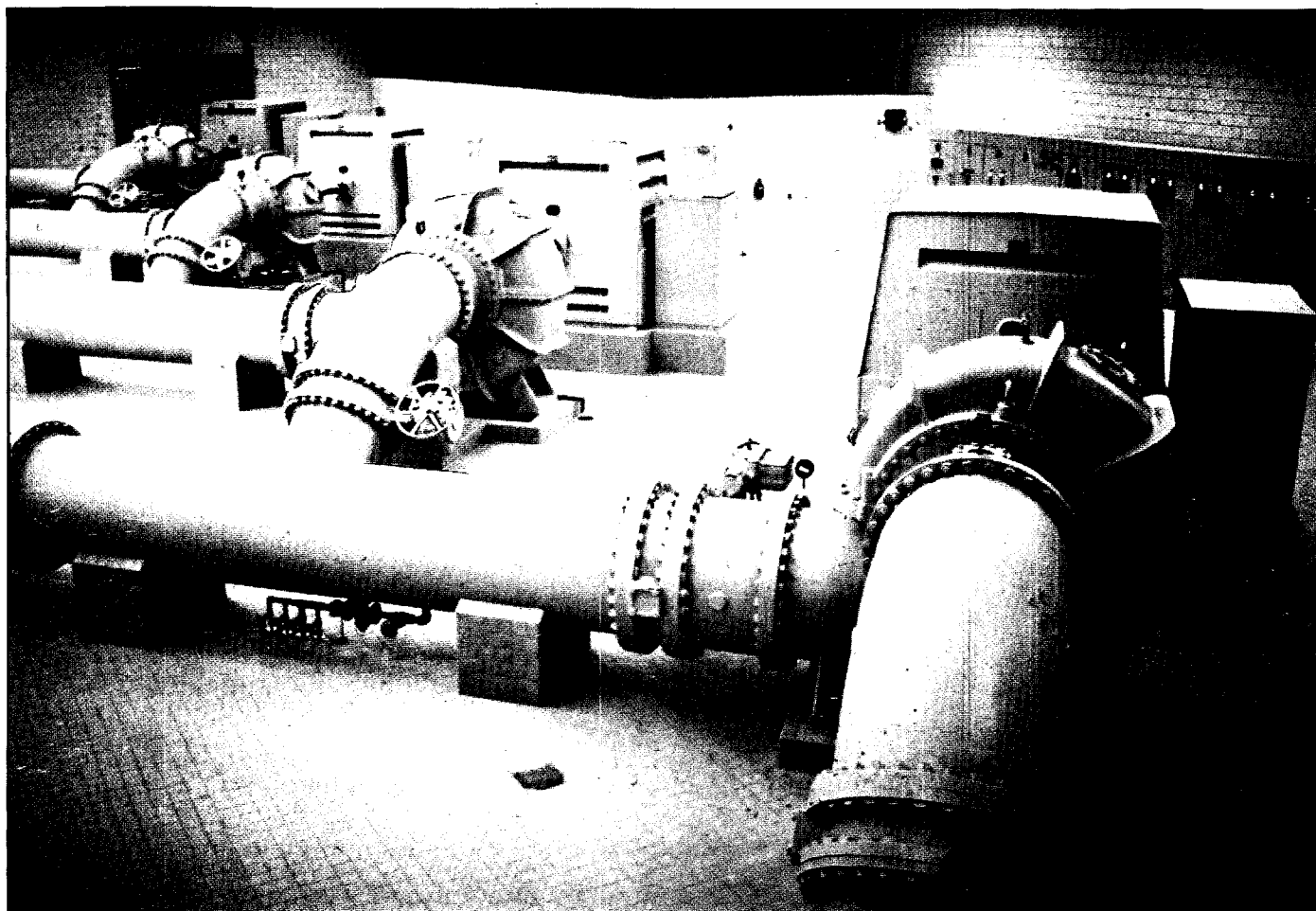


292  
CITY DOCUMENT



ANNUAL REPORT  
*of the*  
WATER SUPPLY BOARD  
*of the*  
CITY OF PROVIDENCE

For the Year Ended September 30, 1968

IN CITY COUNCIL  
MAY 15 1969

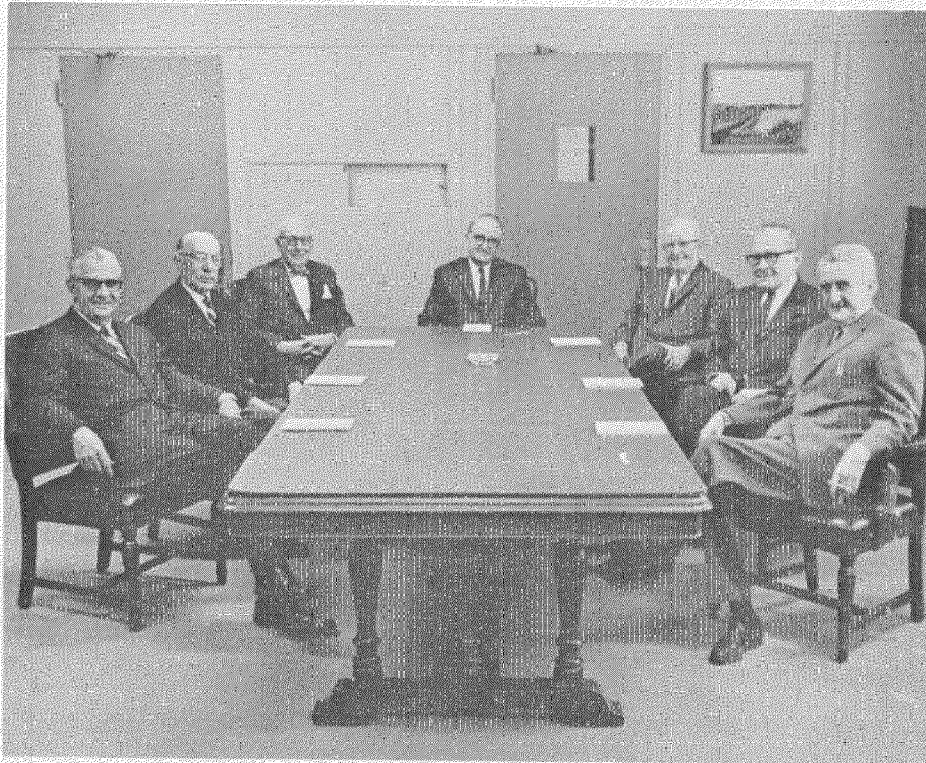
READ:  
WHEREUPON IT IS ORDERED THAT  
THE SAME BE RECEIVED.

*Vincent V. Capin*  
CLERK

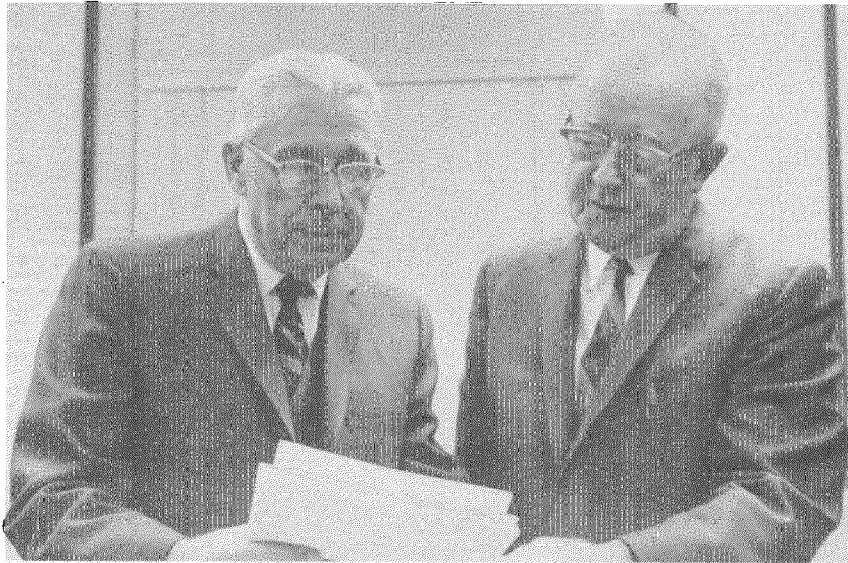
---

## WATER SUPPLY BOARD

---



From l-r: John T. Walsh, *Legal Advisor*, John J. Tierney, Earl H. Ashley, John A. Doherty, *Chairman*, Joseph E. Martin, *Chief Engineer*, Ugo Riccio, John J. Deary, *Secretary*. David R. McGovern, *ex-officio*, not present.



*Former Chief Engineer Philip J. Holton, who retired in August, 1968, and his successor, former Deputy Chief Engineer Joseph E. Martin.*

October 1, 1968

The Honorable Joseph A. Doorley, Jr., Mayor  
The Honorable Members of the City Council  
City of Providence, Rhode Island

Gentlemen:

We are submitting the 28th Annual Report of the Water Supply Board, highlighting the operations and projects of the department during the fiscal year ended September 30, 1968.

The Board is proud of the numerous improvements made, and being made, to our system, and its continued national reputation for supplying an excellent quality of water. It is thankful for the long-range plans and wisdom of the original Water Supply Board appointed in 1915, and to Mr. Philip J. Holton, former Chief Engineer, who retired August 2, 1968. His enthusiasm, ingenuity and engineering ability during 35 years with the department are well known throughout the industry. We are indebted to him for his foresight and guidance in our Capital Improvement Program designed to meet the system's demands to the year 2015.

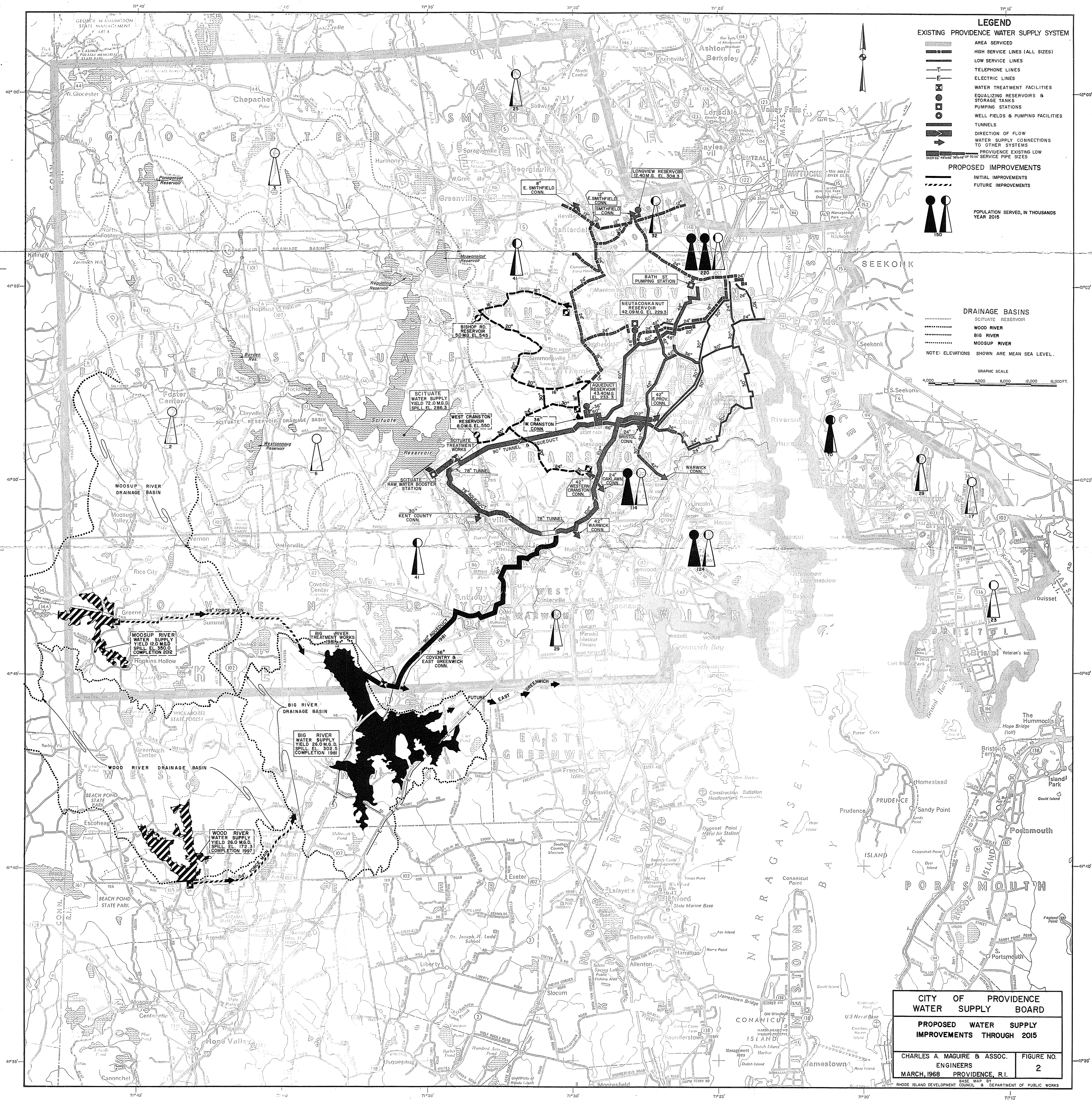
We are grateful, Mr. Mayor, for your leadership and for the assistance of the City Council. Also, we wish to extend our appreciation and thanks to the officials of the Regional Office of the Economic Development Administration, U. S. Department of Commerce, to other governmental agencies, to civic and industrial organizations, to the public and to our 180 dedicated employees.

Respectfully submitted,

*John A. Lohr*  
Chairman

WATER SUPPLY BOARD







---

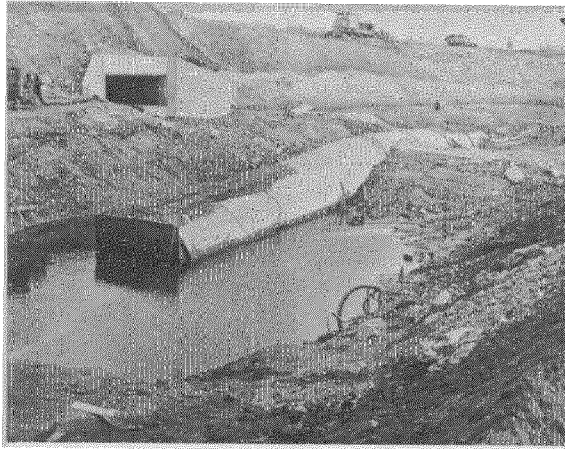
## PROVIDENCE REGIONAL WATER SERVICE AREA

---

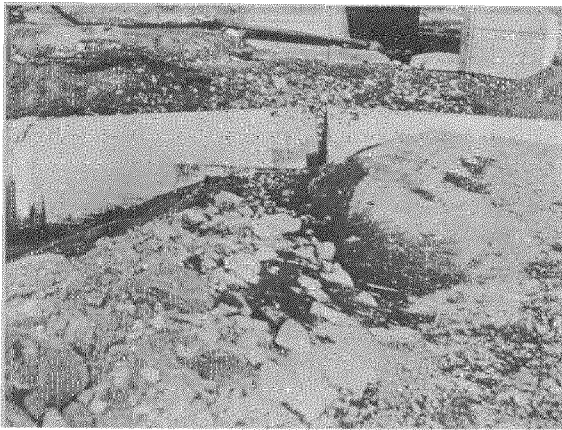
The fold-in map adjacent to this page outlines the fifteen cities and towns that are entitled by law to receive water from the Scituate drainage basin. The Providence service area totals 415.71 square miles, which is 22 times the area of the City of Providence. The land area of the entire state is only 1,058 square miles, so our service territory represents 39.3% of Rhode Island.

Although municipally owned, the Providence Water Works has operated as a regional or metropolitan district from its very inception over 100 years ago. At the present time, in addition to the City of Providence, the City of Cranston and the Towns of Johnston and North Providence are supplied from a distribution system owned and maintained by Providence. The City of Warwick, the Kent County Water Authority supplying parts of Scituate, West Warwick and Coventry, the East Smithfield Water District and the Town of Smithfield are supplied by Providence, but own and maintain their own distribution systems. Water to these latter communities is supplied through master meters. The population served in these areas during 1968 was estimated to be 391,180 or 42.4% of the estimated population of 921,940 for the State of Rhode Island.

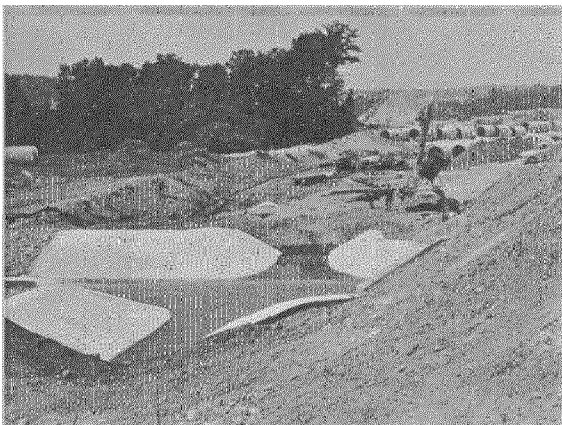
The map shows the existing sources of supply together with proposed improvements and developments, many of which are in the process of construction. These additions will be necessary in order to serve the cities and towns presently receiving water from the Providence system, as well as the City of East Providence and the investor-owned Bristol County Water Company, which supplies the Towns of Barrington, Warren and Bristol. There are two other towns entitled to water under the 1915 Water Act; they are Foster and Glocester, but up to the present time there is no public water supply in either of these communities.



*Damaged 102" prestressed reinforced concrete steel cylinder aqueduct resulting from severe rainstorm of March 17 and 18, 1968.*



*Close-up view of damaged 102" aqueduct.*



*Reinforced concrete channel lining and cut-off wall to provide protection for 102" aqueduct.*

## MAJOR CONSTRUCTION PROJECTS

**TUNNEL AND AQUEDUCT**—Construction of the Supplemental Tunnel and Aqueduct progressed to 70% of completion. Installation of the 102-inch aqueduct at the P-37 Interchange in Cranston, R. I. was delayed due to damage caused by over 5-inches of rainfall on March 17 and 18, the heaviest rainstorm in 50 years. Flow diverted from Furnace Hill Brook washed away temporary embankments, flooded the construction area and damaged the empty aqueduct. General clean-up work and inspection and replacement of damaged pipe with new sections delayed for several months progress of work on adjoining Contract No. 6. To prevent recurrence of this type damage, where the new aqueduct passes under the brook, it was decided to provide a reinforced concrete channel lining and cut-off wall under the stream bed instead of riprap protection as originally specified.

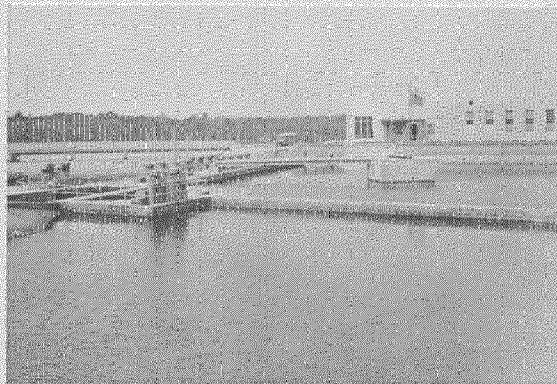
The section of tunnel and aqueduct from the purification works to tunnel portal No. 4, located near the easterly end of the West Warwick Country Club, is 78-inches in diameter and approximately 23,000-feet long. It will be supplied from the existing tunnel and aqueduct through a connection in tunnel portal No. 1. From this point a maximum of 44 million gallons daily will flow in a southwesterly direction through tunnel No. 1, which is underneath the coagulation and sedimentation basins, to portal No. 2 and then through a Dall Flow Tube to the aqueduct. Following a generally southeast path it will terminate at portal No. 3. From this point, tunnel No. 2 will convey the water to portal No. 4 and then to the 102-inch section of the aqueduct. Reinforcement to



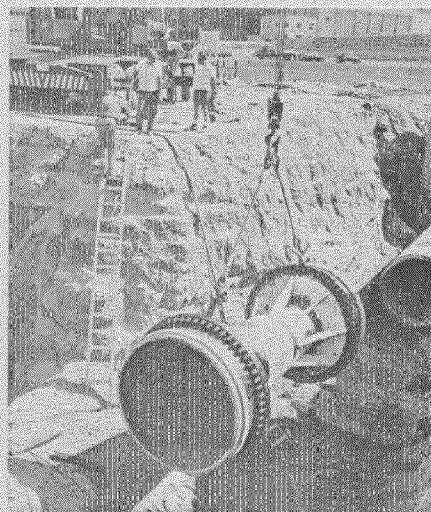
the Kent County Water Authority system, supplying West Warwick, Coventry and parts of Scituate, is provided by a 30-inch connection from the 78-inch aqueduct to the Authority's new pumping station located on Clinton Avenue in Hope, R. I. It is anticipated that work will be completed to a stage where we can begin disinfection of the tunnel and aqueduct during the early part of the next fiscal year.

A 96-inch diameter connection has been installed at portal No. 4 to receive an additional supply of 56 million gallons daily from the proposed Big and Wood River Reservoir development. The 44 million gallons daily from our plant and 56 million gallons daily in the future from Big and Wood River, together with the capacity of 100 million gallons daily through our existing tunnel and aqueduct, will mean an eventual capability of delivering 200 million gallons daily to the system. The 102-inch section of aqueduct from tunnel portal No. 4 to Budlong Road in Cranston, a distance of 27,200-feet, is designed to carry 100 million gallons daily; 44 from the 78-inch aqueduct and 56 from Big and Wood River.

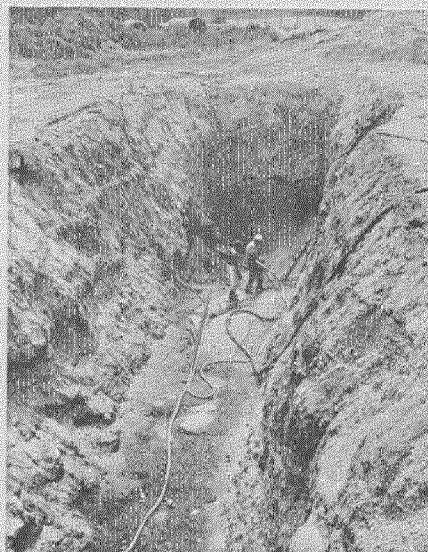
From tunnel portal No. 4 in West Warwick the 102-inch aqueduct will follow a north-easterly route to its terminus in Cranston. There will be five connections along the way; a 42-inch to increase the supply to the growing Kent County Water Authority and City of Warwick systems, a 42-inch for the western areas of the City of Cranston and the Town of Johnston, a 24-inch in the vicinity of Wilbur Avenue to provide reinforcement to our system in the Oaklawn Avenue area of Cranston, a 42-inch in Budlong Road, Cranston, for the City of East Providence and a 24-inch in the same general area for the Bristol County Water Company.



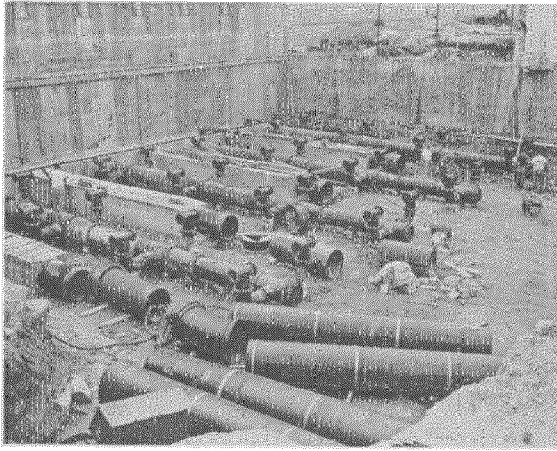
*Tunnel portal No. 1 superstructure in north coagulation and sedimentation basin. Main entrance and central operations and control buildings in background.*



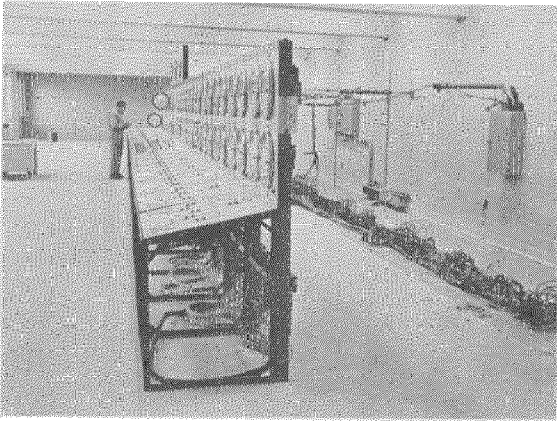
*Dall flow tube being lowered into place. This will meter the quantity of water delivered through the new 78" aqueduct.*



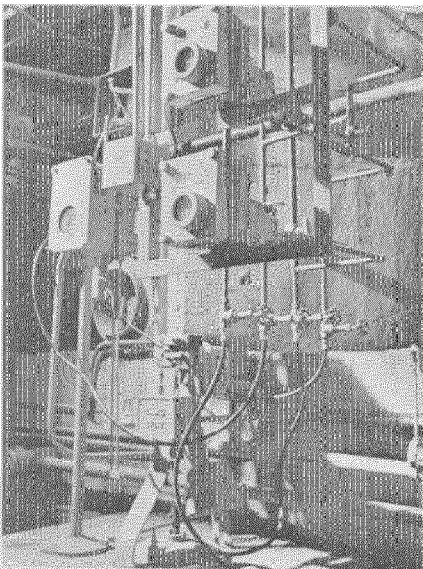
*Contractor excavating ledge to prepare pipe-bed for aqueduct.*



*Installing underdrain piping system in new filters.*



*Original Central Control Board installed in 1939; to be replaced with new Centralized Control System, which will be positioned along wall.*



*Existing loss of head and rate of flow transmitters and replacement installation of new continuous signal units.*

During the year the sand in five of the existing filters was replaced with a coarser size to conform with the material in the other nine units that were changed in 1954. Four additional filter beds are under construction and should be completed by the summer of 1969. The eighteen units will permit processing of 144 million gallons daily at a filtration rate of 3.25 gallons per minute per square foot. This is the full potential that may be withdrawn from Scituate Reservoir based on maximum daily demands.

The new centralized control system, which will replace the present control board installed in 1939, should be completed and in operation before the end of the next fiscal year. It will monitor and control the performance of the filter plant, pumping stations, distribution reservoirs, flow measuring stations and other related functions such as the emergency diesel-driven generator located in the new Raw Water Booster Pumping Station. All pumping stations, including the Raw Water Booster Station at the base of Gainer Memorial Dam in the Town of Scituate as well as the three pumping stations in the distribution system, will be unattended and their operation will be regulated by a single operator stationed at the control board.

Space has been provided for the installation of additional instruments and controls for the eventual operation of a pumping station that must be built to obtain water from Wood River Reservoir and additional stations that will be required to serve the western sections of Cranston and Johnston.

The two contracts for the new Raw Water Booster Pumping Station, one

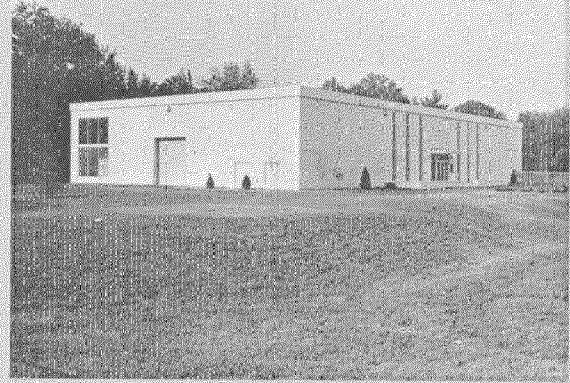


awarded in April, 1966 for pumps, motors, switchgear, etc. and the second in May, 1966 for building and site improvements, were for all practical purposes completed except for some adjustments and minor items of work. Field acceptance tests were completed for pump units and the 2300 horsepower emergency diesel-driven generator on May 1 and June 12, respectively. Final payments to the contractors will be made by the end of the calendar year. The total final cost will approximate \$1,150,000.

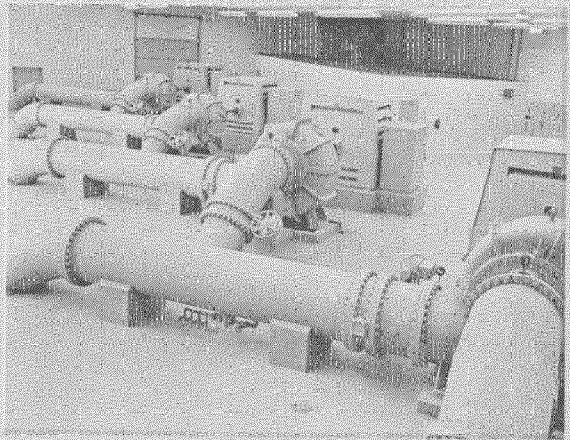
This new facility will provide the means necessary to deliver water from Scituate Reservoir to the Purification Works whenever the reservoir level recedes to a point where normal gravity flow to the plant is impossible, or where gravity flow will not furnish a sufficient quantity to meet system requirements. The first of these two situations would arise during times of extended drought and the second would occur with a lowered reservoir elevation during the dry summer months, combined with the demands of the maximum day.

The station has four pumps, two with a capacity of fifty million gallons daily each, driven by either 300 or 600 horsepower motors, and two with a rating of thirty million gallons daily each, driven by 150 or 400 horsepower motors. Based on variable head conditions, eight different rates of flow are possible, from thirty to one hundred and sixty million gallons daily, providing ample flexibility to satisfy varying conditions.

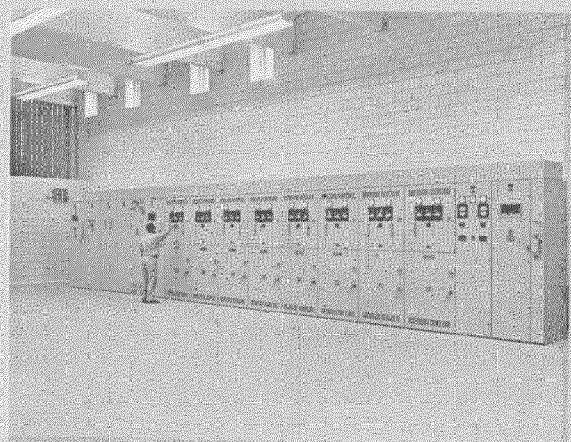
Operation of the switchgear and diesel-driven generator will be remotely controlled from the new central control system at the Purification Works. There are 53 command and reportback signals for general start and stop operations, indication of generator fault, overheating of motor windings and bearings and the changeover from public power to our own.



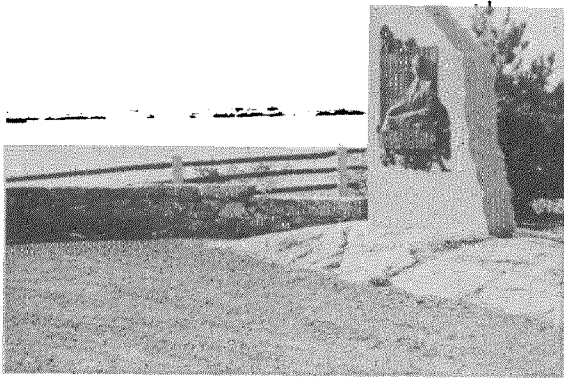
*New Raw Water Booster Pumping Station.*



*50 and 30 million gallons daily pumps with synchronous motor drives.*



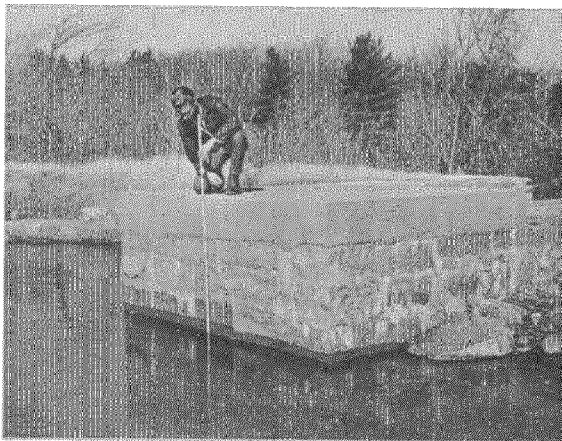
*High voltage switchgear for eight pump motors ranging from 150 to 600 horsepower; to be remotely controlled from the Purification Works.*



*View of Scituate Reservoir and memorial plaque naming main dam after Joseph H. Gainer, Mayor of Providence from 1913 to 1927.*



*Reading chart removed from recording rain gauge.*



*Measuring elevation of water in Westconnaug, one of the five tributary reservoirs.*

## SOURCE OF SUPPLY

**RAINFALL AND RUNOFF**—The rainfall on the 92.8 square mile Scituate Watershed above Gainer Dam was measured as usual by rain gages at Rocky Hill, Hopkins Mills, North Scituate, Westcott District and Gainer Dam. A total of 47.19 inches was recorded, which is 0.88-inch less than the 53-year (1916-1968) average of 48.07 inches. The rainfall for the year was 98.2% of the long term average and 71.2% of the maximum of 66.28 inches established during the year ended September 30, 1958. The runoff totaled 26.46 inches; this was 1.98 inches more than the 53-year average of 24.48 inches and 9.46 inches less than the maximum of 35.92 inches which occurred during the 1956 fiscal year.

**STORAGE, DRAFT AND YIELD**—On October 1, 1967 the combined storage on the watershed, including Regulating, Westconnaug, Barden, Moswansicut, Ponaganset and Scituate Reservoirs, amounted to 37,359,000,000 gallons, or 90.5% of combined total capacity. At the end of the year the combined storage was 33,968,000,000 gallons, or 82.3% of capacity.

The total draft from the Scituate Watershed for the year was 46,063,570,000 gallons, an average of 125,860,000 gallons daily. The draft for water supply purposes was 19,349,190,000 gallons and the discharge into the north branch of the Pawtuxet River totaled 26,714,380,000 gallons.

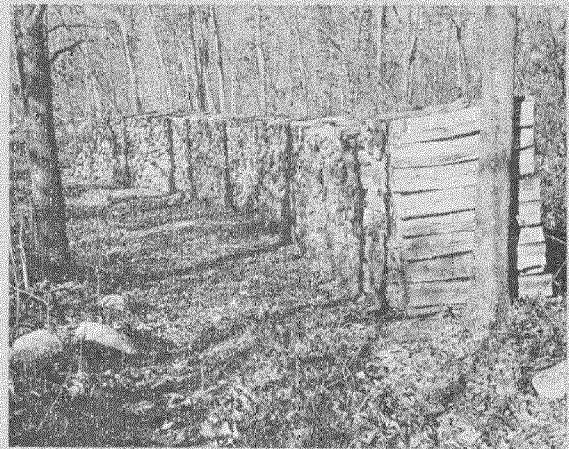
The yield from the Scituate Watershed for the year totaled 42,672,570,000 gallons, an average of 116,590,000 gallons per day. This was 8,500,000 gallons per day more than the 108,090,000 gallons average daily yield for the 53-year period 1916 through 1968.



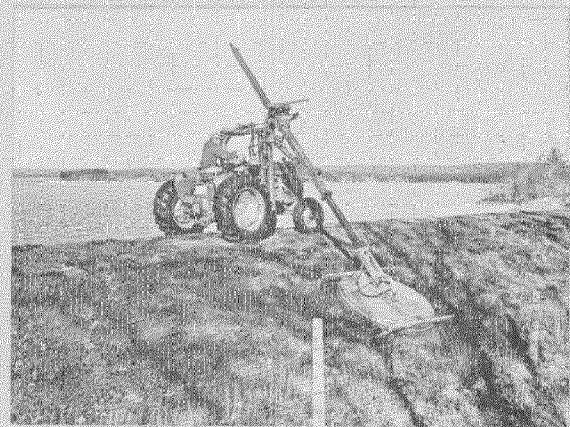
**FORESTRY OPERATIONS**—The Scituate Reservoir watershed lands are prudently managed by professional foresters to produce a raw water of the highest quality. The forestland marginal to the Scituate Reservoir and its tributary reservoirs and streams provides natural environmental conditions that are conducive to the production of pure water. Reforestation efforts, which were initiated 44 years ago, are displaying their value today. In recent years, major emphasis in management has shifted to protection and culture of the forest resource.

Protection of the watershed is directed in three principal areas: (1) forest fire control, (2) water pollution abatement, and (3) forest insect and disease control. Forest fires and water pollution are directly related to the effects of man and his activity on the 92.8 square-mile watershed. The fire tower on Tunk Hill was manned on 38 high-hazard days during the year in cooperation with State and local fire control agencies. While forest fires can cause undesirable erosion of land and subsequent siltation of streams and reservoirs, the Department must also be constantly watchful of potential sources of contamination. In addition, the forestry staff is continually on the alert to spot and counteract damaging infestations of forest insects and diseases. Close coordination with the U. S. Forest Service has included research and intensive studies of control methods as related to the spread of *Fomes annosus* root rot disease.

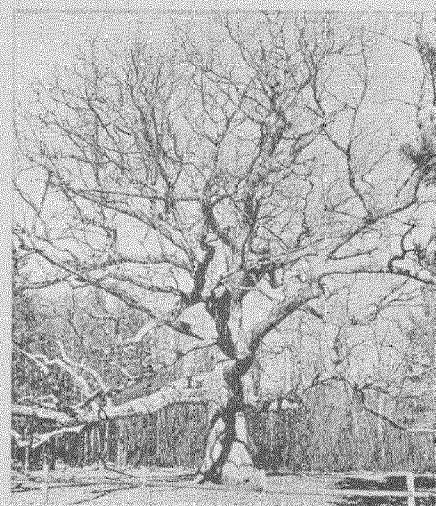
During the year, forest-culture operations consisted primarily of plantation thinning, harvest of mature timber, forest-stand improvement and aesthetic development of roadside woodland. Approximately 700,000 board feet of timber products were removed from the watershed forests by contractual woods operators. Included in the forest aesthetics program was the creation of a vista overlooking the Scituate Reservoir and beautification at an historic mill-pond site.



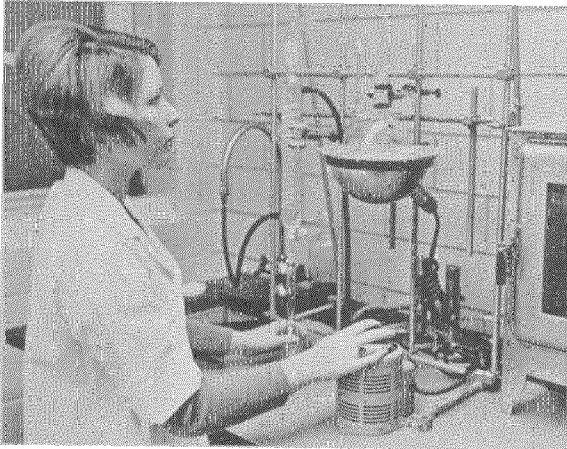
*Stacked fireplace wood removed in forest improvement operations.*



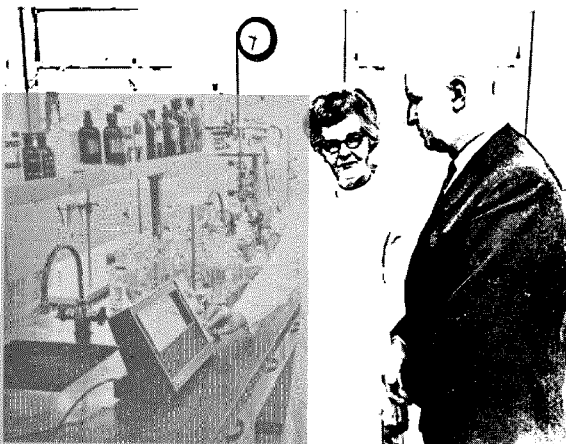
*Maintenance of turf by slopemower on steep embankment of Gainer Memorial Dike.*



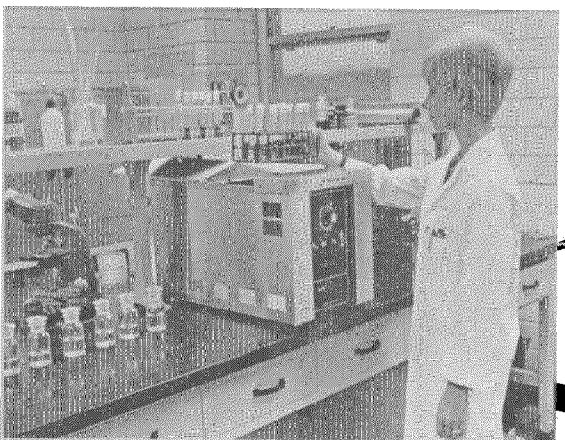
*Aesthetic improvements to environs of huge, majestic white oak adjacent to Plainfield Pike, Scituate.*



*Laboratory assistant conducting one of the thousands of determinations made during the year.*



*Laboratory technician discussing a quality control parameter with a supervisor.*



*Bacteriologist performing one of the frequent examinations in accordance with the U. S. Public Health Service Drinking Water Standards.*

Intensive turf management was carried out at the dams, distribution reservoirs and Purification Works. Five miles of access roads, 26.4 miles of roadside fenceline and numerous miscellaneous areas were treated with herbicidal spray to control hardwood sprout growth. Other operations included roadside slash disposal, the planting of 5200 tree seedlings, improvement and preparation of additional forest access roads, and maintenance of fencing, gates and other facilities.

**LABORATORIES**—The chemical and bacteriological laboratories that check the quality of the water supply from the raw water impoundments to the taps at the consumers' premises, conducted tests on 13,098 samples of water during the year. They were obtained from brooks, streams and raw water reservoirs, as well as daily samples collected throughout the distribution system. Tests made on these samples included chemical, sanitary chemical and mineral analyses, and bacteriologic and microscopic examinations. The total number of tests made during the year amounted to 104,510. Based on a 40-hour week, the water was receiving one test or another every 72 seconds.

Chemists carried out frequent coagulation tests of the raw water with various amounts of chemicals, simulating all operations of the purification processes for the purpose of determining the most desirable dosage to produce an excellent quality of water at a reasonable cost. Rigid laboratory control over the quality of the water exceeded the sampling requirements of the U. S. Public Health Service Drinking Water Standards. The actual number of bacteriological samples collected from our distribution system amounted to 3,103 or an average of 259 per month, a figure 36% greater than recommended by the Standards and about equal to the number required for a population of 600,000.



**PURIFICATION**—The water supplied to communities from the Providence system is processed at one of the most modern filtration plants in the country. Operation is all-electric from a central control board. Power loss is minimized and almost nil, due to the availability of three sources: public, hydro-generated and auxiliary diesel-generator.

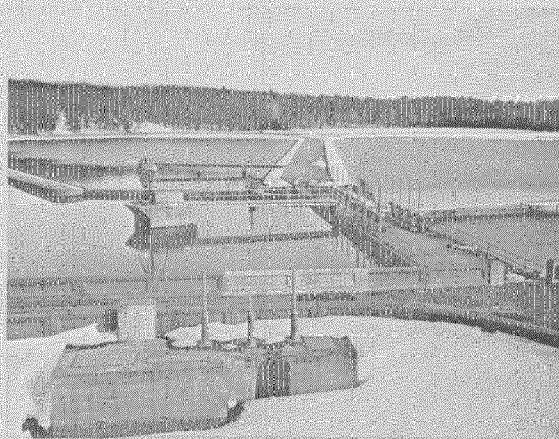
All chemical feeding machines are automatically controlled in direct proportion to the volume of water being treated. They are installed in multiple units, providing standby machines that may be placed in service in case of mechanical failure. Chemicals are stored in large silos and are transferred pneumatically, by remote control, to hoppers located above each feeder.

The treatment process consists of influent aeration, mixing, coagulation and sedimentation, and finally filtration. Chemicals employed include ferric sulphate to coagulate microorganisms and particles that cause color and turbidity, lime to change the water from acid to alkaline to assist in the precipitation of iron and manganese and reduce corrosion in the distribution system, and chlorine to destroy harmful bacteria. Finally, fluoride is added to reduce the incidence of dental caries in children. The following quantities of chemicals were used:—1,775,018 pounds of ferric sulphate before influent aeration, 1,757,403 pounds of quicklime after influent aeration and before mixing, 81,770 pounds of chlorine prior to filtration and 222,624 pounds of sodium silicofluoride after filtration, a grand total of 3,836,815 pounds.

During the year, 18,608.41 million gallons were delivered into the distribution system, an average of 50.84 million gallons daily. The maximum hourly demand in the system was at the rate of 122.78 million gallons daily; consumption during the maximum day amounted to 84.58 million gallons. The difference between plant production and system demands was provided from storage reservoirs in our distribution system.



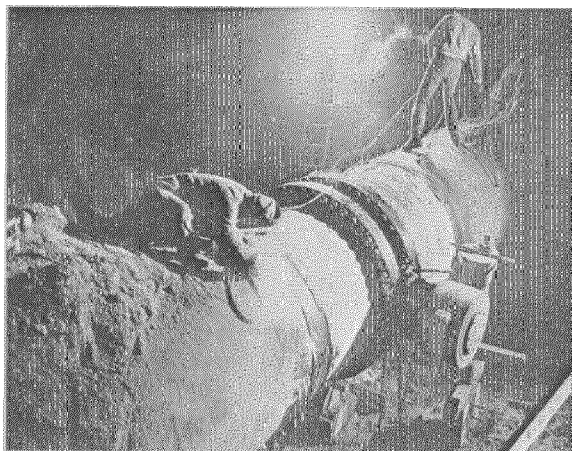
*Introduction of chemicals into the treatment process is automatically controlled by modern chemical feeding machinery.*



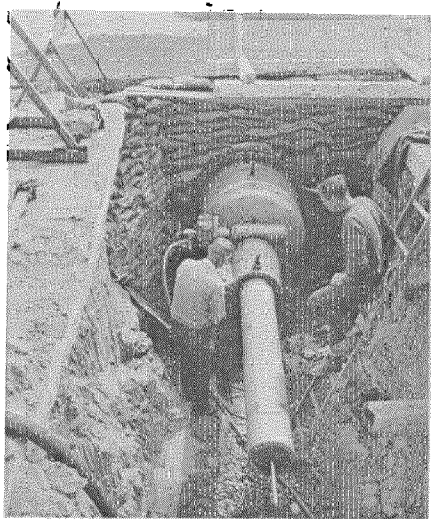
*Concrete-lined coagulation and sedimentation basins where majority of impurities are removed prior to rapid sand filtration.*



*Filter gallery with electrically operated valves remotely controlled from Central Control Board.*



*Improvements being made to distribution system main.*



*Installation of 42" tapping sleeve and valve.*



*Utility and meter trucks, stockpile of hydrants and piping, and evergreen-screened employees' parking area at rear of Administration Building.*

## DISTRIBUTION

At the end of the year our distribution system in Providence, Cranston, Johnston and North Providence contained 4,258,047 ft. (806.45 miles) of water mains ranging from 6" to 66" in diameter. The network consists of iron, steel, asbestos-cement and reinforced concrete steel cylinder pipe. There were 64,347 services, 15,923 valves and 4,905 hydrants in use on September 30, 1968. The amount of pipe laid during the year totaled 28,869 feet; 11,835 feet were removed, resulting in a net increase to the system of 17,034 feet. Services installed and removed were 796 and 276, respectively, a gain of 520. 201 valves were installed and 80 removed, an addition of 121. 214 hydrants installed and 166 removed resulted in a net increase of 48.

Total water distribution was 18,609.110 million gallons, or 50.845 million gallons per day. The low service area, a gravity supply, consumed 81.2%; the high service system, furnishing water to the higher elevations as well as the special high pressure fire service in the downtown business district of Providence, used 18.8%. Total registration on customers' meters totaled 17,246.798 million gallons, accounting for 92.7% of the amount delivered into the system.

Leaks in the transmission and distribution mains totaled 74 throughout the year, 29 occurring at joints and 45 as a result of ruptured mains. Leaks at joints averaged one for every 28 miles of pipe and total leaks averaged one for every 11 miles of main.

The number of meters on active services totaled 64,424. Small size meters in residential properties are brought into our shop every seven years for test and repairs; testing and servicing of larger size meters are carried out more frequently.



## ENGINEERING OFFICE

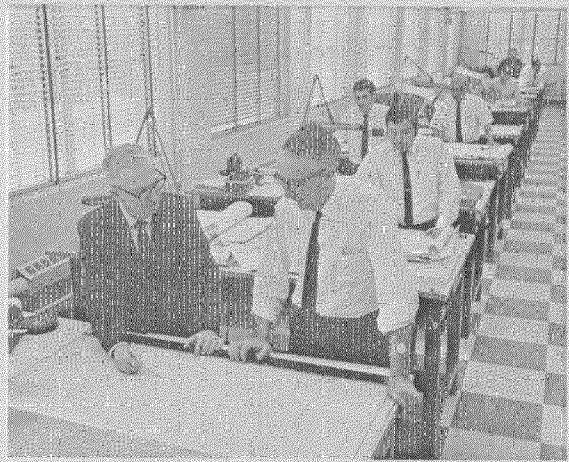
The engineering staff has been engaged in the preparation of various specifications and estimates, plans for extensions of the distribution system into numerous real estate developments, and the usual problems related to the operation and maintenance of water works structures and equipment. Other work included real estate surveys, inventories and appraisals, consumer demands with respect to service requirements and proper size meters, inspection of water pipe installations, observing and conducting flow tests at various points in the distribution system and compiling pertinent data and records. Other services included computations of quantities and the preparation of monthly estimates for periodic payments on all outstanding contracts.

During the year, our engineers supervised the construction of the Supplemental Tunnel and Aqueduct, the Raw Water Booster Pumping Station and the Additions, Alterations and Improvements to the Water Purification Works. The program consisted of twelve separate contracts and represents a capital investment of approximately \$17,000,000.

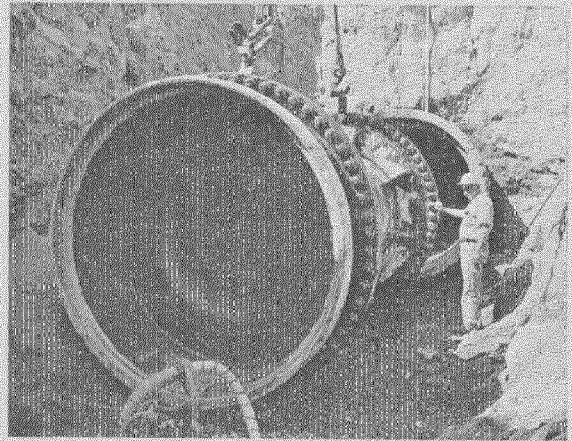
Engineering activities were handicapped this past year by reorganizations in the department due to the retirement of the Deputy Chief Engineer in February and the Chief Engineer in August.

## COMMERCIAL AND ACCOUNTING

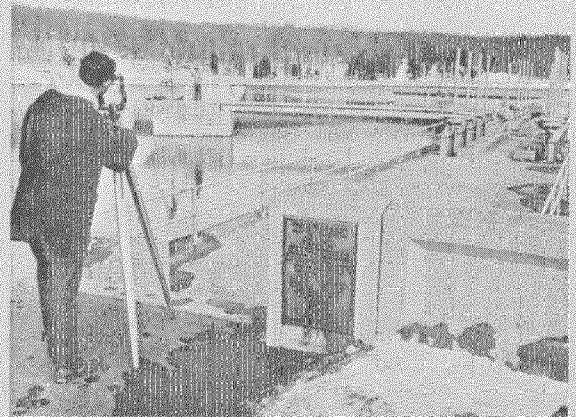
At the end of the fiscal year the department had 64,347 services. To meet the various requirements of our customers, we operated as usual on a 24 hour schedule. This



*Engineers and draftsmen engaged in the preparation of plans and specifications, and the maintenance of all records relating to plant operations and the distribution system.*



*Department engineer inspecting installation of Dall Flow Tube in 78" aqueduct.*

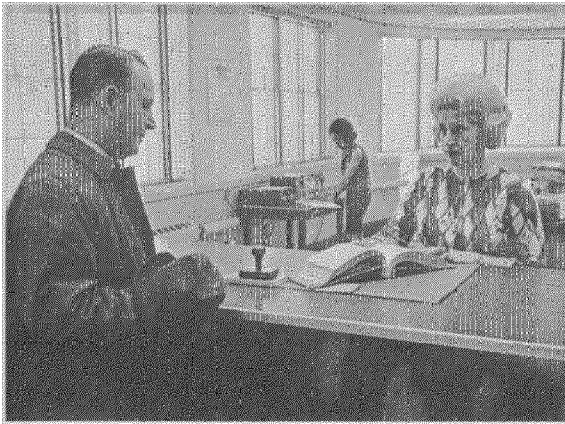


*Department's field engineers checking alignment of tunnel portal number 1 superstructure.*





*Billing operations, using latest automatic equipment.*



*Customer information service. Two-way radio console in background.*



*The advantages of the new remote meter reading system being explained to a happy customer.*

included switchboard operators around the clock and two-way radio communication with our crews in the field. Day to day operations of this division also were carried out during the year, such as reading of meters, notifying customers of excessive water use, preparation of water bills, collection of delinquent accounts, investigating complaints, furnishing information to title companies and banks, processing new applications and preparing payrolls and job cost data.

As mentioned in our previous report, a survey showed the necessity for ready access to meter readings in the field. To effect this, a pilot program was started in March to train two teams of two men each to convert the old style meters to the new Neptune ARB system. Our first bills for the encoder equipment were issued on April 8, 1968 to those customers who participated in this improvement. The exact cost of the receptacle was charged to the property owner, with the installation cost borne by the department. During the period May through September, 949 conversions were made in the Town of Johnston. In addition, 200 were placed in new construction throughout the system, under the supervision of our Service Inspector. At the present time our men are averaging 14 installations per day, or approximately 3,500 a year. The department intends to increase the number to 7,000 per year with outside contractual assistance.

In conjunction with this modern method of meter reading, we have revised the route books from a street to a block system in the Towns of Johnston and North Providence. Also, addressograph plates, ledger cards and route sheets were rearranged with new account numbers to conform with the changes. The first area to be changed was the Town of Johnston, where we have approximately 3,925 accounts in the September billing district. The same revisions will be made for Cranston and Providence.

---

## FINANCIAL

---

The gross income for the year ended September 30, 1968 totaled \$3,287,756.08, a decrease of 3.4%, or \$115,192.09 below the previous year. Revenue from the sale of water alone amounted to \$2,942,611.22, a decrease from the previous year of \$90,425.46. The remaining income of \$345,144.86 was received from other sources, including hydrant rentals, installation of services and fire supplies, miscellaneous items and the surplus in the Meter Revolving Fund. This is the second year in a row that income has decreased. The miscellaneous revenue decreased by \$24,766.63 from the previous year. At the end of the fiscal year, unpaid water bills totaled \$256,901.98, or 7.8% of the total net billing.

Operating expenses continued to increase. The total for the year amounted to \$2,374,135.19 compared with \$2,359,882.39 the previous year, an increase of \$14,252.80. This item will become greater due to the general inflationary trend, higher wages and the spiraling cost of money to float bond issues such as the one which will be necessary for the new Supplemental Tunnel and Aqueduct.

Principal payments on the serial bonds and the floating debt amounted to \$134,350. This includes the last payment on our floating debt of \$59,350. The last remaining issue on our original Sinking Fund Bonds, \$1,500,000, was paid on January 3, 1968, leaving a net bonded debt of \$2,805,000 at the close of the fiscal year. Interest charges on both the bonded and floating debt totaled \$123,939.18.

The surplus in our Sinking Fund to retire the original bonded debt was \$1,626,140.10 and this by law has reverted to the Emergency Public Improvement Fund of the City.

---

## PRESENT AND FUTURE CAPITAL PLANNING

---

Our present capital improvement program includes a new Supplemental Tunnel and Aqueduct, Additions, Alterations and Improvements to the Water Purification Works, and the Raw Water Booster Pumping Station. The first two projects were to be financed by a \$13,000,000 bond issue which had been approved by the voters. The Raw Water Booster Pumping Station, now ready for service, was financed through the department's Depreciation and Extension Fund.

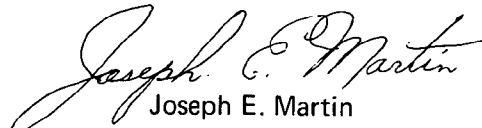
The original estimated cost for all three projects was \$14,500,000, but as this report goes to press the cost estimate is now approximately \$17,000,000. Through the efforts of Mayor Joseph A. Doorley, Jr., we succeeded in obtaining a 50% Federal Grant based on the original estimated cost, or \$7,250,000, from the U. S. Commerce Department, Economic Development Administration. This will result in a reduction of debt service charges of about \$450,000 annually. To date, we have received \$5,550,394 of the allotted Federal Grant.

During the past year the Mayor and the Water Supply Board filed an application with the State Water Resources Board to permit Providence to proceed with the construction of Big and Wood River Reservoirs. If our application is approved by this State agency, we have sufficient reserve in our Depreciation and Extension Fund to start the project known as Big River. In that event, the department will endeavor to obtain a Federal loan to assist in financing the field work and preparation of construction plans.

---

Financial accounts of the department, together with other statistical data for the year ended September 30, 1968, are appended to the report.

Respectfully submitted,

  
Joseph E. Martin  
Chief Engineer



---

## APPENDIX

---

# LIST OF TABLES

## Table

1. SCITUATE WATERSHED--Monthly Rainfall in Inches--Year Ended Sept. 30, 1968.
2. SCITUATE WATERSHED--Monthly and Yearly Rainfall in Inches for 53 Years, 1916-1968.
3. SCITUATE WATERSHED--Monthly and Yearly Runoff in Inches for 53 Years, 1916-1968.
4. SCITUATE WATERSHED--Monthly and Yearly Percent of Rainfall Collected for 53 Years, 1916-1968.
5. SCITUATE WATERSHED--Statistics of Storage--Year Ended Sept. 30, 1968.
- 5A. SCITUATE RESERVOIR--Monthly Elevations for 41 Years, 1928-1968.
6. SCITUATE WATERSHED--Statistics of Draft and Yield--Year Ended Sept. 30, 1968.
7. SCITUATE WATERSHED--Reforestation, Number and Kinds of Trees Planted in Various Years.
8. GAINER DAM--Hydro-Electric Power Generation Statistics.
9. WATER PURIFICATION WORKS--Operating Statistics.
10. WATER PURIFICATION WORKS--Chemicals Used and Their Cost.
11. WATER PURIFICATION WORKS--Chemical and Physical Characteristics of Water in Process of Filtration.
12. WATER PURIFICATION WORKS--Chemical and Physical Characteristics of Water in Various Brooks and Reservoirs on Scituate Watershed.
13. WATER PURIFICATION WORKS--Chemical and Physical Characteristics of Water in the Distribution System.
14. WATER PURIFICATION WORKS--Bacteriological Examination of Water in Process of Filtration--48 Hours on Agar at 20°C.
15. WATER PURIFICATION WORKS--Bacteriological Examination of Water in Process of Filtration--24 Hours on Agar at 35°C.
16. WATER PURIFICATION WORKS--Bacteriological Examination of Water in Process of Filtration--Coliform Bacteria.
17. WATER PURIFICATION WORKS--Bacteriological Examination of Water in Various Brooks and Reservoirs on Scituate Watershed.
18. WATER PURIFICATION WORKS--Bacteriological Examination of Water in the Distribution System.
19. WATER PURIFICATION WORKS--Mineral Analysis of Water.
20. WATER PURIFICATION WORKS--Sanitary Chemical Analysis.
21. WATER PURIFICATION WORKS--List of Laboratory Tests and Examinations.
22. WATER DISTRIBUTION SYSTEM--Neutaconkanut Pumping Station Operating Statistics.
23. WATER DISTRIBUTION SYSTEM--Bath Street Pumping Station Operating Statistics.
24. WATER DISTRIBUTION SYSTEM--Aqueduct Distribution Reservoir Statistics.
25. WATER DISTRIBUTION SYSTEM--Neutaconkanut Distribution Reservoir Statistics.
26. WATER DISTRIBUTION SYSTEM--Longview Distribution Reservoir Statistics.
27. WATER DISTRIBUTION SYSTEM--Water Mains Laid, Removed, etc.
28. WATER DISTRIBUTION SYSTEM--Public Water Mains in Use at End of Year.
29. WATER DISTRIBUTION SYSTEM--Gates in Use at End of Year.
30. WATER DISTRIBUTION SYSTEM--Services Installed and Removed.
31. WATER DISTRIBUTION SYSTEM--Services in Use on September 30, 1968.
32. WATER DISTRIBUTION SYSTEM--Fire Hydrants Installed, Removed and Number in System.
33. WATER METERS--Number, Make and Size of Meters in System.
34. CAPACITY AND CONSUMPTION--1941-1968.
35. WATER CONSUMPTION--Low Service, High Service and Total Consumption for Year.
36. WATER CONSUMPTION--Water Sold to State Institutions and City of Warwick.
37. WATER CONSUMPTION--Water Sold to East Smithfield Water Co., Smithfield Water Department, and Kent County Water Authority.
38. WATER CONSUMPTION--Average Daily Consumption for Years 1877-1968.
39. FUEL OIL CONSUMPTION.
40. INCOME STATEMENT--Year Ended Sept. 30, 1968.
41. OPERATING EXPENSES OF PROVIDENCE WATER WORKS--Year Ended Sept. 30, 1968.
42. ANNUAL WATER WORKS REVENUES--Summary, 1930-1968.
43. STATEMENT OF REVENUE--Estimated and Actual--Year Ended Sept. 30, 1968.
44. WATER WORKS DEPRECIATION AND EXTENSION FUND--Year Ended Sept. 30, 1968.
45. STATEMENT--Serial Bonds Outstanding--Year Ended Sept. 30, 1968.
46. STATEMENT OF FLOATING DEBT OUTSTANDING--Year Ended Sept. 30, 1968.
47. PERSONAL PROPERTY INVENTORIES as of Sept. 30, 1968.
48. STATEMENT OF STORES REVOLVING FUND--Year Ended Sept. 30, 1968.
49. STATEMENT OF THE MISCELLANEOUS WATER MAIN EXTENSIONS ACCOUNT--Year Ended Sept. 30, 1968.
50. STATEMENT--Account for Inserting New Valves.
51. CONSTRUCTION OF MAJOR IMPROVEMENTS TO WATER SUPPLY SYSTEM--SUPPLEMENTAL TUNNEL AND AQUEDUCT.
52. CONSTRUCTION OF RAPID SAND FILTERS--PURIFICATION PLANT.
53. FEDERAL PROGRAMS--SUPPLEMENTAL TUNNEL AND AQUEDUCT (EDA 01-1-00087), RAPID SAND FILTERS-PURIFICATION PLANT (EDA 01-1-00088), RAW WATER BOOSTER PUMPING STATION (EDA 01-1-00089).
54. WATER WORKS PROPERTY--Valuations and Taxes.
55. SUMMARY OF WATER WORKS STATISTICS--Year Ended Sept. 30, 1968.

TABLE 1  
MONTHLY RAINFALL IN INCHES ON SCITUATE WATERSHED  
YEAR ENDED SEPTEMBER 30, 1968

1967-1968		STATIONS ON WATERSHED				
	Rocky Hill	Hopkins Mills	North Scituate	Westcott	Gainer Dam	Average
October	2.37	2.48	1.98	2.21	2.15	2.24
November	4.01	3.91	3.08	3.22	3.03	3.45
December	8.12	8.39	8.67	7.62	8.31	8.22
January	3.60	4.39	4.23	4.43	4.77	4.28
February	1.81	2.25	2.25	1.99	2.28	2.12
March	8.23	8.04	8.29	7.56	8.21	8.07
April	1.67	1.85	1.37	1.59	1.76	1.65
May	4.15	4.01	3.73	4.06	4.09	4.01
June	7.37	6.61	5.71	6.18	5.17	6.21
July	1.26	1.33	0.90	1.47	1.37	1.27
August	2.59	3.24	3.09	2.84	2.08	2.77
September	3.28	3.42	2.61	3.04	2.16	2.90
Total	48.46	49.92	45.91	46.21	45.38	47.19*
Monthly Average	4.04	4.16	3.83	3.85	3.78	3.93

\*Total of averages.



TABLE 2  
MONTHLY AND YEARLY RAINFALL IN INCHES ON SCITUATE WATERSHED

Year	YEARS ENDED SEPTEMBER 30												Jan. Dec. Year Total
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
1915-1916	2.75(e)	2.88	5.86	1.88	5.88	2.46	3.60	4.83	5.71	7.38	1.33	1.24	45.80
1916-1917	2.61	2.34	3.30	3.96	2.18	4.91	2.70	4.15	4.54	1.51	6.13	2.66	40.99
1917-1918	6.71	0.48	3.23	3.56	3.73	2.15	4.56	3.12	4.49	5.13	4.14	8.79	50.09
1918-1919	1.07	2.60	3.75	4.89	3.42	6.05	4.31	5.99	3.65	5.47	6.65	6.07	53.92
1919-1920	2.29	5.05	2.58	3.03	6.10	4.90	6.28	3.95	7.93	4.44	3.86	3.04	53.45
1920-1921	1.34	5.85	5.09	3.46	3.06	3.72	5.45	3.73	4.30	6.80	2.97	2.53	48.30
1921-1922	1.26	8.02	2.54	1.91	2.67	6.40	1.98	5.22	6.34	8.36	9.09	5.35	59.14
1922-1923	2.92	1.41	3.11	6.78	1.82	3.73	5.92	1.48	4.93	2.78	2.35	2.15	39.38
1923-1924	5.67	5.68	5.10	4.49	2.92	2.80	6.12	3.66	1.49	1.72	5.85	5.28	50.78
1924-1925	0.21	2.23	2.38	4.41	2.22	4.76	2.85	2.72	2.36	6.14	1.70	2.96	34.94
1925-1926	4.32	4.83	5.18	3.26	6.10	3.73	2.46	2.27	1.74	3.80	3.94	1.89	43.52
1926-1927	5.04	5.55	3.55	2.98	3.31	1.59	2.56	3.41	3.36	3.99	8.55	2.61	46.50
1927-1928	5.24	9.22	5.63	2.72	4.32	2.70	5.43	1.45	3.91	5.06	5.50	4.80	55.98
1928-1929	3.99	2.50	3.21	5.20	4.89	3.92	7.56	3.47	2.27	2.06	2.93	1.35	43.35
1929-1930	3.09	3.06	4.15	2.86	2.88	3.23	2.03	2.74	3.05	3.33	3.00	1.35	34.77
1930-1931	3.36	4.65	3.10	3.55	2.57	6.37	3.36	4.19	6.31	3.74	5.96	1.97	49.13
1931-1932	2.22	1.03	3.16	6.16	2.38	6.16	1.97	2.57	2.75	2.57	6.44	11.75	49.16
1932-1933	6.63	7.13	2.09	2.02	3.81	6.55	6.18	3.76	4.04	2.00	3.60	7.56	55.37
1933-1934	3.41	1.48	3.72	3.87	4.53	4.03	5.24	3.98	4.79	2.20	3.89	7.37	48.51
1934-1935	3.25	4.44	3.55	7.24	3.09	1.93	4.76	2.27	5.12	4.10	1.42	3.59	44.76
1935-1936	1.04	5.86	0.88	8.81	4.16	9.31	3.80	1.98	2.98	2.63	3.28	7.72	52.45
1936-1937	2.00	1.25	9.83	5.02	2.45	4.09	5.42	3.05	3.40	1.58	6.47	4.19	48.75
1937-1938	3.92	8.10	2.89	5.29	2.91	2.70	2.60	4.17	8.62	11.49	3.10	6.76	62.55
1938-1939	2.64	3.91	3.64	3.08	5.06	5.86	4.53	0.94	2.95	1.20	6.52	3.47	43.80
1939-1940	5.76	1.40	3.40	2.82	5.97	4.04	6.00	5.75	2.45	4.41	2.01	2.63	46.65
1940-1941	2.00	6.81	2.28	3.12	3.37	2.97	1.36	3.16	4.92	5.90	4.00	0.20	40.09
1941-1942	1.75	3.35	3.78	4.95	3.30	8.35	0.89	2.80	3.88	5.38	4.32	1.94	44.69
1942-1943	4.26	5.52	6.39	3.56	1.95	3.68	3.90	3.87	1.99	3.41	2.15	1.30	41.98
1943-1944	6.38	3.43	1.22	1.79	2.50	5.05	4.11	1.35	3.75	1.74	2.01	11.03	44.36
1944-1945	2.71	8.45	4.33	3.45	5.79	2.13	3.36	4.89	5.17	2.74	3.06	2.84	48.92
1945-1946	2.21	9.03	7.58	3.82	3.81	1.42	2.37	4.92	3.31	2.49	11.48	3.69	56.13
1946-1947	0.48	1.32	3.90	2.98	2.60	3.85	5.40	3.37	4.10	4.86	2.91	4.02	39.79
1947-1948	3.26	6.42	3.91	7.14	2.57	4.26	3.97	9.36	4.20	3.73	3.14	1.59	53.55
1948-1949	4.86	7.43	3.45	4.38	3.62	2.47	4.65	4.03	0.10	1.24	6.07	3.49	45.79
1949-1950	2.27	3.47	2.79	3.68	4.62	3.99	3.68	3.51	2.93	1.62	5.04	2.03	39.63

(e Estimated

TABLE 2 (Continued)

MONTHLY AND YEARLY RAINFALL IN INCHES ON SCITUATE WATERSHED

YEARS ENDED SEPTEMBER 30															
Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total	Year	Total
1950-1951	2.23	7.21	4.57	4.95	4.48	5.91	3.97	5.20	2.71	3.36	3.08	2.41	50.08	1951	55.38
1951-1952	4.14	9.64	5.53	4.88	4.31	4.13	4.41	3.97	3.16	1.20	7.33	2.21	55.41	1952	45.26
1952-1953	1.94	3.02	4.20	7.38	4.64	9.33	7.54	3.24	1.67	4.27	2.94	2.74	52.91	1953	61.10
1953-1954	5.57	6.22	5.56	2.91	3.16	4.36	5.37	4.91	1.55	2.76	9.10	7.63	59.10	1954	57.44
1954-1955	3.13	5.65	6.91	1.00	4.96	4.17	4.16	1.78	4.53	2.43	12.75	4.53	56.00	1955	57.74
1955-1956	11.48	5.23	0.72	5.39	4.39	7.91	3.84	2.42	2.10	4.13	1.56	3.98	53.15	1956	49.06
1956-1957	2.96	4.92	5.46	2.90	2.46	3.33	5.01	1.55	0.72	0.96	1.58	1.58	33.43	1957	36.13
1957-1958	3.07	5.50	7.47	8.46	4.50	5.46	7.55	3.84	2.69	7.04	4.58	6.12	66.28	1958	58.88
1958-1959	3.83	3.03	1.78	2.56	4.12	7.13	4.41	1.15	5.55	6.74	2.27	0.57	43.14	1959	53.82
1959-1960	8.37	5.35	5.60	3.59	5.65	3.27	3.06	4.49	1.15	4.86	2.55	8.10	56.04	1960	47.42
1960-1961	3.58	2.86	4.26	3.24	3.48	4.27	5.92	5.65	2.25	3.01	4.02	9.43	51.97	1961	50.52
1961-1962	2.60	3.18	3.47	4.55	6.15	3.67	2.16	2.05	4.68	1.33	3.37	3.49	40.70	1962	47.58
1962-1963	8.95	4.20	2.98	3.23	3.41	3.71	2.03	3.06	3.36	3.59	1.55	4.41	44.58	1963	40.63
1963-1964	1.59	7.82	2.77	6.32	5.36	2.63	5.65	1.15	1.98	3.86	2.14	3.56	44.83	1964	45.58
1964-1965	2.84	3.81	6.28	4.13	4.51	2.13	2.54	2.03	2.71	2.61	2.58	1.96	38.13	1965	33.21
1965-1966	3.58	2.48	1.95	5.93	5.09	1.59	1.95	3.57	2.40	3.71	3.10	5.28	40.63	1966	45.45
1966-1967	3.65	5.41	3.77	2.10	4.00	6.15	4.81	8.33	3.12	6.71	4.50	3.86	56.41	1967	57.49
1967-1968	2.24	3.45	8.22	4.28	2.12	8.07	1.65	4.01	6.21	1.27	2.77	2.90	47.19	1968	50.30
53 Years Average	3.56	4.63	4.08	4.15	3.85	4.41	4.10	3.56	3.59	3.79	4.28	4.07	48.07*	Avg.	48.16*
53 Years Maximum	11.48	9.64	9.83	8.81	6.15	9.33	7.56	9.36	8.62	11.49	12.75	11.75	66.28	Max.	61.10
53 Years Minimum	0.21	0.48	0.72	1.00	1.82	1.42	0.89	0.94	0.10	0.96	1.33	0.20	33.43	Min.	33.21

\*Total of Monthly Averages.

TABLE 3

## MONTHLY AND YEARLY RUNOFF IN INCHES ON SCITUATE WATERSHED (92.8 SQ. MI.)

YEARS ENDED SEPTEMBER 30

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total	Year	Jan.-Dec. Total
1915-1916	0.75(e)	1.24(e)	3.03(e)	2.50	3.70	3.99	4.64	3.69	3.42	2.74	1.09	0.42	31.21	1916	28.25
1916-1917	0.51	0.58	0.97	1.91	1.30	4.29	3.05	2.79	2.18	0.79	0.71	0.63	19.71	1917	22.41
1917-1918	1.79	1.59	1.38	1.83	4.04	3.17	3.40	2.24	1.24	0.47	0.82	1.81	23.78	1918	23.75
1918-1919	1.02	1.34	2.37	3.81	2.27	5.01	4.43	3.86	1.27	1.35	0.91	3.33	30.97	1919	32.65
1919-1920	1.45	2.25	2.71	1.19	1.69	9.60	5.10	3.73	4.15	1.38	0.79	0.34	34.38	1920	33.29
1920-1921	0.37	1.73	3.22	2.79	1.69	4.19	3.68	2.85	0.95	2.56	0.93	0.31	25.27	1921	24.52
1921-1922	0.24	1.55	2.68	1.13	1.80	4.81	3.92	3.50	2.39	3.50	3.59	4.39	33.60	1922	33.32
1922-1923	1.66	1.26	1.37	4.16	2.46	6.10	4.06	2.68	1.15	0.64	0.40	0.25	26.19	1923	29.75
1923-1924	1.27	2.01	4.57	4.52	1.88	3.43	5.70	3.38	1.05	0.20	0.56	0.68	29.25	1924	23.31
1924-1925	0.49	0.45	0.97	0.91	3.65	3.41	2.46	1.46	0.52	0.58	0.39	0.32	15.61	1925	19.04
1925-1926	0.61	1.48	3.25	2.23	3.11	4.38	3.00	1.70	0.62	0.40	0.42	0.17	21.37	1926	21.03
1926-1927	0.76	2.15	2.09	3.34	2.64	3.05	1.71	2.03	1.44	0.32	1.59	0.64	21.76	1927	30.14
1927-1928	1.95	6.73	4.70	2.62	3.76	2.86	3.18	2.05	1.15	1.08	1.17	0.80	32.05	1928	23.03
1928-1929	1.21	1.16	1.99	4.02	3.65	5.56	6.09	3.56	0.48	0.06	0.07	-0.09	27.76	1929	25.18
1929-1930	0.07	0.53	1.18	1.96	2.38	2.74	1.84	0.88	0.42	0.09	0.04	-0.11	12.02	1930	11.82
1930-1931	0.12	0.63	0.83	1.56	2.11	5.95	3.21	3.10	2.97	0.69	0.85	0.10	22.12	1931	21.67
1931-1932	0.07	0.15	0.91	3.35	2.16	4.10	3.08	1.35	0.39	0.07	0.35	3.27	19.25	1932	30.15
1932-1933	3.48	6.29	2.26	2.24	2.70	6.28	6.88	1.93	1.57	0.17	0.25	1.52	35.57	1933	27.13
1933-1934	0.95	0.82	1.82	3.78	1.18	5.48	6.08	2.88	1.47	0.08	0.14	1.40	26.08	1934	28.94
1934-1935	1.33	1.91	3.21	4.78	2.83	4.22	4.05	1.71	1.78	0.62	-0.14	0.26	26.56	1935	21.82
1935-1936	-0.13	1.09	0.75	3.94	1.93	11.51	4.45	1.59	0.44	0.03	-0.02	0.82	26.40	1936	31.64
1936-1937	0.46	0.43	6.05	4.59	2.77	3.34	3.79	2.52	0.75	0.02	0.60	0.57	25.90	1937	27.16
1937-1938	0.79	4.17	3.25	4.15	2.99	2.99	2.29	1.84	2.85	6.93	1.32	1.66	35.23	1938	33.76
1938-1939	1.22	1.90	3.62	2.11	4.12	5.24	4.90	1.08	0.31	-0.24	0.22	0.09	24.57	1939	21.35
1939-1940	0.63	1.35	1.54	2.03	1.51	4.86	6.89	3.17	1.65	0.84	-0.14	-0.04	24.29	1940	23.98
1940-1941	-0.07	1.63	1.65	1.53	2.88	2.42	1.65	1.16	1.33	0.54	0.10	-0.41	14.41	1941	12.43
1941-1942	-0.15	0.52	0.85	1.87	2.54	7.14	1.75	1.06	0.59	0.86	0.26	-0.17	17.13	1942	22.77
1942-1943	0.45	1.86	4.56	2.45	3.46	4.40	2.68	3.01	0.36	0.02	-0.16	-0.22	22.87	1943	17.97
1943-1944	0.60	0.95	0.42	0.73	1.23	3.24	3.53	1.08	0.43	-0.26	-0.31	1.73	13.37	1944	18.61
1944-1945	0.50	3.16	3.55	2.91	2.58	5.61	2.15	3.10	1.26	0.15	-0.12	-0.15	24.70	1945	24.02
1945-1946	0.06	1.88	4.59	3.93	2.98	3.70	1.43	2.50	1.65	0	2.35	0.56	25.63	1946	21.08
1946-1947	0.49	0.30	1.19	2.16	1.52	4.01	3.31	2.86	1.09	0.53	0.12	0.31	17.89	1947	20.47
1947-1948	0.23	2.94	1.39	1.55	3.15	7.16	3.76	5.25	3.12	0.56	0.15	-0.21	29.05	1948	29.08
1948-1949	0.35	2.24	2.00	3.57	3.22	2.92	3.20	1.78	-0.02	-0.26	0.02	0.09	19.11	1949	16.40
1949-1950	0.05	0.57	1.26	2.03	2.42	4.16	3.01	2.20	1.00	-0.11	0.22	-0.02	16.79	1950	19.39

(e Estimated)



TABLE 3 (Continued)  
MONTHLY AND YEARLY RUNOFF IN INCHES ON SCITUATE WATERSHED (92.8 SQ. MI.)

Year	YEARS ENDED SEPTEMBER 30												Total	Jan.-Dec. Year	Total
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
1950-1951	0.04	1.85	2.59	3.24	4.95	4.35	4.30	2.70	1.21	0.14	0.07	-0.07	25.38	1951	30.16
1951-1952	0.34	4.62	4.30	4.24	3.30	5.02	2.97	2.46	0.98	-0.35	0.53	-0.20	28.21	1952	20.27
1952-1953	-0.20	0.37	1.15	4.61	4.35	7.24	6.36	3.20	0.20	0.07	-0.05	-0.13	27.17	1953	32.41
1953-1954	0.38	1.86	4.32	2.12	2.66	3.56	4.01	3.71	0.33	-0.01	0.93	3.95	27.83	1954	32.15
1954-1955	1.33	3.65	5.90	2.46	3.61	4.26	2.76	1.62	0.89	0.02	4.04	1.19	31.73	1955	35.13
1955-1956	7.22	5.56	1.50	3.27	4.09	4.57	6.57	1.98	0.96	0.37	-0.22	0.05	35.92	1956	25.87
1956-1957	0.23	1.10	2.90	2.41	2.10	2.78	4.54	0.58	-0.18	-0.41	-0.38	-0.22	15.45	1957	14.20
1957-1958	0.06	0.52	2.40	6.59	2.69	6.03	6.89	3.88	0.83	0.85	0.86	1.31	32.91	1958	35.66
1958-1959	2.05	1.85	1.83	1.65	2.58	5.86	4.52	1.45	1.23	2.09	0.07	-0.23	24.95	1959	26.97
1959-1960	1.17	2.16	4.40	3.29	5.09	3.15	4.01	2.19	0.35	0.38	0.00	1.54	27.75	1960	25.51
1960-1961	0.98	2.11	2.42	2.21	3.68	4.97	4.75	3.63	1.30	0.25	0.20	2.30	28.80	1961	27.93
1961-1962	1.28	1.53	1.83	4.32	1.66	5.24	3.61	1.53	0.98	-0.09	0.04	0.07	22.01	1962	24.34
1962-1963	1.89	2.97	2.12	1.81	1.88	4.47	1.69	1.88	0.54	0.10	-0.25	-0.02	19.08	1963	15.25
1963-1964	-0.11	1.59	1.67	4.68	2.82	3.47	4.61	0.87	0.01	0.03	-0.14	-0.11	19.39	1964	19.30
1964-1965	0.11	0.47	2.48	1.68	3.43	3.02	1.89	1.04	0.44	-0.10	-0.14	-0.06	14.26	1965	11.89
1965-1966	0.04	0.21	0.44	0.70	2.26	3.11	1.10	1.68	0.73	0.11	0.09	0.36	10.83	1966	13.88
1966-1967	0.50	1.87	1.37	2.25	1.60	4.52	4.92	4.94	1.61	1.67	1.58	0.61	27.44	1967	30.51
1967-1968	0.80	1.50	4.51	2.91	2.76	7.53	2.00	1.78	2.26	0.27	0.03	0.11	26.46	1968	24.79
53 Years Average	0.82	1.83	2.46	2.80	2.75	4.69	3.77	2.39	1.17	0.62	0.51	0.67	24.48*	Avg.	24.48*
53 Years Maximum	7.22	6.73	6.06	6.59	5.09	11.51	6.89	5.25	4.15	6.93	4.04	4.39	35.92	Max.	35.66
53 Years Minimum	-0.20	0.15	0.42	0.70	1.18	2.42	1.10	0.58	-0.18	-0.41	-0.38	-0.41	10.83	Min.	11.82

\*Total of Monthly Averages.

TABLE 4

## MONTHLY AND YEARLY PERCENT OF RAINFALL COLLECTED ON SCITUATE WATERSHED

YEARS ENDED SEPTEMBER 30

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total	Jan.-Dec. Year Total
1915-1916	27.3 <sup>(e)</sup>	43.0 <sup>(e)</sup>	51.7 <sup>(e)</sup>	133.0	62.9	162.2	128.9	76.4	59.9	37.1	82.0	33.9	68.1	1916 65.4
1916-1917	19.5	24.8	29.4	48.2	59.6	87.4	113.0	67.2	48.0	52.3	11.6	23.7	48.1	1917 51.9
1917-1918	26.7	331.2	42.7	51.4	108.3	147.4	74.6	71.8	27.6	9.2	19.8	20.6	47.5	1918 50.4
1918-1919	95.3	51.5	63.2	77.9	66.4	82.8	102.8	64.4	34.8	24.7	13.7	54.8	57.4	1919 57.9
1919-1920	63.3	44.6	105.0	39.3	27.7	195.9	81.2	94.4	52.3	31.1	20.5	11.2	64.3	1920 59.6
1920-1921	27.6	29.6	63.3	80.6	55.2	112.6	67.5	76.4	22.1	37.6	31.3	12.2	52.3	1921 51.2
1921-1922	19.0	20.6	105.5	59.2	67.4	75.2	198.0	67.0	37.7	41.9	39.5	82.0	56.8	1922 60.8
1922-1923	56.8	89.4	44.0	61.4	135.2	163.5	68.6	181.1	23.3	23.0	17.0	11.6	66.5	1923 61.5
1923-1924	22.4	35.4	89.6	100.7	84.4	122.5	93.1	92.3	70.5	11.6	9.6	12.9	57.6	1924 59.5
1924-1925	233.3	20.2	40.8	20.6	164.4	71.6	86.3	53.7	22.0	9.4	22.9	10.8	44.7	1925 42.8
1925-1926	14.1	30.6	62.7	68.4	51.0	117.4	122.0	74.9	35.6	10.5	10.6	9.0	49.1	1926 48.5
1926-1927	15.1	38.7	58.9	112.1	79.8	191.8	66.8	59.5	42.8	8.0	18.6	24.5	46.8	1927 57.5
1927-1928	37.2	73.0	83.5	96.3	87.0	105.9	58.6	141.4	29.4	21.3	21.3	16.7	57.2	1928 50.5
1928-1929	30.3	46.4	62.0	77.3	74.6	141.8	80.6	102.6	21.1	2.9	2.4	-6.7	64.0	1929 57.3
1929-1930	2.3	17.3	28.4	68.5	82.6	84.8	90.6	32.1	13.8	2.7	1.3	-8.1	34.6	1930 33.2
1930-1931	3.6	13.5	26.8	43.9	82.1	93.4	95.5	74.0	47.1	18.4	14.3	5.1	45.0	1931 48.8
1931-1932	3.2	14.6	28.8	54.4	90.8	66.6	156.3	52.5	14.2	2.7	5.4	27.8	39.2	1932 51.4
1932-1933	52.5	88.2	108.1	110.9	70.9	95.9	111.3	51.3	38.9	8.5	6.9	20.1	64.2	1933 56.4
1933-1934	27.9	55.4	48.9	97.7	26.0	136.0	116.0	72.4	30.7	3.6	3.6	19.0	53.8	1934 56.6
1934-1935	40.9	43.0	90.4	66.0	91.6	218.6	85.1	75.3	34.8	15.1	-9.8	7.2	59.3	1935 52.8
1935-1936	-12.5	18.6	85.2	44.7	46.4	123.6	117.1	80.3	14.8	1.1	-0.6	10.6	50.3	1936 54.8
1936-1937	23.0	34.4	61.6	91.4	113.1	81.7	69.9	82.6	22.0	1.3	9.3	13.6	53.1	1937 53.7
1937-1938	20.2	51.5	112.5	78.4	102.7	110.7	88.1	44.1	33.1	60.3	42.6	24.6	56.3	1938 58.4
1938-1939	46.2	48.6	99.4	68.5	81.4	89.4	108.2	114.9	10.5	-20.0	3.4	2.6	56.1	1939 48.3
1939-1940	10.9	96.4	45.3	72.0	25.3	120.3	114.8	55.0	67.3	19.0	-7.0	-1.5	52.1	1940 50.8
1940-1941	-3.5	23.9	72.4	49.0	87.4	81.5	121.3	36.7	27.0	9.2	2.5	-205.0	35.9	1941 32.8
1941-1942	-8.6	15.5	22.8	37.8	77.0	85.5	196.6	37.8	15.2	16.0	6.0	-8.8	38.3	1942 43.8
1942-1943	10.6	33.7	71.4	68.8	177.4	119.6	68.7	77.8	18.1	0.6	-7.4	-16.9	54.5	1943 48.8
1943-1944	9.4	27.7	34.4	40.8	49.2	64.2	85.9	80.0	11.5	-14.9	-15.4	15.7	30.1	1944 38.1
1944-1945	18.4	37.4	82.0	84.3	44.6	263.4	64.0	63.4	24.4	5.5	-3.9	-5.3	50.5	1945 46.0
1945-1946	2.7	20.8	60.6	102.9	78.2	260.6	60.3	50.8	49.8	0	20.5	15.2	45.7	1946 49.0
1946-1947	102.1	22.7	30.5	72.5	58.5	104.2	61.3	84.9	26.6	10.9	4.1	7.7	45.0	1947 42.9
1947-1948	7.0	45.8	35.5	21.7	122.6	168.1	94.7	56.1	74.3	15.0	4.8	-13.2	54.2	1948 52.2
1948-1949	7.2	30.1	58.0	81.5	89.0	118.2	68.8	44.2	-20.0	-21.0	0.3	2.6	41.7	1949 42.5
1949-1950	2.2	16.4	45.2	55.2	52.4	104.3	81.8	62.7	34.1	-6.8	4.4	-1.0	42.4	1950 43.0

(e) Estimated

TABLE 4 (Continued)  
MONTHLY AND YEARLY PERCENT OF RAINFALL COLLECTED ON SCITUATE WATERSHED  
YEARS ENDED SEPTEMBER 30

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total	Jan.-Dec. Year Total
1950-1951	1.8	25.6	56.7	65.4	110.5	73.8	108.3	51.9	44.6	4.2	2.3	-2.9	50.7	1951 54.5
1951-1952	8.2	47.9	77.8	86.9	68.6	121.5	67.3	61.7	31.0	-29.2	7.2	-9.0	50.9	1952 44.8
1952-1953	-10.3	12.2	27.4	62.5	93.8	77.6	84.4	98.8	12.0	1.6	-1.7	-4.7	51.4	1953 53.0
1953-1954	6.8	29.9	77.7	72.8	84.2	81.6	74.7	75.6	21.3	-0.4	10.2	51.9	47.1	1954 56.0
1954-1955	42.5	64.6	85.4	245.0	72.8	102.2	66.3	91.0	19.6	0.8	32.7	26.3	56.7	1955 60.8
1955-1956	62.9	122.7	208.3	60.7	93.2	57.8	171.1	81.8	45.7	8.9	-14.1	1.2	67.6	1956 52.7
1956-1957	7.8	22.4	53.1	83.1	85.4	83.5	90.6	37.4	-25.0	-42.7	-24.1	-13.9	46.2	1957 39.3
1957-1958	2.0	9.5	32.1	77.9	59.8	110.4	91.3	101.0	30.9	12.1	18.8	21.4	49.7	1958 60.6
1958-1959	53.5	61.1	102.8	64.5	62.6	82.2	102.5	126.1	22.2	31.0	3.1	-40.4	57.8	1959 50.1
1959-1960	14.0	40.7	78.6	91.6	90.1	96.3	131.0	48.8	30.4	7.8	-0.1	19.0	49.6	1960 53.8
1960-1961	27.4	73.8	56.8	68.2	105.7	116.4	80.2	64.2	57.8	8.3	5.0	24.4	55.4	1961 55.3
1961-1962	49.2	48.1	52.7	94.9	27.0	142.8	167.1	74.6	20.9	-6.8	1.2	2.0	54.1	1962 51.1
1962-1963	21.1	70.7	71.1	56.0	55.1	120.5	83.3	61.4	16.1	2.8	-15.2	-0.5	42.8	1963 37.5
1963-1964	-6.8	20.3	60.3	74.1	52.6	131.9	81.6	75.7	0.5	0.8	-6.5	-3.1	43.3	1964 42.3
1964-1965	3.9	12.3	39.5	40.7	76.1	141.8	74.4	51.2	16.2	-3.8	-5.4	-3.1	37.4	1965 35.8
1965-1966	1.1	8.5	22.6	11.8	44.4	195.6	56.4	47.1	30.4	3.0	2.9	6.8	26.7	1966 30.5
1966-1967	1.4	34.6	36.3	107.1	40.0	73.5	102.3	59.3	51.6	2.5	3.5	1.6	48.6	1967 53.1
1967-1968	35.7	43.5	54.9	68.0	130.2	93.3	121.2	44.4	36.4	21.3	1.1	3.8	56.1	1968 49.3
53 Years Average	23.0	39.5	60.3	67.5	71.4	106.3	92.0	67.1	32.6	16.4	11.9	16.5	50.9	Avg. 50.8
53 Years Maximum	233.3	331.2	208.3	245.0	177.4	263.4	198.0	181.1	74.3	60.3	82.0	82.0	68.1	Max. 66.4
53 Years Minimum	-12.5	8.5	22.6	11.8	25.3	57.8	56.4	32.1	-25.0	-42.7	-24.1	-205.0	26.7	Min. 30.5



TABLE 5

## SCITUATE WATERSHED

(92.8 Square Miles)

## STATISTICS OF STORAGE - YEAR ENDED SEPTEMBER 30, 1968

	1		2		3		4		5		6		Total	
	Regulating Reservoir	Avail. Storage	Westconnaug Reservoir	Avail. Storage	Barden Reservoir	Avail. Storage	Moswansicut Reservoir	Avail. Storage	Ponaganset Reservoir	Avail. Storage	Scituate Reservoir	Avail. Storage	Total 1-6	% of Avail. Storage
1967	Elev. M.G.		Elev. M.G.		Elev. M.G.		Elev. M.G.		Elev. M.G.		Elev. M.G.		M.G.	**Tot. M.G. Avail.
October	285.68	436	454.25	458	345.65	897	302.10	735	627.42	335	280.59	32,976	35,837	90.2
November	285.58	427	454.30	460	345.35	873	301.93	718	627.47	338	279.74	32,104	34,920	87.9
December	285.60	429	454.45	469	345.40	877	302.00	725	628.17	377	279.97	32,348	35,225	88.6
January	285.65	433	454.65	480	345.55	889	302.12	737	630.62	526	281.26	33,668	36,733	92.4
February	285.70	437	454.60	477	345.60	893	302.10	735	631.42	579	279.15	31,465	34,586	87.0
March	285.60	429	454.50	472	345.35	873	302.10	735	632.22	633	279.05	31,355	34,497	86.8
April	285.70	437	452.55	364	343.50	728	302.15	741	633.67	741	285.30	38,050	41,061	103.3
May	285.62	431	454.45	469	345.40	877	302.05	730	633.35	716	284.18	36,802	40,025	100.7
June	285.65	433	454.50	472	345.45	881	302.05	730	633.47	725	284.21	36,835	40,076	100.8
July	285.65	433	454.45	469	345.50	885	302.05	730	633.77	748	284.41	37,059	40,324	101.5
August	285.35	409	453.90	438	345.15	857	301.70	695	633.04	692	281.48	33,904	36,995	93.1
September	284.90	375	452.95	384	345.05	849	301.50	675	632.52	654	279.26	31,586	34,523	86.9
Maximum for Year	Feb. 3	454	Feb. 3	497	Feb. 3	937	Feb. 3	751	Mar. 23	783	Mar. 23	38,316	41,649	104.8
Minimum for Year	Sept. 28	353	Apr. 1	364	Apr. 1	728	Sept. 21 & 28	665	Oct. 7 & 14	332	Sept. 28	29,720	32,625	82.1
1. Regulating Reservoir-Spillway	Elev. 285.50;	Total Storage	428 M.G.;	Dead Storage	7 M.G.;	Total Available Storage	421 M.G.							
2. Westconnaug	" " " 454.17;	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453	" " " 453
3. Barden	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;	" " " 345.10;
4. Moswansicut	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;	" " " 301.90;
5. Ponaganset	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;	" " " 633.05;
Total 1-5	Total Storage	4,257 M.G.;	Dead Storage	1,122 M.G.;	Total Available Storage	3,135 M.G.								
6. Scituate Reservoir-Spillway	Elev. 284.01;	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011	" " " 37,011
Total 1-6	Total Storage	41,268 M.G.;	Dead Storage	1,522 M.G.;	Total Available Storage	39,746 M.G.								

NOTE: Elevations shown are in feet above mean high water in Providence Harbor.  
Statistics shown are for the first day (7 A.M.) of the month indicated.

TABLE 5A

## SCITUATE RESERVOIR ELEVATIONS

YEARS ENDED SEPTEMBER 30

1st of Month

Year	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
1927-1928	276.13	275.89	284.21	284.26	284.20	284.29	284.28	284.40	284.83	284.43	283.63	283.08
1928-1929	282.87	282.65	282.11	282.34	284.00	284.32	284.28	284.53	284.10	282.77	280.87	278.95
1929-1930	276.88	274.83	273.09	272.60	273.57	275.38	277.54	278.29	277.51	276.23	274.28	272.18
1930-1931	269.80	267.58	266.14	264.86	265.82	267.39	275.51	278.84	281.37	283.32	281.56	280.11
1931-1932	278.25	276.34	274.45	273.35	276.56	277.96	281.85	283.83	283.17	281.06	278.86	277.16
1932-1933	279.75	282.50	284.60	283.61	282.80	282.86	284.23	284.16	283.09	282.68	280.42	278.39
1933-1934	278.26	277.64	276.86	277.58	280.96	280.38	285.04	284.14	284.09	283.14	280.72	278.62
1934-1935	278.55	278.20	278.73	281.17	283.23	281.23	281.20	284.37	283.14	283.50	281.93	279.32
1935-1936	277.32	275.01	274.30	273.13	277.33	278.48	285.48	283.95	282.22	280.91	279.07	277.06
1936-1937	275.97	274.43	273.12	280.27	280.85	279.18	281.83	284.30	285.19	284.06	282.09	281.43
1937-1938	279.80	278.13	280.96	279.49	279.19	279.73	280.86	282.48	283.04	284.87	285.14	280.58
1938-1939	281.12	279.83	278.23	280.01	279.17	281.31	282.72	283.74	282.57	280.86	278.48	276.67
1939-1940	274.62	272.85	273.10	273.18	274.28	274.70	280.08	284.55	285.11	283.53	282.87	280.63
1940-1941	278.35	275.88	276.19	276.21	276.22	278.63	279.70	280.39	280.01	280.07	278.99	277.15
1941-1942	274.75	272.38	270.88	270.02	270.95	273.39	282.29	281.65	281.25	280.34	279.81	278.31
1942-1943	276.16	274.55	275.40	280.05	279.69	280.00	280.98	281.53	283.91	282.46	280.43	278.21
1943-1944	275.93	274.41	273.57	271.84	270.65	270.52	273.95	277.75	277.50	276.20	273.86	271.20
1944-1945	271.68	270.27	273.47	277.37	279.19	279.43	283.76	283.73	283.88	283.76	282.03	279.81
1945-1946	277.63	275.45	275.88	280.85	281.92	282.59	283.71	283.56	284.67	283.41	281.23	282.51
1946-1947	281.16	279.95	278.30	277.97	279.17	279.62	283.18	283.87	284.50	283.91	282.73	280.97
1947-1948	279.29	277.37	279.63	279.66	277.97	280.01	285.22	284.61	285.56	284.69	282.83	281.01
1948-1949	278.73	277.01	278.12	279.00	279.00	281.56	282.64	284.16	284.66	282.50	280.17	278.10
1949-1950	276.05	273.94	272.40	272.07	273.29	275.58	280.13	282.78	284.07	283.58	281.33	279.64
1950-1951	277.64	275.63	275.99	277.74	279.77	282.17	283.41	284.46	285.08	284.19	282.41	280.57
1951-1952	278.54	276.71	281.24	283.40	282.84	281.44	283.39	284.31	285.10	283.92	281.34	280.02
1952-1953	277.76	275.37	273.52	272.74	278.12	282.29	285.13	284.68	284.49	282.38	280.50	278.36
1953-1954	276.08	274.38	274.86	279.60	280.19	281.50	283.75	284.92	284.48	283.05	281.11	280.22
1954-1955	282.61	281.65	282.94	284.57	281.49	282.33	282.66	284.05	284.35	283.65	281.04	282.47

TABLE 5A (Continued)  
SCITUATE RESERVOIR ELEVATIONS  
YEARS ENDED SEPTEMBER 30  
1st of Month

Year	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.
1955-1956	279.97	285.21	284.60	281.10	282.20	282.41	282.18	285.06	283.80	282.97	281.39	278.96
1956-1957	276.87	274.79	274.14	276.52	278.15	279.67	282.10	284.36	283.34	281.00	278.38	275.91
1957-1958	273.47	271.19	269.42	270.66	279.27	280.98	284.82	285.62	284.67	283.80	282.10	280.42
1958-1959	279.27	279.43	279.32	278.74	278.12	279.12	282.98	284.30	283.82	283.61	283.91	281.28
1959-1960	279.01	278.35	279.54	282.60	282.15	284.19	283.12	284.27	284.62	282.55	280.89	278.84
1960-1961	279.00	278.37	279.44	280.03	278.86	281.01	282.99	284.92	285.35	283.23	281.41	279.11
1961-1962	279.99	279.76	279.36	278.81	280.96	279.87	283.34	284.04	284.15	283.45	281.29	279.08
1962-1963	277.14	277.54	280.09	280.12	278.98	279.05	283.61	283.64	284.54	283.55	282.41	280.07
1963-1964	278.08	275.77	274.90	275.36	280.15	280.37	282.17	284.68	283.53	281.43	279.43	277.21
1964-1965	274.98	272.78	271.28	273.08	273.83	277.38	280.27	281.38	281.06	279.60	277.26	274.89
1965-1966	272.71	270.70	269.01	267.69	266.76	268.84	272.57	272.61	273.71	275.84	274.08	272.00
1966-1967	270.63	269.64	271.24	271.94	274.09	275.21	280.45	283.59	285.27	285.05	284.30	282.48
1967-1968	280.59	279.74	279.97	281.26	279.15	279.05	285.30	284.18	284.21	284.41	281.48	279.26
41 Years Average	277.40	276.20	276.45	277.24	278.24	279.16	282.07	283.19	283.29	282.44	280.68	278.84
41 Years Maximum	282.87	285.21	284.60	284.57	284.20	284.32	285.48	285.62	285.56	285.05	285.14	283.08
41 Years Minimum	269.80	267.58	266.14	264.86	265.82	267.39	272.57	272.61	273.71	275.84	273.86	271.20



TABLE 6

## SCITUATE WATERSHED

(92.8 Square Miles)

DRAFT AND YIELD - YEAR ENDED SEPTEMBER 30, 1968

1967 1968	DRAFT FROM SCITUATE RESERVOIR Million Gallons			WATERSHED YIELD Million Gallons					
	To River Over Spill- way	Below Gainer Dam Through Gate- house	Total	To Water Purification Works	Total For Month	Average per Day	For Month	Average per Day 53-Year Mean 1967-1968	1916-1968
October	0	623.70	623.70	1,587.73	2,211.43	71.34	1,294.43	41.75	42.66
November	0	674.26	674.26	1,436.48	2,110.74	70.36	2,415.74	80.52	98.38
December	0	4,387.93	4,387.93	1,372.87	5,760.80	185.83	7,268.80	234.48	127.98
January	0	5,329.08	5,329.08	1,508.88	6,837.96	220.58	4,690.96	151.32	145.67
February	0	3,142.95	3,142.95	1,401.57	4,544.52	156.71	4,455.52	153.64	156.99
March	812.26	3,266.72	4,078.98	1,499.14	5,578.12	179.94	12,142.12	391.68	243.99
April	74.05	2,669.69	2,743.74	1,524.22	4,267.96	142.27	3,231.96	107.73	202.67
May	18.83	1,127.67	1,146.50	1,668.34	2,814.84	90.80	2,865.84	92.45	124.34
June	70.86	1,643.09	1,713.95	1,676.58	3,390.53	113.02	3,638.53	121.28	62.90
July	8.63	1,760.89	1,769.52	1,996.43	3,765.95	121.48	436.95	14.10	32.26
August	0	609.08	609.08	1,912.79	2,521.87	81.35	49.87	1.61	26.53
September	0	494.69	494.69	1,764.16	2,258.85	75.30	181.85	6.06	36.02
For Year	*984.63	25,729.75	26,714.38	19,349.19	46,063.57	125.86	42,672.57	116.59	108.09

\*Includes Flashboard Leakage.

TABLE 7

## SCITUATE WATERSHED - REFORESTATION

## NUMBER AND KINDS OF TREES PLANTED IN VARIOUS YEARS

Planted During Calendar Year	Fraser Fir	Balsam Fir	Red Pine	White Pine	Douglas Fir	Austrian Pine	Scotch Pine	Jack Pine	White Spruce	Norway Spruce	Hemlock	Larch	Total Number Planted Yearly
1925	0	0	160,000	40,000	0	0	0	0	0	0	0	0	200,000
1927	0	0	60,000	150,000	0	0	0	0	0	0	0	0	210,000
1928	0	0	10,000	10,000	0	0	0	0	0	0	0	0	20,000
1929	0	0	10,000	75,000	0	0	0	0	0	0	0	0	85,000
1930	0	0	40,000	40,000	0	0	0	0	0	0	0	0	80,000
1931	0	0	40,000	50,000	0	0	0	0	9,000	0	0	0	99,000
1932	0	0	40,000	40,000	0	0	0	0	20,000	0	0	0	100,000
1933	0	0	0	0	0	0	0	0	0	0	0	0	0
1934 & 1935	0	0	755,000	255,000	0	36,000	136,000	4,000	505,000	204,000	3,000	0	1,898,000
1936	0	0	453,700	111,000	0	14,400	0	0	20,000	15,000	26,000	0	640,100
1937	0	0	481,100	0	0	0	0	0	213,200	0	0	0	694,300
1938	0	0	229,000	21,693	0	0	0	0	0	0	0	0	250,693
1939	0	0	8,000	761,000	0	0	0	50,000	0	0	0	0	819,000
1940	0	0	267,387	618,828	0	45,916	0	67,750	0	0	0	0	999,881
1941	0	0	51,000	295,650	0	0	0	0	34,350	0	0	0	381,000
1942	0	0	0	308,120	0	0	0	0	0	0	0	0	308,120
1943	0	0	0	0	0	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	0	0	0	0	0	0	0
1947	0	0	0	0	0	0	0	0	0	0	0	0	0
1948	0	0	0	0	0	0	0	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	0	0	0	0	0
1950	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 7 (Continued)

## SCITUATE WATERSHED - REFORESTATION

## NUMBER AND KINDS OF TREES PLANTED IN VARIOUS YEARS

Planted During Calendar Year	Fraser Fir	Balsam Fir	Red Pine	White Pine	Douglas Fir	Austrian Pine	Scotch Pine	Jack Pine	White Spruce	Norway Spruce	Hemlock	Larch	Total Number Planted Yearly
1951	0	0	0	1,500	12,000	0	0	0	0	0	0	0	13,500
1952	0	0	20,000	0	0	0	0	0	10,000	0	0	10,000	40,000
1953	0	0	10,000	0	0	0	0	0	6,000	0	0	0	16,000
1954	0	2,000	0	0	2,000	0	0	0	0	0	0	6,000	10,000
1955	0	0	0	5,000	0	0	0	0	0	0	0	5,000	10,000
1956	0	0	0	5,000	0	4,500	0	0	0	0	0	0	9,500
1957	0	0	0	6,000	0	0	0	0	0	0	0	0	6,000
1958	0	0	2,700	2,000	0	0	0	0	0	0	0	0	4,700
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	140	540	6,874	784	405	0	0	3,401	49	0	3,451	15,654
1961	0	0	0	2,300	144	0	0	0	0	0	2,000	0	4,444
1962	0	0	0	5,000	0	0	0	0	150	0	2,000	2,000	9,150
1963	0	0	0	5,000	0	0	0	0	170	0	5,000	5,000	15,170
1964	0	0	0	5,000	0	0	0	0	510	0	5,000	5,000	15,510
1965	1,000	2,000	0	5,000	0	0	0	0	0	0	10,000	5,000	23,000
1966	0	0	0	5,000	0	0	0	0	0	0	5,000	5,000	15,000
1967	0	0	0	1,000	0	0	0	0	0	0	3,000	1,000	5,000
1968	0	0	0	2,000	1,000	0	0	0	0	0	2,000	1,000	*6,200
Totals	1,000	4,140	2,638,427	2,832,965	15,928	101,221	136,000	121,750	821,781	219,049	63,000	48,451	*7,003,922

\*Includes 200 Black Walnut planted this year.



TABLE 8

## GAINER DAM HYDRO-ELECTRIC PLANT\*

POWER STATISTICS ON THE BASIS OF THE "CONTRACT YEAR" WITH  
THE NARRAGANSETT ELECTRIC COMPANY

Contract Year	KWH Generated at Gainer Dam	KWH Used at Gainer Dam and Water Purification Works	Net KWH Delivered to Narragansett Electric Co.	Payment Received
(Period June 20-30, 1930)	87,000	6,470	75,100	\$ 300.40
July 1930-June 1931	3,023,000	152,940	2,758,340	20,000.00
July 1931-June 1932	4,201,500	158,070	3,980,570	19,600.00
July 1932-June 1933	7,024,900	155,210	6,697,656	26,790.62
July 1933-June 1934	5,080,900	152,420	4,837,371	19,349.48
July 1934-June 1935	7,102,900	174,710	6,756,101	27,024.40
July 1935-June 1936	5,761,200	173,530	5,394,176	21,576.70
July 1936-June 1937	5,626,000	174,110	5,262,807	21,051.23
July 1937-June 1938	6,438,300	156,710	6,069,927	24,279.71
July 1938-June 1939	8,915,000	159,860	8,457,980	33,831.92
July 1939-June 1940	4,681,100	231,850	4,329,115	17,316.46
July 1940-June 1941	3,291,200	185,540	2,982,991	16,000.00
July 1941-June 1942	2,585,300	194,250	2,322,916	15,600.00
July 1942-June 1943	4,655,800	170,520	4,372,359	17,489.44
July 1943-June 1944	2,290,100	183,250	2,096,811	14,597.25
July 1944-June 1945	4,146,200	187,080	3,879,622	15,518.49
July 1945-June 1946	4,754,100	200,200	4,460,596	17,343.70
July 1946-June 1947	3,494,400	251,270	3,224,049	13,600.00
July 1947-June 1948	5,576,900	249,940	5,313,209	21,252.84
July 1948-June 1949	3,790,500	264,160	3,521,404	14,085.62
July 1949-June 1950	1,972,200	303,460	1,548,000	9,288.00
July 1950-June 1951	4,965,900	322,220	4,476,900	26,861.40
July 1951-June 1952	6,381,400	329,080	5,836,700	35,020.20
July 1952-June 1953	4,993,400	351,080	4,429,900	26,579.40
July 1953-June 1954	3,945,700	389,050	3,389,000	20,334.00
July 1954-June 1955	6,776,900	422,250	6,111,000	36,666.00
July 1955-June 1956	9,521,700	480,300	8,747,900	52,487.40
July 1956-June 1957	2,195,400	466,480	1,608,100	9,648.60
July 1957-June 1958	4,141,000	541,760	3,432,900	**20,597.40
July 1958-June 1959	4,987,600	504,310	4,297,300	25,783.80
July 1959-June 1960	5,754,000	515,280	5,078,000	30,468.00
July 1960-June 1961	4,912,500	583,050	4,159,400	24,956.40
July 1961-June 1962	3,998,900	614,800	3,267,600	19,605.60
July 1962-June 1963	2,116,200	679,400	1,334,800	8,008.80
July 1963-June 1964	2,550,450	735,790	1,716,800	10,418.40
July 1964-June 1965	184,800	759,140	0	0.00
July 1965-June 1966	303,700	746,340	0	0.00
July 1966-June 1967	1,195,100	748,410	283,500	4,857.60
July 1967-June 1968	5,370,900	795,380	4,232,000	23,916.08

\*1875 KVA 3 Phase, 60 Cycle, 2300 Volts, 80 Ft. Head Turbo-Generator

\*\*Involves net exchange for portion of previous year.

TABLE 9

## WATER PURIFICATION WORKS

OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	Influent Aerator	Plant Influent		Water Filtered		Wash Water		Plant Effluent		Plant Effluent		Number of Filters	
		Mil. Gals.		Mil. Gals.		Mil. Gals.		Mil. Gals.		Flow		in Operation	
	Hours Operated	Total	Average per day	Total	Average per Day	Total	Average per Day Filt.	Total	Average per Day	Hours	Max.	Min.	Avg.
1967													
1968													
October	744.4	1,587.732	51.217	1,533.295	49.461	10.362	0.334	0.7	49.127	745.0	12.0	3.5	8.4
November	689.5	1,436.483	47.883	1,386.462	46.215	15.903	0.530	1.1	45.685	691.0	14.0	1.0	7.9
December	731.4	1,372.868	44.286	1,379.527	44.501	18.651	0.602	1.4	43.899	729.5	12.0	1.0	8.2
January	740.5	1,508.878	48.673	1,488.225	48.007	18.151	0.586	1.2	47.422	742.8	12.5	4.0	9.8
February	672.5	1,401.571	48.330	1,381.735	47.646	17.940	0.619	1.3	47.027	672.8	14.0	4.0	9.7
March	744.0	1,499.135	48.359	1,476.475	47.628	15.183	0.490	1.0	47.138	744.0	13.0	5.0	9.7
April	705.3	1,524.218	50.807	1,485.751	49.525	13.684	0.456	0.9	49.053	705.1	13.0	2.0	9.2
May	742.3	1,668.338	53.817	1,589.656	51.279	17.131	0.553	1.1	50.727	744.0	13.0	4.0	8.7
June	720.0	1,676.583	55.886	1,603.917	53.464	14.174	0.472	0.9	52.991	720.0	13.0	4.0	9.1
July	744.0	1,996.427	64.401	1,921.140	61.972	11.806	0.381	0.6	61.591	744.0	14.0	4.5	9.4
August	743.8	1,912.790	61.703	1,843.398	59.464	9.659	0.312	0.5	59.153	744.0	12.5	4.0	8.1
September	720.0	1,764.164	58.805	1,689.987	56.333	8.049	0.268	0.5	56.065	720.0	12.0	4.0	8.9
Totals	8,697.7	19,349.187		*18,779.568		170.693				8,702.2			
Average	724.8		52.867		51.310		0.466	0.9	50.843	725.2			8.9

Raw water treated with Ferri-Floc before Influent Aeration.

Quicklime added to Ferri-Floc treated water in conduit to tangential mixer.

Chlorine added to water before filtration.

Sodium Silicofluoride added to water after filtration.

Raw water drawn from lower intake at Gainer Memorial Dam all year.

\*Includes 0.465 M.G. to refill wash water pipe and tank on April 28.

TABLE 9 (Continued)

## WATER PURIFICATION WORKS

OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	Average Rate of Filtration per Filter M.G.D.	Number of Filters Washed Total	Average Filter Run Hours	Ferri-Floc Used		Quiklime Used		Chlorine Used		Sodium Silicofluoride Used	
				Lbs.	Avg. Gr. per Day Gal.	Lbs.	Avg. Gr. per Day Gal.	Lbs.	Avg. Parts per Day Mil.	Lbs.	Avg. Parts per Day Mil.*
1967											
1968											
October	5.69	76	82.55	143,227	4,520 0.63	162,337	5,237 0.71	3,960	126 0.31	18,217	588 0.85
November	5.66	120	4.0 48.65	136,906	4,564 0.67	119,674	3,969 0.58	5,748	192 0.50	16,277	543 0.85
December	5.41	145	4.7 42.23	131,519	4,243 0.67	118,264	3,816 0.60	6,553	211 0.57	16,235	524 0.86
January	4.90	158	5.1 45.98	144,483	4,561 0.67	126,661	4,086 0.59	7,465	241 0.60	17,471	564 0.85
February	4.90	154	5.3 55.91	134,049	4,822 0.67	120,379	4,151 0.60	6,919	239 0.60	16,203	559 0.85
March	4.92	130	4.2 55.45	143,006	4,513 0.67	135,584	4,374 0.63	7,410	239 0.60	17,355	560 0.85
April	5.39	118	3.9 64.47	144,968	4,832 0.67	134,877	4,496 0.62	7,870	262 0.64	17,464	582 0.85
May	5.91	126	4.1 57.89	157,517	5,081 0.66	150,132	4,943 0.63	8,504	274 0.64	18,264	589 0.85
June	5.88	102	3.4 70.11	159,870	5,329 0.67	152,957	5,099 0.64	7,438	248 0.56	16,796	627 0.85
July	6.62	82	2.6 92.24	190,829	5,156 0.67	189,127	6,101 0.66	8,782	283 0.55	23,041	743 0.88
August	7.34	67	2.2 88.62	161,369	5,205 0.69	179,360	5,786 0.66	6,382	206 0.42	22,518	726 0.89
September	6.30	56	1.9 114.30	127,275	4,243 0.61	168,001	5,600 0.67	4,719	157 0.34	20,793	693 0.89
Totals		1,334		1,775,018		1,757,403		81,770		222,624	
Average	5.75	3.6	60.87		4,850 0.64		4,802 0.64		223 0.52		608 0.86

Total filter hours for year, 76,340.59; average per day, 214.05.

Average quantity of water filtered per run, 14.59 m.g.

\*Dosage expressed as p.p.m. of Fluoride ion.

TABLE 10

## WATER PURIFICATION WORKS

CHEMICALS USED - YEAR ENDED SEPTEMBER 30, 1968

	Pounds of Chemicals Used Total	Lbs. per Day (Average)	Total Gallons of Water Treated	Cost of Chemicals	Pounds of Chemicals Used per 1,000,000 Gals. of Water Treated (Average)	Cost of Chemicals per 1,000,000 Gals. of Water Treated
Ferri-Floc	1,775,018	4,850	19,332,989,000	\$49,305.60	91.81	\$2.55
Quicklime	1,757,403	4,802	19,341,195,000	18,371.53	90.86	0.95
Chlorine	81,770	223	18,775,366,000	5,519.48	4.36	0.29
Sodium Silicofluoride	222,624	608	18,363,677,000	20,708.09	12.12	1.13
Totals	3,836,815			\$93,904.70		\$4.92

Price of Ferri-Floc--From Oct. 1 to Oct. 31, 1967--\$55.05 per ton;  
 from Nov. 1, 1967 to Sept. 29, 1968--\$55.65 per ton.  
 Delivery received on Sept. 30, 1968--\$58.25 per ton.

Price of Quicklime---From Oct. 1, 1967 to August 8, 1968--\$20.90 per ton;  
 from Aug. 9 to Sept. 30, 1968--\$21.00 per ton.

Price of Chlorine----From Oct. 1, 1967 to Sept. 30, 1968--\$135.00 per ton.

Price of Sodium Silicofluoride--\$156.70 per ton as of Oct. 1, 1967.  
 Deliveries received on and after  
 Oct. 2, 1967 were purchased at  
 \$188.00 per ton.



TABLE 11

## WATER PURIFICATION WORKS

## \*CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER IN PROCESS OF FILTRATION

YEAR ENDED SEPTEMBER 30, 1968

	Monthly Averages												Avg. for Year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
pH													
Raw	5.8	6.2	6.2	6.2	6.1	6.0	6.0	6.0	5.9	5.8	5.9	5.7	6.0
Aerated Influent	4.2	4.2	4.1	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.4	4.5	4.3
Treated	10.1	10.1	10.2	10.3	10.3	10.2	10.2	10.3	10.2	10.2	10.2	10.1	10.2
Settled	10.1	10.1	10.2	10.3	10.3	10.2	10.2	10.2	10.2	10.1	10.2	10.0	10.2
Filtered	10.0	10.1	10.1	10.3	10.2	10.2	10.1	10.1	10.2	10.1	10.1	10.0	10.1
**Effluent	10.0	10.1	10.1	10.3	10.2	10.2	10.1	10.1	10.2	10.1	10.1	10.0	10.1
Tap	10.0	10.0	10.1	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	9.9	10.1
Acidity													
Raw	6.3	1.6	1.6	2.0	2.3	2.8	2.3	2.6	3.4	4.8	6.3	7.6	3.6
Aerated Influent	8.0	6.7	6.6	7.1	7.6	7.6	7.3	7.2	7.4	7.9	8.0	7.6	7.4
Phenolphthalein Alkalinity													
Treated	10.4	8.2	8.7	8.5	8.2	9.2	8.9	9.0	9.4	10.0	10.1	10.4	9.3
Settled	10.0	7.7	8.2	8.3	8.2	9.0	8.8	8.5	8.8	9.1	9.6	9.9	8.8
Filtered	9.7	6.9	7.4	7.5	7.5	8.2	8.0	7.7	8.1	8.5	9.0	9.5	8.2
**Effluent	9.7	6.9	7.3	7.4	7.4	8.1	7.9	7.7	8.1	8.5	9.0	9.5	8.1
Tap	7.6	5.4	5.6	5.6	5.4	5.8	6.0	6.0	6.3	6.7	7.1	7.6	6.3
Methyl Orange Alkalinity													
Raw	3.7	3.2	3.6	3.5	3.4	3.3	3.4	3.3	3.2	3.4	3.7	4.2	3.5
Treated	16.9	12.7	13.7	13.6	13.5	14.7	14.0	14.3	15.0	16.1	16.6	17.8	14.9
Settled	16.8	12.5	13.3	13.4	13.6	14.7	14.1	13.9	14.6	15.5	16.4	17.3	14.7
Filtered	16.4	11.7	12.4	12.4	12.7	13.7	13.2	13.2	13.9	14.8	15.8	17.0	13.9
**Effluent	16.3	11.7	12.4	12.3	12.6	13.6	13.1	13.2	13.9	14.8	15.8	17.0	13.9
Tap	15.1	10.6	11.2	10.9	11.0	12.1	11.9	12.0	12.5	13.5	14.2	15.5	12.5
Color													
Raw	11	8	9	13	13	13	13	12	9	8	10	14	11
Settled	16	15	18	23	25	22	22	17	15	11	12	13	17
**Effluent	4	4	3	5	7	5	6	5	4	3	3	3	4
Tap	5	4	4	6	7	6	6	5	4	3	3	4	5
Turbidity													
Raw	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.2
Settled	.3	.3	.3	.4	.5	.5	.4	.3	.3	.3	.2	.3	.3
**Effluent	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1
Hardness													
Raw	12	11	12	11	12	12	11	11	11	11	11	11	11
**Effluent	31	27	27	27	28	29	28	28	28	29	29	30	28
Tap	31	27	28	27	28	29	28	28	28	29	29	30	29
Iron													
Raw	0.14	0.07	0.07	0.09	0.08	0.08	0.08	0.05	0.03	0.04	0.09	0.26	0.09
Settled	.51	.56	.68	.99	1.09	.95	.91	.56	.56	.35	.37	.30	.65
**Effluent	.01	.00	.00	.01	.02	.01	.01	.01	.00	.00	.00	.00	.01
Tap	.03	.03	.02	.05	.05	.05	.03	.02	.02	.02	.02	.02	.03
Manganese													
Raw	0.14	0.04	0.03	0.05	0.02	0.02	0.03	0.02	0.02	0.02	0.09	0.25	0.06
Settled	.05	.01	.01	.01	.01	.01	.01	.00	.00	.00	.01	.05	.01
**Effluent	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Tap	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Fluoride													
Raw	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
**Effluent	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
Tap	1.00	.98	1.00	1.00	.99	1.00	.98	.94	.95	.96	.98	1.00	.98
Chlorine Residual													
Filtered	0.11	0.09	0.11	0.11	0.10	0.08	0.08	0.10	0.10	0.11	0.10	0.11	0.10
**Effluent	.11	.08	.11	.11	.11	.10	.07	.09	.08	.10	.10	.11	.10
28 Phenix Ave. (C)	.07	.05	.06	.06	.06	.05	.03	.04	.05	.06	.06	.08	.06
Neut. Reservoir	.03	.03	.03	.03	.03	.03	.02	.01	.02	.03	.03	.04	.03
Tap	.04	.03	.04	.03	.03	.02	.01	.01	.01	.02	.04	.05	.03

\*Parts per million, except pH.

\*\*Before treatment with sodium silicofluoride.

TABLE 12

## WATER PURIFICATION WORKS

\*CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analyses	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
Color													
Ponaganset Reservoir	13	7	7	7	7	12	6	2	12	7	8	17	9
Coventry Brook	33	28	18	15	9	13	23	23	32	23	22	22	22
Wilbur Brook	115	82	38	28	23	28	46	60	80	120	90	43	63
Westconnaug Reservoir	17	12	13	12	12	8	17	12	11	8	5	8	11
Barden Reservoir	56	33	23	22	13	16	13	22	22	20	130	27	33
Cork Brook	23	14	12	13	7	10	13	13	11	17	**	7	13
Rush Brook	48	22	18	18	15	13	28	32	29	42	18	12	25
Huntinghouse Brook	38	23	17	13	12	12	8	23	28	17	20	8	18
Harrisdale Brook	22	17	13	14	11	13	18	22	17	13	15	8	15
Blanchard Brook	160	90	65	60	65	37	85	120	220	180	300	120	125
Moswansicut Pond	17	12	13	18	17	15	15	13	12	13	12	14	14
Regulating Reservoir	37	28	22	20	17	7	13	13	18	12	13	12	18
Quonopaug Brook	135	85	48	28	28	6	85	110	120	160	350	160	110
Hemlock Brook	56	42	33	22	22	22	19	22	22	23	27	31	28
Betty Pond Stream	23	16	18	11	7	10	12	12	16	18	27	28	17
Spruce Brook	85	48	28	23	12	18	28	43	54	62	70	40	43
Brandy Brook	67	65	43	43	33	33	42	22	60	38	30	22	42
Moswansicut-South	22	13	8	11	7	17	18	33	22	37	60	60	26
Windsor Brook	23	17	15	7	7	12	18	22	28	32	**	12	18
Paine Pond	18	37	30	22	27	22	16	42	65	110	90	70	46
Unnamed Brook-A	110	52	25	22	26	22	23	33	75	**	**	**	43
Unnamed Brook-B	10	8	7	12	8	8	12	13	17	**	**	**	11
Turbidity													
Ponaganset Reservoir	0.4	0.4	0.2	0.1	0.1	0.4	0.1	0.1	0.2	0.2	0.4	1.5	0.3
Coventry Brook	.1	.1	.1	.0	.1	.1	.1	.1	.2	.2	.2	.0	.1
Wilbur Brook	.3	.1	.2	.1	.1	.1	.1	.3	.3	.3	.4	.2	.2
Westconnaug Reservoir	.2	.1	.1	.1	.2	.1	.1	.2	.3	.2	.2	.1	.2
Barden Reservoir	.2	.2	.1	.1	.2	.1	.1	.3	.2	.2	1.7	.4	.3
Cork Brook	.1	.1	.1	.1	.1	.1	.1	.1	.2	.1	**	.1	.1
Rush Brook	.3	.2	.2	.1	.4	.2	.2	.3	.6	.7	.2	.2	.3
Huntinghouse Brook	.2	.1	.1	.1	.2	.1	.1	.3	.3	.2	.2	.1	.2
Harrisdale Brook	.1	.1	.2	.1	.1	.1	.3	.2	.2	.1	.2	.1	.2
Blanchard Brook	.1	.1	.1	.1	.2	.1	.2	.2	.2	.8	.5	.3	.2
Moswansicut Pond	.3	.1	.1	.1	.1	.1	.1	.2	.3	.3	.2	.4	.2
Regulating Reservoir	.2	.2	.1	.2	.2	.1	.1	.1	.2	.2	.2	.1	.2
Quonopaug Brook	.3	.1	.1	.1	.1	.2	.2	.4	.3	.3	1.3	.3	.3
Hemlock Brook	.2	.1	.1	.1	.1	.1	.1	.2	.3	.3	.2	.6	.2
Betty Pond Stream	.1	.2	.1	.1	.2	.1	.1	.2	.2	.2	.2	.3	.2
Spruce Brook	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.3	.1
Brandy Brook	.4	.1	.1	.2	.2	.1	.2	.2	.3	.3	.3	.2	.2
Moswansicut-South	.6	.1	.1	.2	.2	.2	.6	.8	.7	1.1	2.5	1.8	.7
Windsor Brook	.3	.4	.1	.1	.2	.1	.2	.1	.2	.2	**	.2	.2
Paine Pond	.3	.6	.7	.2	.8	.5	.2	.5	.8	1.0	1.4	3.5	.9
Unnamed Brook-A	.5	.5	.4	.2	.6	.5	.3	.6	.9	**	**	**	.5
Unnamed Brook-B	.1	.0	.1	.1	.1	.1	.1	.2	.2	**	**	**	.1

\*Parts per million.

\*\*No sample obtained--Dry.

NOTE: Unnamed Brook A is just north of Scituate Town Dump. Unnamed Brook B is southwest of the former Foster Nike Site.

TABLE 12 (Continued)

## WATER PURIFICATION WORKS

\*CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analyses	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
<b>Iron</b>													
Ponaganset Reservoir	0.28	0.07	0.05	0.13	0.10	0.08	0.05	0.03	0.25	0.23	0.50	0.52	0.19
Coventry Brook	.22	.18	.03	.03	.03	.04	.09	.05	.16	.20	.14	.24	.12
Wilbur Brook	.90	.26	.05	.14	.14	.12	.32	.70	.70	1.10	1.90	.34	.56
Westconnaug Reservoir	.15	.13	.03	.09	.14	.10	.20	.14	.25	.23	.05	.12	.14
Barden Reservoir	.85	.30	.05	.11	.16	.09	.08	.14	.33	.32	4.60	.65	.66
Cork Brook	.19	.13	.02	.07	.04	.03	.07	.07	.13	.15	**	.02	.08
Rush Brook	.58	.27	.22	.19	.27	.17	.28	.30	.65	1.60	.15	.42	.43
Huntinghouse Brook	.26	.07	.03	.14	.07	.06	.18	.18	.24	.33	.24	.16	.16
Harrisdale Brook	.23	.09	.10	.05	.11	.02	.10	.23	.14	.32	.09	.40	.16
Blanchard Brook	1.10	.35	.18	.32	.25	.24	.39	.50	1.20	1.00	1.75	1.70	.75
Moswansicut Pond	.10	.04	.06	.08	.11	.04	.03	.02	.02	.05	.03	.04	.05
Regulating Reservoir	.47	.15	.13	.19	.18	.02	.02	.08	.21	.24	.05	.10	.15
Quonopaug Brook	1.10	.28	.15	.15	.05	.05	.30	.40	.70	1.10	10.00	1.08	1.28
Hemlock Brook	.75	.28	.10	.13	.04	.08	.07	.19	.11	.34	.50	.80	.28
Betty Pond Stream	.10	.03	.03	.08	.12	.02	.05	.02	.05	.30	.12	.14	.09
Spruce Brook	.38	.22	.05	.07	.14	.05	.10	.14	.17	.56	.70	.74	.28
Brandy Brook	.43	.20	.12	.20	.03	.12	.27	.16	.16	.64	.24	.15	.23
Moswansicut-South	.37	.26	.20	.70	.04	.13	.24	2.00	.46	3.00	2.50	1.50	.95
Windsor Brook	.11	.03	.05	.14	.18	.02	.07	.08	.17	.23	**	.15	.11
Paine Pond	.25	.36	.30	.23	.48	.10	.12	.60	1.50	2.30	1.45	.56	.69
Unnamed Brook-A	1.40	.40	.25	.24	.35	.18	.34	.42	1.60	**	**	**	.58
Unnamed Brook-B	.26	.09	.20	.10	.21	.03	.07	.09	.27	**	**	**	.15
<b>Manganese</b>													
Ponaganset Reservoir	0.14	0.14	0.16	0.11	0.16	0.14	0.17	0.09	0.12	0.15	0.10	0.14	0.14
Coventry Brook	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
Wilbur Brook	.03	.01	.00	.02	.01	.00	.01	.01	.00	.00	.18	.00	.02
Westconnaug Reservoir	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
Barden Reservoir	.02	.00	.00	.02	.02	.04	.00	.00	.00	.00	.22	.04	.03
Cork Brook	.04	.03	.00	.02	.02	.04	.00	.00	.00	.01	**	.00	.01
Rush Brook	.04	.04	.00	.08	.16	.02	.01	.00	.03	.14	.08	.00	.05
Huntinghouse Brook	.01	.00	.00	.02	.00	.00	.01	.02	.00	.00	.01	.00	.01
Harrisdale Brook	.02	.01	.00	.02	.00	.00	.04	.00	.00	.01	.01	.00	.01
Blanchard Brook	.02	.02	.01	.02	.03	.01	.00	.03	.00	.03	.04	.02	.02
Moswansicut Pond	.04	.00	.00	.01	.00	.01	.00	.04	.00	.06	.00	.04	.02
Regulating Reservoir	.04	.00	.00	.05	.00	.00	.02	.00	.00	.00	.00	.00	.01
Quonopaug Brook	.08	.00	.00	.00	.03	.02	.00	.00	.00	.00	.04	.04	.02
Hemlock Brook	.03	.05	.04	.02	.01	.08	.01	.00	.00	.02	.00	.00	.02
Betty Pond Stream	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00	.00	.00
Spruce Brook	.01	.02	.00	.00	.00	.00	.00	.00	.00	.00	.01	.02	.01
Brandy Brook	.00	.00	.00	.02	.01	.01	.00	.00	.00	.02	.01	.00	.01
Moswansicut-South	.65	.04	.01	.02	.02	.00	.02	.15	.00	.28	.16	.04	.12
Windsor Brook	.02	.01	.01	.02	.00	.00	.00	.00	.00	.00	**	.15	.02
Paine Pond	.02	.04	.06	.10	.10	.11	.04	.03	.02	.02	.04	.05	.05
Unnamed Brook-A	.01	.04	.05	.04	.14	.03	.02	.04	.08	**	**	**	.06
Unnamed Brook-B	.20	.03	.01	.04	.04	.00	.06	.04	.00	**	**	**	.05

\*Parts per million.

\*\*No sample obtained--Dry.

NOTE: Unnamed Brook A is just north of Scituate Town Dump. Unnamed Brook B is southwest of the former Foster Nike Site.

TABLE 12 (Continued)

## WATER PURIFICATION WORKS

\*CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analyses	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
pH													
Ponaganset Reservoir	4.9	4.7	4.7	4.8	4.9	4.6	4.8	4.8	4.8	4.8	4.9	4.9	4.8
Coventry Brook	6.1	6.1	5.7	5.9	6.0	5.4	6.2	6.1	6.5	7.0	6.6	6.2	6.2
Wilbur Brook	5.6	5.4	5.6	5.3	5.7	5.2	5.8	5.9	6.1	6.7	6.6	6.2	5.8
Westconnaug Reservoir	6.3	5.8	5.9	5.8	6.2	5.5	6.3	6.5	6.4	6.6	7.0	6.7	6.3
Barden Reservoir	6.2	5.7	5.6	5.6	5.7	5.0	6.1	6.0	6.2	6.7	6.2	6.3	5.9
Cork Brook	5.8	5.5	6.0	5.6	6.0	5.2	6.2	6.2	6.0	6.2	**	5.8	5.9
Rush Brook	6.3	5.8	6.1	6.1	6.4	5.8	6.3	6.4	6.1	6.1	6.2	6.0	6.1
Huntinghouse Brook	6.3	5.9	6.1	6.0	6.1	5.7	6.4	6.5	6.5	6.5	6.8	6.6	6.3
Harrisdale Brook	6.5	6.0	6.0	6.2	6.3	6.0	6.4	6.7	6.8	6.6	7.0	6.8	6.4
Blanchard Brook	5.3	5.2	5.1	5.0	5.2	5.1	6.4	5.5	5.5	5.6	5.7	5.5	5.4
Moswansicut Pond	6.2	6.0	6.1	6.1	6.4	6.0	6.5	6.4	6.5	6.4	6.5	6.4	6.3
Regulating Reservoir	6.3	6.0	5.7	6.0	6.4	5.9	6.5	6.5	6.7	6.7	7.1	6.6	6.4
Quonopaug Brook	5.7	5.4	5.4	5.3	5.4	5.3	5.9	6.2	6.2	6.2	6.4	5.9	5.8
Hemlock Brook	5.8	5.1	5.3	5.2	5.8	5.0	5.9	5.9	6.0	6.0	6.5	6.2	5.7
Betty Pond Stream	6.1	6.0	6.1	5.7	5.6	5.5	6.1	5.9	5.9	6.1	6.3	6.1	6.0
Spruce Brook	5.6	5.2	6.1	5.4	5.8	5.3	6.0	5.8	5.6	6.1	6.2	6.0	5.8
Brandy Brook	6.4	6.3	6.3	6.5	6.7	6.2	6.4	6.3	6.5	6.6	6.8	6.6	6.5
Moswansicut-South	6.6	6.1	6.1	6.4	6.1	6.1	6.3	6.5	6.3	6.6	6.6	6.3	6.3
Windsor Brook	6.1	5.3	5.5	5.4	5.9	5.3	6.3	6.6	6.2	6.3	**	5.5	5.9
Paine Pond	5.6	6.2	5.7	5.4	5.6	5.3	5.8	5.8	5.8	5.8	6.0	6.4	5.8
Unnamed Brook-A	6.2	6.2	6.1	6.0	5.8	5.9	6.2	6.3	6.4	**	**	**	6.1
Unnamed Brook-B	5.1	5.6	5.4	5.7	5.4	5.4	5.6	5.4	5.5	**	**	**	5.5
Acidity													
Ponaganset Reservoir	4.0	4.5	3.5	6.0	8.5	9.0	3.5	3.5	3.5	3.0	3.5	3.0	4.6
Coventry Brook	5.5	3.5	2.5	2.5	4.0	4.0	3.5	3.5	3.5	3.0	4.0	5.0	3.7
Wilbur Brook	12.0	8.0	6.5	8.0	12.5	5.0	8.0	8.5	7.0	5.5	6.0	5.5	7.7
Westconnaug Reservoir	2.5	2.5	2.5	3.5	2.5	3.0	2.5	2.5	1.5	2.0	2.5	2.0	2.5
Barden Reservoir	2.5	3.0	3.0	3.0	3.0	4.0	2.5	2.5	2.0	2.0	7.5	2.5	3.1
Cork Brook	5.0	4.0	2.5	3.0	4.0	3.5	3.0	3.0	3.0	3.0	**	7.0	3.7
Rush Brook	3.5	4.5	2.5	2.5	4.5	2.5	2.5	4.0	5.5	9.0	7.5	8.0	4.7
Huntinghouse Brook	3.0	3.0	2.5	2.0	3.5	2.0	2.0	2.5	2.0	2.5	2.5	2.5	2.5
Harrisdale Brook	3.0	3.5	2.5	3.0	4.5	2.0	3.0	2.0	1.5	2.5	2.5	3.0	2.8
Blanchard Brook	10.5	9.0	8.5	10.0	25.5	5.5	7.5	7.5	9.0	12.5	14.0	13.0	11.0
Moswansicut Pond	2.5	2.0	1.5	2.0	3.0	2.5	2.0	1.5	1.5	2.5	2.0	2.5	2.1
Regulating Reservoir	3.5	4.0	4.0	6.0	4.5	2.5	2.0	2.0	1.5	2.0	1.5	3.0	3.0
Quonopaug Brook	13.0	8.5	8.0	8.0	21.5	6.0	8.0	7.5	7.0	11.0	16.0	15.5	10.8
Hemlock Brook	4.0	5.5	3.0	4.0	4.5	3.0	4.0	2.5	3.0	3.0	3.0	3.0	3.5
Betty Pond Stream	3.0	2.5	3.0	5.5	11.5	3.5	2.5	2.5	4.5	4.0	3.5	3.5	4.1
Spruce Brook	6.0	6.0	4.0	3.5	4.5	4.0	4.5	4.0	4.0	4.5	7.0	7.5	5.0
Brandy Brook	3.5	2.5	2.0	2.5	2.5	2.5	2.5	1.5	2.5	2.5	5.0	5.0	2.7
Moswansicut-South	2.0	9.0	3.0	4.5	8.0	5.0	3.0	3.5	3.5	7.0	6.0	14.0	5.7
Windsor Brook	3.5	3.5	4.5	4.5	6.5	3.5	2.5	2.0	2.5	3.0	**	5.0	3.7
Paine Pond	6.0	4.0	7.0	14.0	19.5	7.0	5.0	9.0	6.5	8.5	6.5	6.5	8.3
Unnamed Brook-A	10.5	7.5	4.5	9.5	31.0	3.5	8.0	9.0	6.5	**	**	**	10.0
Unnamed Brook-B	10.5	5.5	2.5	4.0	9.5	4.5	4.5	6.5	9.0	**	**	**	6.3

\*Parts per million, except pH.

\*\*No sample obtained--Dry.

NOTE: Unnamed Brook-A is just north of Scituate Town Dump. Unnamed Brook-B is southwest of the former Foster Nike Site.

TABLE 12 (Continued)

## WATER PURIFICATION WORKS

\*CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analyses	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
Alkalinity													
Ponaganset Reservoir	2.0	1.0	1.0	1.5	1.5	1.0	1.5	1.5	1.5	2.0	1.5	2.5	1.5
Coventry Brook	4.5	4.0	3.0	3.5	4.0	2.5	4.0	4.0	5.0	7.0	6.5	6.0	4.5
Wilbur Brook	4.5	2.5	2.5	2.5	3.5	2.0	4.5	5.0	6.0	8.0	9.5	7.0	4.8
Westconnaug Reservoir	5.5	3.5	3.0	3.0	4.5	3.0	5.5	4.0	4.5	6.5	7.0	7.5	4.8
Barden Reservoir	3.0	2.5	3.0	3.0	2.5	1.5	3.0	3.0	3.5	3.0	6.5	4.0	3.2
Cork Brook	2.5	2.0	2.5	3.0	3.5	2.5	3.5	3.0	3.5	4.5	**	5.0	3.2
Rush Brook	6.0	3.5	5.0	5.0	7.5	4.0	6.0	6.5	6.5	8.5	7.5	7.0	6.1
Huntinghouse Brook	6.0	3.0	4.0	4.0	6.5	3.0	6.5	7.0	7.0	10.5	13.0	11.0	6.8
Harrisdale Brook	9.0	6.0	6.0	6.0	7.0	4.5	7.5	8.0	8.0	11.0	12.0	10.5	8.0
Blanchard Brook	3.0	2.5	2.5	2.0	2.0	2.5	3.0	4.0	4.5	5.0	3.5	4.0	3.2
Moswansicut Pond	6.0	6.0	5.0	5.0	5.0	5.0	5.5	5.5	5.5	6.0	5.5	5.5	5.5
Regulating Reservoir	6.0	5.0	4.5	4.5	5.0	4.5	5.0	6.5	6.5	6.5	7.5	7.0	5.7
Quonopaug Brook	5.0	3.5	3.5	3.5	4.0	3.0	4.5	6.5	7.5	10.0	15.5	8.5	6.3
Hemlock Brook	3.5	1.5	2.5	3.0	3.0	1.5	2.5	3.0	3.0	4.0	4.0	4.0	3.0
Betty Pond Stream	4.0	4.5	3.5	4.0	4.0	3.0	4.0	2.5	3.0	5.0	3.5	4.5	3.8
Spruce Brook	3.0	2.0	2.5	2.5	2.5	2.0	3.0	3.0	2.5	5.0	5.5	7.0	3.4
Brandy Brook	8.5	7.0	6.0	6.5	7.5	5.0	7.5	5.0	8.0	9.5	10.0	11.0	7.6
Moswansicut-South	3.5	11.5	11.5	8.5	8.5	6.5	9.0	13.0	14.0	16.0	16.0	16.5	11.2
Windsor Brook	3.0	2.5	3.5	2.5	3.0	3.5	4.0	3.0	3.0	3.5	**	8.5	3.6
Paine Pond	3.0	3.5	3.5	3.0	4.5	4.0	4.0	4.5	5.0	5.0	4.0	4.0	4.0
Unnamed Brook-A	9.0	6.5	9.0	6.5	8.5	7.0	9.0	10.0	12.0	**	**	**	8.6
Unnamed Brook-B	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.0	**	**	**	2.6

\*Parts per million.

\*\*No sample obtained--Dry.

NOTE: Unnamed Brook A is just north of Scituate Town Dump. Unnamed Brook B is southwest of the former Foster Nike Site.



TABLE 13  
WATER PURIFICATION WORKS  
CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER  
IN VARIOUS PARTS OF THE DISTRIBUTION SYSTEM  
YEAR ENDED SEPTEMBER 30, 1968

	Monthly Averages												Avg. for
pH	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Year
Neutaconkanut Reservoir	9.9	10.0	10.0	10.2	10.2	10.1	10.1	10.1	10.0	10.0	10.0	9.9	10.0
28 Phenix Avenue, Cranston	10.0	10.0	10.1	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.0	9.9	10.1
Westminster St., Olneyville	10.0	10.0	10.1	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.1	9.9	10.1
1275 Reservoir Ave., Cranston	10.0	10.0	10.1	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.0	9.9	10.1
750 Reservoir Ave., Cranston	10.0	10.0	10.1	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.0	9.9	10.1
Biltmore Hotel	10.0	10.0	10.1	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	9.9	10.1
Dexter Manor	10.0	10.0	10.1	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.1	9.9	10.1
State Office Building	10.0	10.0	10.1	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.1	9.9	10.1
*Longview Reservoir	10.0	10.0	10.1	10.2	10.2	10.2	10.1	10.1	10.1	10.0	10.0	9.9	10.1
Crown Hotel	10.0	10.0	10.1	10.2	10.2	10.1	10.1	10.1	10.0	10.0	10.1	9.9	10.1
Phenolphthalein Alkalinity													
Neutaconkanut Reservoir	7.5	5.9	5.7	5.5	5.3	6.0	5.9	5.8	6.1	6.4	6.9	7.3	6.2
28 Phenix Avenue, Cranston	7.5	5.3	5.6	5.5	5.4	6.1	6.0	5.9	6.3	6.8	7.1	7.7	6.3
Westminster Street, Olneyville	7.6	5.4	5.7	5.5	5.5	6.1	6.0	6.0	6.3	6.7	7.1	7.7	6.3
1275 Reservoir Ave., Cranston	7.6	5.4	5.6	5.5	5.5	6.3	6.1	5.9	6.4	6.9	7.2	7.7	6.3
750 Reservoir Ave., Cranston	7.7	5.3	5.7	5.5	5.5	6.4	6.1	6.1	6.4	6.8	7.2	7.7	6.4
Biltmore Hotel	7.7	5.5	5.6	5.5	5.4	6.3	6.1	6.0	6.4	6.8	7.1	7.7	6.3
Dexter Manor	7.9	5.6	5.7	5.6	5.7	6.4	6.3	6.1	6.6	6.9	7.2	7.7	6.5
State Office Building	7.8	5.5	5.8	5.6	5.6	6.4	6.2	6.1	6.6	6.8	7.2	7.7	6.4
*Longview Reservoir	8.2	6.6	6.4	6.2	6.0	6.5	6.5	6.4	6.7	7.0	7.3	7.7	6.8
Crown Hotel	7.7	5.5	5.7	5.6	5.5	6.3	6.1	6.0	6.4	6.8	7.2	7.7	6.4
Methyl Orange Alkalinity													
Neutaconkanut Reservoir	15.0	11.9	11.4	11.1	10.9	11.8	11.9	11.7	12.3	13.1	13.9	14.9	12.5
28 Phenix Avenue, Cranston	15.0	10.5	11.2	10.8	10.9	12.2	11.8	11.8	12.5	13.5	14.2	15.5	12.5
Westminster St., Olneyville	15.0	10.5	11.1	10.8	11.0	12.2	11.8	11.8	12.6	13.4	14.3	15.5	12.5
1275 Reservoir Ave., Cranston	15.0	10.6	11.2	10.8	11.1	12.2	11.9	11.9	12.6	13.6	14.3	15.6	12.6
750 Reservoir Ave., Cranston	15.1	10.5	11.2	10.8	11.0	12.3	11.8	12.0	12.6	13.5	14.4	15.5	12.6
Biltmore Hotel	15.1	10.6	11.2	10.8	10.9	12.3	12.0	11.9	12.8	13.5	14.4	15.5	12.6
Dexter Manor	15.3	10.8	11.3	11.0	11.2	12.4	12.0	12.1	13.0	13.7	14.4	15.6	12.7
State Office Building	15.2	10.9	11.4	11.0	11.1	12.4	12.0	12.0	12.8	13.4	14.5	15.6	12.7
*Longview Reservoir	16.2	12.9	12.4	12.0	12.0	12.6	12.8	12.6	13.2	14.0	14.8	15.7	13.4
Crown Hotel	15.2	10.8	11.3	10.9	11.0	12.3	12.0	11.9	12.7	13.5	14.3	15.5	12.7
Color													
Neutaconkanut Reservoir	4	4	3	5	7	5	6	5	4	3	3	3	4
28 Phenix Avenue, Cranston	4	4	3	5	7	6	6	5	4	3	3	3	4
Westminster St., Olneyville	4	4	3	5	7	5	6	5	4	3	3	3	4
1275 Reservoir Ave., Cranston	4	4	3	5	7	5	6	5	4	3	3	3	4
750 Reservoir Ave., Cranston	4	4	3	5	7	5	6	5	4	3	3	3	4
Biltmore Hotel	4	4	3	6	7	6	6	5	4	3	3	3	5
Dexter Manor	4	4	4	5	7	6	5	5	4	3	3	4	5
State Office Building	4	4	3	5	7	6	6	5	4	3	3	3	4
*Longview Reservoir	6	5	5	6	7	6	7	6	6	5	6	6	6
Crown Hotel	4	4	4	6	7	6	6	5	4	3	3	3	5
Iron													
Neutaconkanut Reservoir	0.01	0.01	0.01	0.01	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
28 Phenix Avenue, Cranston	.02	.01	.01	.03	.03	.02	.03	.02	.01	.01	.01	.01	.02
Westminster St., Olneyville	.01	.01	.01	.02	.02	.02	.02	.01	.01	.01	.01	.01	.01
1275 Reservoir Ave., Cranston	.01	.01	.01	.02	.03	.01	.02	.01	.01	.00	.01	.00	.01
750 Reservoir Ave., Cranston	.02	.01	.01	.03	.03	.02	.03	.02	.01	.01	.01	.01	.02
Biltmore Hotel	.02	.02	.02	.04	.04	.03	.03	.02	.02	.02	.02	.02	.03
Dexter Manor	.02	.02	.02	.03	.04	.03	.02	.02	.02	.02	.02	.02	.02
State Office Building	.02	.01	.01	.03	.04	.02	.03	.02	.01	.01	.01	.02	.02
*Longview Reservoir	.04	.04	.04	.06	.07	.06	.06	.06	.06	.05	.05	.05	.05
Crown Hotel	.02	.02	.02	.03	.04	.03	.03	.03	.02	.02	.02	.02	.03

\*Sample obtained at Our Lady of Fatima Hospital, North Providence.

TABLE 13 (Continued)

## WATER PURIFICATION WORKS

CHEMICAL AND PHYSICAL CHARACTERISTICS OF WATER  
IN VARIOUS PARTS OF THE DISTRIBUTION SYSTEM

YEAR ENDED SEPTEMBER 30, 1968

## Monthly Averages

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
<b>Chlorides</b>													
Neutaconkanut Reservoir	8.7	9.2	9.5	9.5	9.8	10.1	9.8	9.7	9.5	9.8	9.6	9.6	7.5
28 Phenix Avenue, Cranston	8.6	9.2	9.5	9.5	9.8	10.1	9.5	9.5	9.5	9.7	9.5	9.6	9.5
Westminster St., Olneyville	8.7	9.3	9.5	9.5	9.7	10.0	9.6	9.6	9.6	9.8	9.5	9.6	9.5
1275 Reservoir Ave., Cranston	8.6	9.3	9.5	9.5	9.7	10.0	9.5	9.5	9.6	9.7	9.6	9.5	9.5
750 Reservoir Ave., Cranston	8.7	9.2	9.5	9.5	9.8	10.0	9.5	9.5	9.6	9.6	9.5	9.5	9.5
Biltmore Hotel	8.6	9.3	9.4	9.5	9.7	10.0	9.5	9.6	9.5	9.7	9.5	9.5	9.5
Dexter Manor	8.6	9.3	9.5	9.5	9.7	10.0	9.5	9.5	9.6	9.8	9.5	9.6	9.5
State Office Building	8.6	9.2	9.4	9.5	9.8	10.0	9.5	9.5	9.6	9.6	9.5	9.6	9.5
*Longview Reservoir	8.6	9.1	9.5	9.5	9.7	10.1	9.6	9.6	9.6	9.8	9.6	9.6	9.5
Crown Hotel	8.6	9.3	9.5	9.5	9.8	10.0	9.6	9.6	9.5	9.7	9.5	9.6	9.5
<b>Nitrites</b>													
Neutaconkanut Reservoir	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001
28 Phenix Avenue, Cranston	.000	.000	.000	.000	.000	.000	.001	.001	.001	.001	.001	.001	.001
Westminster St., Olneyville	.000	.000	.000	.000	.000	.000	.001	.001	.001	.001	.000	.001	.000
1275 Reservoir Ave., Cranston	.000	.000	.000	.000	.000	.000	.001	.001	.001	.001	.000	.001	.000
750 Reservoir Ave., Cranston	.000	.000	.000	.000	.000	.000	.001	.001	.001	.001	.000	.001	.000
Biltmore Hotel	.000	.000	.000	.000	.000	.000	.001	.001	.001	.001	.001	.001	.001
Dexter Manor	.000	.000	.000	.000	.001	.001	.001	.001	.001	.001	.001	.001	.001
State Office Building	.000	.000	.000	.000	.000	.001	.001	.001	.001	.001	.000	.001	.001
*Longview Reservoir	.001	.000	.000	.000	.001	.001	.001	.001	.001	.001	.001	.001	.001
Crown Hotel	.001	.000	.000	.001	.000	.001	.001	.001	.001	.001	.001	.001	.001
<b>Taste</b>													
Neutaconkanut Reservoir	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Phenix Avenue, Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
Westminster St., Olneyville	0	0	0	0	0	0	0	0	0	0	0	0	0
1275 Reservoir Ave., Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
750 Reservoir Ave., Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
Biltmore Hotel	0	0	0	0	0	0	0	0	0	0	0	0	0
Dexter Manor	0	0	0	0	0	0	0	0	0	0	0	0	0
State Office Building	0	0	0	0	0	0	0	0	0	0	0	0	0
*Longview Reservoir	0	0	0	0	0	0	0	0	0	0	0	0	0
Crown Hotel	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Odor</b>													
Neutaconkanut Reservoir	0	0	0	0	0	0	0	0	0	0	0	0	0
28 Phenix Avenue, Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
Westminster St., Olneyville	0	0	0	0	0	0	0	0	0	0	0	0	0
1275 Reservoir Ave., Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
750 Reservoir Ave., Cranston	0	0	0	0	0	0	0	0	0	0	0	0	0
Biltmore Hotel	0	0	0	0	0	0	0	0	0	0	0	0	0
Dexter Manor	0	0	0	0	0	0	0	0	0	0	0	0	0
State Office Building	0	0	0	0	0	0	0	0	0	0	0	0	0
*Longview Reservoir	0	0	0	0	0	0	0	0	0	0	0	0	0
Crown Hotel	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Fluoride</b>													
Neutaconkanut Reservoir	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.96	0.95	0.99	1.00	0.99
28 Phenix Avenue, Cranston	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.97	0.90	0.96	1.00	0.98
Westminster St., Olneyville	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.96	0.99	0.96	0.96	1.00	0.99
1275 Reservoir Ave., Cranston	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.95	0.89	0.96	1.00	0.98
750 Reservoir Ave., Cranston	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.95	0.97	0.92	0.96	1.00	0.98
Biltmore Hotel	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.98	0.97	1.00	1.00	0.99
Dexter Manor	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	0.97	0.98	1.00	1.00	0.99
State Office Building	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.96	0.98	1.00	0.99	0.99
*Longview Reservoir	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.97	0.98	1.00	1.00	0.99
Crown Hotel	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	0.97	0.98	1.00	1.00	0.99

\*Sample obtained at Our Lady of Fatima Hospital, North Providence.

TABLE 14  
WATER PURIFICATION WORKS  
BACTERIOLOGICAL EXAMINATION OF WATER IN PROCESS OF FILTRATION  
YEAR ENDED SEPTEMBER 30, 1968

1967-1968	Bacteria per ML. (48 Hours on Agar at 20°C.)											
	Raw-A.M.			Raw P.M.			Settled			Effluent-A.M.		
	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
October	270	10	38	40	8	23	500	0	87	25	0	4
November	40	11	22	36	9	19	400	15	63	150	0	16
December	60	2	32	40	15	26	75	2	17	36	0	10
January	45	8	23	40	8	19	1400	0	78	28	0	12
February	28	3	14	20	0	12	1800	0	406	100	0	12
March	360	4	90	360	0	79	1700	0	481	40	0	9
April	200	20	91	220	12	85	2200	15	674	250	0	67
May	30	4	14	25	2	12	1600	5	380	20	0	3
June	50	1	20	20	3	11	600	2	113	5	0	0
July	120	0	20	60	1	11	230	0	60	15	0	1
August	60	3	14	60	3	14	300	0	32	10	0	1
September	40	2	15	25	2	12	100	3	32	1	0	0
For Year	360	0	33	360	0	27	2200	0	202	250	0	11
										500	0	13
										290	0	5

A.M. refers to samples obtained in the morning; P.M. to samples obtained in the afternoon.

TABLE 15  
WATER PURIFICATION WORKS  
BACTERIOLOGICAL EXAMINATION OF WATER IN PROCESS OF FILTRATION  
YEAR ENDED SEPTEMBER 30, 1968

1967-1968	Bacteria per MI (24 Hours on Agar at 35° C.)											
	Raw-A.M.			Raw-P.M.			Settled			Effluent-A.M.		
	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
October	40	1	9	130	0	15	70	0	8	8	0	1
November	12	1	4	14	1	4	30	0	4	6	0	1
December	9	0	3	7	0	3	3	0	0	50	0	0
January	14	3	5	30	0	5	12	0	1	12	0	2
February	50	1	8	10	1	5	60	0	7	40	0	4
March	30	0	10	22	0	7	160	0	12	57	0	3
April	25	3	14	30	4	16	60	0	5	5	0	1
May	300	1	18	10	1	4	10	0	1	5	0	0
June	11	1	4	8	0	3	20	0	3	7	0	0
July	15	0	3	5	0	2	170	0	8	8	0	1
August	12	0	4	6	0	2	90	0	8	0	0	0
September	25	1	6	10	0	5	24	0	4	2	0	0
For Year	300	0	7	130	0	6	170	0	5	57	0	1
										15	0	1
										13	0	1

A.M. refers to samples obtained in the morning; P.M. to samples obtained in the afternoon.

TABLE 16

## WATER PURIFICATION WORKS

## BACTERIOLOGICAL EXAMINATION OF WATER IN PROCESS OF FILTRATION

YEAR ENDED SEPTEMBER 30, 1968

## Coliform Bacteria

	Raw-A.M.			Raw-P.M.			Settled			Effluent-A.M.			Effluent-P.M.			Tap		
	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.	No. of 10 ml. Por- tions Tested	No. of Tests Con- firmed	Index per ml.
1967																		
October	75	45	0.060	42	27	0.064	50	1	0.002	50	0	0.000	42	0	0.000	125	0	0.000
November	72	70	.097	42	40	.095	48	3	.006	48	0	.000	42	1	.002	120	0	.000
December	75	74	.099	40	38	.095	50	2	.004	50	0	.000	40	0	.000	125	0	.000
January	78	71	.091	44	39	.089	52	4	.008	52	1	.002	44	0	.000	130	0	.000
February	72	16	.022	40	13	.033	48	1	.002	48	0	.000	40	0	.000	120	0	.000
March	78	16	.021	42	8	.019	52	1	.002	52	0	.000	42	0	.000	130	0	.000
April	78	26	.033	42	15	.036	52	0	.000	52	2	.004	42	0	.000	130	0	.000
May	78	6	.008	44	8	.018	52	2	.004	52	0	.000	44	0	.000	130	0	.000
June	75	10	.013	40	10	.025	50	6	.012	50	0	.000	40	0	.000	125	0	.000
July	78	3	.004	44	2	.005	52	1	.002	52	0	.000	44	0	.000	130	0	.000
August	78	7	.009	42	4	.010	52	0	.000	52	0	.000	42	0	.000	130	0	.000
September	72	41	.057	40	21	.053	48	5	.010	48	0	.000	40	0	.000	120	0	.000
For Year	909	385	0.042	502	225	0.045	606	26	0.004	606	3	0.000	502	1	0.000	1,515	0	0.000

A.M. refers to samples obtained in the morning; P.M. refers to samples obtained in the afternoon.



TABLE 17

## WATER PURIFICATION WORKS

BACTERIOLOGICAL EXAMINATION OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analysis	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
Bacteria per Ml. 48 Hours on Agar at 20°C.													
Ponaganset Reservoir	450	80	110	100	80	120	40	90	80	780	240	600	231
Coventry Brook	360	250	100	80	80	80	200	210	540	1,000	4,300	1,200	700
Wilbur Brook	800	280	100	100	130	180	500	1,000	420	1,300	750	650	518
Westconnaug Reservoir	400	210	120	130	200	240	180	400	150	440	500	350	277
Barden Reservoir	170	230	110	170	90	400	40	50	80	160	1,200	320	252
Cork Brook	420	160	120	200	120	90	180	200	300	200	*	700	245
Rush Brook	800	270	170	180	160	200	200	360	780	180	720	600	385
Huntinghouse Brook	750	240	130	80	170	130	150	240	400	600	700	600	349
Harrisdale Brook	270	600	170	240	360	150	350	350	600	680	640	3,500	659
Blanchard Brook	450	210	70	120	170	210	600	660	1,200	1,600	5,400	3,000	1,141
Moswansicut Pond	420	60	40	70	30	240	80	200	120	720	350	270	217
Regulating Reservoir	800	600	80	720	40	360	180	120	320	90	500	280	341
Quonopaug Brook	200	170	60	50	40	80	200	360	720	1,000	800	540	352
Hemlock Brook	120	280	150	90	170	160	90	100	120	180	360	200	168
Betty Pond Stream	200	240	110	340	60	340	280	210	270	800	1,400	1,500	479
Spruce Brook	300	300	120	100	80	110	240	270	720	780	780	1,200	417
Brandy Brook	720	650	250	450	240	650	270	180	800	660	700	480	504
Moswansicut-South	1,300	1,400	340	600	450	440	250	2,700	1,200	2,100	3,600	4,800	1,598
Windsor Brook	320	270	140	130	90	150	300	540	450	540	*	1,300	385
Paine Pond	850	2,000	150	210	90	570	190	600	440	600	1,200	800	642
Unnamed Brook--A	1,100	1,700	230	280	250	420	1,500	950	600	*	*	*	781
Unnamed Brook--B	350	600	80	100	200	130	80	180	200	*	*	*	213
Bacteria per Ml. 24 Hours on Agar at 35° C.													
Ponaganset Reservoir	220	20	40	4	10	15	4	30	60	660	200	420	140
Coventry Brook	60	40	20	10	13	6	40	70	180	240	6,500	850	669
Wilbur Brook	130	50	15	15	20	23	120	350	400	720	450	280	214
Westconnaug Reservoir	40	30	20	10	25	20	50	100	330	120	160	300	100
Barden Reservoir	30	60	15	15	10	44	10	50	30	180	1,000	350	150
Cork Brook	70	30	15	120	15	12	20	40	100	110	*	320	77
Rush Brook	110	70	15	20	10	17	40	240	600	120	850	220	193
Huntinghouse Brook	60	120	23	25	15	7	50	130	120	520	450	330	154
Harrisdale Brook	110	100	30	10	20	28	60	90	150	240	400	300	128
Blanchard Brook	120	60	25	20	60	55	280	500	240	840	4,300	2,500	750
Moswansicut Pond	90	10	7	10	2	30	40	30	140	200	200	200	80
Regulating Reservoir	300	80	30	35	20	60	25	130	160	120	240	150	113
Quonopaug Brook	50	40	20	15	12	25	90	150	150	750	300	320	160
Hemlock Brook	30	60	20	15	9	12	30	50	140	220	270	80	78
Betty Pond Stream	110	25	14	10	2	18	90	220	200	1,000	1,200	2,400	441
Spruce Brook	100	70	15	20	14	20	30	60	180	450	450	360	147
Brandy Brook	70	50	110	80	90	240	170	80	400	320	600	240	204
Moswansicut-South	1,000	200	80	80	140	140	150	350	960	540	5,400	2,700	978
Windsor Brook	60	110	27	13	5	10	20	30	160	280	*	420	103
Paine Pond	170	160	30	20	12	40	60	360	200	360	1,000	660	256
Unnamed Brook--A	180	80	30	17	25	60	950	240	300	*	*	*	209
Unnamed Brook--B	60	70	35	11	35	15	20	40	180	*	*	*	52

\*No Sample Obtained--Dry.

NOTE: Unnamed Brook A is just north of Scituate Town Dump. Unnamed Brook B is southwest of the former Foster Nike Site.

TABLE 17 (Continued)

## WATER PURIFICATION WORKS

BACTERIOLOGICAL EXAMINATION OF WATER IN VARIOUS BROOKS AND RESERVOIRS  
ON SCITUATE WATERSHED

YEAR ENDED SEPTEMBER 30, 1968

Monthly Analyses	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Coliform Bacteria Index per 100 Ml.												
Ponaganset Reservoir	110+	6	0	0	0	70	0	6	25	700	6	60
Coventry Brook	70	25	70	6	0	6	25	6	60	700	1100+	2500
Wilbur Brook	110+	25	6	70	13	25	25	1100+	60	700	250	25
Westconnaug Reservoir	110+	110+	70	70	70	25	25	250	60	700	25	1100+
Barden Reservoir	25	70	6	6	110+	25	6	0	250	25	25	6
Cork Brook	25	25	110+	13	0	6	25	0	60	25	*	250
Rush Brook	25	25	25	6	25	70	60	700	250	700	250	250
Huntinghouse Brook	70	110+	70	25	25	25	25	60	200	1100+	130	60
Harrisdale Brook	25	110+	25	70	13	25	13	25	25	25	1100+	600
Blanchard Brook	25	110+	110+	70	25	25	250	60	700	1100+	1100+	7000
Moswansicut Pond	70	6	25	0	0	6	60	6	250	250	200	250
Regulating Reservoir	110+	110+	25	70	0	25	6	6	60	6	60	60
Quonopaug Brook	110+	70	25	25	25	25	13	250	250	1100+	250	1100+
Hemlock Brook	6	110+	25	6	25	25	25	130	25	6	20	25
Betty Pond Stream	6	6	25	6	13	70	25	6	60	700	700	250
Spruce Brook	70	70	6	6	13	13	25	6	60	700	60	700
Brandy Brook	70	13	13	110+	13	25	50	50	60	130	1100+	7000
Moswansicut-South	110+	110+	70	70	110+	110+	200	700	1100+	1100+	1100+	600
Windsor Brook	70	70	0	6	0	25	25	60	130	700	*	250
Paine Pond	39	1100+	150	43	9.1	93	9.1	1100+	43	460	460	210
Unnamed Brook--A	75	1100+	15	43	43	1100	93	150	1100	*	*	*
Unnamed Brook--B	25	70	25	70	70	13	6	700	25	*	*	*

\*No sample obtained--Dry.

NOTE: Unnamed Brook A is just north of Scituate Town Dump. Unnamed Brook B is southwest of the former Foster Nike Site.

TABLE 18  
WATER PURIFICATION WORKS  
BACTERIOLOGICAL EXAMINATION OF WATER IN VARIOUS PARTS  
OF THE DISTRIBUTION SYSTEM  
YEAR ENDED SEPTEMBER 30, 1968

Monthly Averages	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
Bacteria per Ml. 48 Hours on Agar at 20° C.													
Neutaconkanut Reservoir	0	0	0	0	1	0	14	0	0	0	0	0	1
28 Phenix Avenue, Cranston	0	0	2	2	0	2	44	2	0	1	0	0	4
Westminster St., Olneyville	0	5	1	1	0	1	55	1	0	0	0	0	5
1275 Reservoir Ave., Cranston	2	1	1	3	1	4	53	1	0	0	0	0	6
750 Reservoir Ave., Cranston	0	1	1	1	1	2	54	1	0	0	5	0	6
Biltmore Hotel	0	1	0	1	0	3	44	4	0	0	1	0	5
Dexter Manor	0	1	0	0	0	2	44	3	0	0	0	0	4
State Office Building	0	2	0	1	1	1	37	1	0	0	1	0	4
*Longview Reservoir	0	1	0	1	0	1	13	0	0	1	0	0	1
Crown Hotel	0	1	0	0	0	2	48	1	0	0	0	0	4
Bacteria per Ml. 24 Hours on Agar at 35° C.													
Neutaconkanut Reservoir	0	0	0	0	3	1	2	0	0	1	1	0	1
28 Phenix Avenue, Cranston	1	0	1	1	2	1	0	1	1	0	1	1	1
Westminster St., Olneyville	1	1	0	0	1	1	0	0	0	1	2	0	1
1275 Reservoir Ave., Cranston	3	1	0	0	1	1	0	1	0	1	0	0	1
750 Reservoir Ave., Cranston	0	0	1	1	1	0	0	0	1	0	1	1	1
Biltmore Hotel	1	0	0	1	0	1	0	0	1	0	1	1	1
Dexter Manor	1	1	0	0	0	1	0	1	0	0	1	1	1
State Office Building	0	2	1	1	2	0	0	1	0	0	1	0	1
*Longview Reservoir	0	1	0	1	1	0	0	0	1	1	1	1	1
Crown Hotel	1	0	0	0	0	1	0	1	0	1	0	0	0
Coliform Bacteria Index per Ml.													
Neutaconkanut Reservoir	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28 Phenix Avenue, Cranston	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Westminster St., Olneyville	.000	.000	.001	.000	.000	.003	.000	.000	.000	.000	.000	.000	.000
1275 Reservoir Ave., Cranston	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.000	.000	.000
750 Reservoir Ave., Cranston	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Biltmore Hotel	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Dexter Manor	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
State Office Building	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000
*Longview Reservoir	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Crown Hotel	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

\*Sample obtained at Our Lady of Fatima Hospital, North Providence.

TABLE 19

## WATER PURIFICATION WORKS

MINERAL ANALYSIS OF WATER - YEAR ENDED SEPTEMBER 30, 1968

Parts per Million	Raw Water*					Tap Water				
	1967 Oct.- Dec.	Jan.- Mar.	1968 Apr.- June	July- Sept.	Avg.	1967 Oct.- Dec.	Jan.- Mar.	1968 Apr.- June	July Sept.	Avg.
Aluminum	0.03	0.02	0.03	0.03	0.03	0.04	0.02	0.03	0.03	0.03
Arsenic		0.00		0.00	0.00		0.00		0.00	0.00
Calcium	3.5	3.3	2.9	3.0	3.2	11.0	10.1	9.9	11.2	10.6
Chloride	8.7	9.0	9.0	9.0	8.9	9.3	9.6	9.6	9.6	9.5
Copper	0.00	0.02	0.05	0.04	0.03	0.00	0.00	0.00	0.00	0.00
Fluoride	0.15	0.15	0.15	0.15	0.15	0.99	1.00	0.96	0.98	0.98
Hardness	12	12	11	11	11	29	28	28	29	29
Iron	0.09	0.08	0.05	0.13	0.09	0.03	0.05	0.02	0.02	0.03
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Magnesium	0.80	0.91	0.90	0.85	0.87	0.37	0.67	0.78	0.24	0.52
Manganese	0.07	0.03	0.02	0.12	0.06	0.00	0.00	0.00	0.00	0.00
Phenolic Compounds		0.000		0.000	0.000		0.000		0.000	0.000
Selenium		0.00		0.00	0.00		0.00		0.00	0.00
Silica	4.0	3.2	2.9	3.5	3.4	4.1	3.4	3.3	3.6	3.6
Sulphate	8.3	9.0	9.4	9.5	9.1	13.8	12.5	12.5	12.8	12.9
Total Solids	48	51	48	45	48	70	66	68	69	68
Loss on Ignition	24	27	24	24	25	27	21	23	25	24
Total Alkalinity	3.5	3.4	3.3	3.8	3.5	12.3	11.3	12.1	14.4	12.5
Phenolphthalein Alkalinity	0.0	0.0	0.0	0.0	0.0	6.2	5.6	6.1	7.1	6.3
Zinc		0.0		0.0	0.0		0.0		0.0	0.0

\*Water from bottom of Scituate Reservoir as received at Purification Works.

TABLE 20

## WATER PURIFICATION WORKS

SANITARY CHEMICAL ANALYSIS (P.P.M.) - YEAR ENDED SEPTEMBER 30, 1958

	Ammonia			Raw Water**					Ammonia			Tap Water					Loss on Ignition	
	Free	Alb.	Ni- trites	Ni- trites	Chlorides	P.P.M.	% Sat.	Dissolved Oxygen	Free	Alb.	Ni- trites	Ni- trites	Chlorides	P.P.M.	% Sat.	Dissolved Oxygen	on Ignition	Total Solids
1957																		
1958																		
October	0.037	0.043	0.000	0.10	8.1	9.0	86.4	50	0.025	0.019	0.000	0.05	9.1	---	---	---	78	34
November	.030	.044	.000	.02	8.9	9.2	86.4	48	.024	.038	.000	.04	9.3	---	---	---	66	24
December	.015	.054	.000	.03	9.0	12.9	93.4	45	.020	.042	.000	.03	9.5	---	---	---	65	23
January	.020	.044	.000	.04	9.0	12.3	93.8	49	.024	.034	.000	.03	9.5	---	---	---	63	22
February	.010	.048	.000	.04	9.1	11.8	84.9	54	.008	.034	.000	.04	9.7	---	---	---	67	21
March	.007	.057	.000	.03	9.0	12.3	90.4	51	.006	.034	.000	.04	9.5	---	---	---	67	21
April	.012	.064	.000	.03	9.0	12.4	93.2	45	.014	.051	.001	.03	9.5	---	---	---	66	26
May	.022	.054	.000	.07	9.0	10.8	95.6	47	.014	.040	.001	.06	9.5	---	---	---	69	29
June	.025	.060	.000	.07	9.1	8.4	78.5	52	.020	.027	.001	.05	9.5	---	---	---	69	14
July	.027	.054	.000	.09	9.0	8.0	73.4	45	.023	.024	.001	.07	9.7	---	---	---	77	26
August	.033	.041	.000	.08	9.0	5.2	49.1	43	.020	.023	.001	.07	9.5	---	---	---	63	20
September	.057	.048	.000	.10	9.0	3.9	35.6	48	.020	.023	.001	.06	9.5	---	---	---	67	30
Averages	0.025	0.051	0.000	0.06	8.9	9.7	80.5	48	0.016	0.032	0.001	0.05	9.5	---	---	---	68	24

\*Water from bottom of Softwater Reservoir as received at Purification Works.



TABLE 21

## WATER PURIFICATION WORKS

LABORATORY EXAMINATIONS MADE DURING THE FISCAL YEAR ENDED SEPTEMBER 30, 1968

Source of Water Tested	Frequency of Test or Examination	Number of Tests or Analyses Made During the Fiscal Year				
		Chemical	Bacteriological	Microscopical	Sanitary Chemical	Miscellaneous
I Brooks and Streams on Watershed Fourteen Brooks, Two Streams and One Pond	Monthly	1,876	3,285		226	5,387
II Smaller Storage Reservoirs on Watershed						
Regulating Reservoir	Monthly	84	112			196
Westconaug Reservoir	Monthly	84	122			206
Barden Reservoir	Monthly	84	107			191
Moswansicut Pond	Monthly	84	113			197
Ponaganset Reservoir	Monthly	84	103			187
III Soituate Reservoir						
Surface Water	Bi-Weekly	208	358	19	156	741
Subsurface Water (See Purif. Wks.--Raw Water)						
IV Pawtuxet River--Below Gainer Dam						
Gainer Dam Meter Chamber	Bi-Weekly	182			156	338
Fiskeville, R.I.	Bi-Weekly	182			156	338
Twelve Other Locations on Pawtuxet River	Bi-Weekly	2,340	1,850		2,184	6,374
V Water Purification Works						
Raw Water (from Bottom of Soituate Reservoir)	Daily	2,986	3,897		1,440	8,683
Raw Water (from Bottom of Soituate Reservoir)	Bi-Weekly			19		19
Raw Water (from Bottom of Soituate Reservoir)	Monthly				72	72
*Raw Water (from Bottom of Soituate Reservoir)	Every 13 weeks				36	36
Aerated Influent	Daily	720				720
Mixer	Daily	1,836				1,836
Settled	Daily	2,463	1,250			4,073
Settled	Bi-Weekly			19		19
Filtered	Monthly	1,080	1,016		45	2,399
Filtered	Daily				303	45
Effluent	Monthly	3,183	1,215		45	6,141
Effluent	Daily				1,743	19
Effluent	Bi-Weekly			19		24
Raw Water (from Bottom of Soituate Reservoir)	Monthly	1,004	1,229		24	3,237
Effluent	Daily at 3:00 P.M.	1,004	1,005		1,004	3,013
	Daily at 3:00 P.M.				1,004	

\*Composite of 13 Weekly Samples.

TABLE 21 (Continued)

## WATER PURIFICATION WORKS

LABORATORY EXAMINATIONS MADE DURING THE FISCAL YEAR ENDED SEPTEMBER 30, 1963

Source of Water Tested	Frequency of Test or Examination	Number of Tests or Analyses Made During the Fiscal Year					
		Chemical	Bacteriological	Microscopical	Sanitary Chemical	Mineral	Miscellaneous Total
VI Neutaconkent Distribution Reservoir							
Sample from nearby Tap	Daily	1,500	1,751	19	1,250		4,501
Sample from nearby Tap	Bi-Weekly						19
VII Longview Distribution Reservoir							
Sample from nearby Tap	Daily	1,512	1,764	19	1,008		4,284
Sample from nearby Tap	Bi-Weekly						19
VIII Distribution System							
Providence Journal Bldg. Tap Water	Daily	2,424	2,121	19	1,515	303	6,363
Providence Journal Bldg. Tap Water	Bi-Weekly						19
Providence Journal Bldg. Tap Water	Monthly				60		60
*Providence Journal Bldg. Tap Water	Every 13 Weeks				32		32
**Sectional Tests	Monthly	768	840		360		1,968
Consumers' Complaints (24 during the year)		279	42	1	80		402
Disinfection of Newly Laid Mains			768		68		836
***Sectional Tests	Daily	12,054	14,056		8,268		34,398
IX Miscellaneous Tests							
Coagulation Tests to Determine Chemical Dosages		72				36	108
Analysis of Ferri-Floc used for Treatment		54				18	72
Analysis of Calokline used for Treatment		17				34	51
Analysis of Sod. Silicofluoride used for Treatment		7					7
Water, Filter Sand and Other Materials		1,991	3,768	8	927	121	6,835
Totals		40,162	40,792	142	22,114	68	1,232 104,510

\*Composite of 13 Weekly Samples.

\*\*Samples from 10 Random Dwellings (location changed monthly).

\*\*\*Samples from eight fixed locations

TABLE 22  
WATER DISTRIBUTION SYSTEM  
NEUTACONKANUT HIGH SERVICE PUMPING STATION  
OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	No. 1 10" Pump 2700 GPM. TDH 90'		Electrically-Driven Pumps No. 2 12" Pump 3800 GPM. TDH 104'		No. 3 16" Pump 7000 GPM. TDH 96'		Power Used*		Gasoline Engine-Driven Pump No. 4 16" Pump 7000 GPM. TDH 96'		Gas. Used Gals.	Oil Used Qts.
	1967	1968	1967	1968	1967	1968	1967	1968	1967	1968		
	Days	Hours and Minutes	Days	Hours and Minutes	Days	Hours and Minutes	KWH	Cost	Days	Hours and Minutes		
October	2	47-00	30	691-45	0	0	34,000	\$751.82	4	4-00	90	0
November	3	44-30	30	668-30	0	0	( ----- )	( ----- )	5	5-00	120	0
December	8	120-30	28	617-30	0	0	(123,500)	(1,580.59)	4	4-00	80	0
January	9	175-30	25	563-30	0	0	75,500	1,111.55	5	5-00	120	0
February	3	42-30	29	648-00	0	0	78,000	1,135.16	3	3-00	66	0
March	4	66-00	30	674-00	0	0	79,500	1,149.38	4	4-00	141	0
April	5	48-00	29	567-00	0	0	74,000	1,098.03	4	4-00	110	0
May	3	24-00	31	715-00	0	0	75,500	1,103.62	5	5-00	259	0
June	0	0	30	708-15	2	6-30	85,000	1,274.27	4	4-00	92	0
July	0	0	30	485-15	21	251-00	90,500	1,357.12	3	3-00	36	0
August	0	0	30	652-00	11	86-00	86,000	1,305.85	4	4-00	95	0
September	0	0	30	683-30	5	5-00	86,500	1,310.27	4	4-00	108	0
Totals	37	568-00	352	7,774-15	39	348-30	888,000	\$13,177.66	49	49-00	1,317	0

\*Narragansett Electric Co. Power Rate G.  
\*\*Engine Test Run.

TABLE 22 (Continued)  
WATER DISTRIBUTION SYSTEM  
NEUTACONKANUT HIGH SERVICE PUMPING STATION  
OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	Electrically-Driven Pumps		Gasoline Engine-Driven Pump		Total Water Pumped Mil. Gals.	Avg. per Day
	No. 1 10" Pump 2700 GPM. TDH 90'	No. 2 12" Pump 3800 GPM TDH 104'	No. 3 16" Pump 7000 GPM. TDH 96'	No. 4 16" Pump 7000 GPM. TDH 96'		
1967-1968	Water Pumped Mil. Gals.	Water Pumped Mil. Gals.	Water Pumped Mil. Gals.	Water Pumped Mil. Gals.	For Month	
October	8.496	196.290	0	1.600	206.386	6.658
November	8.310	188.970	0	2.050	199.330	6.644
December	22.174	172.090	0	1.715	195.979	6.322
January	30.862	158.248	0	1.990	191.100	6.165
February	7.921	179.089	0	1.335	188.345	6.495
March	11.990	190.805	0	1.690	204.485	6.596
April	13.591	181.989	0	1.610	197.190	6.573
May	4.783	203.427	0	2.150	210.360	6.786
June	0	201.381	2.799	1.590	205.770	6.859
July	0	142.364	103.186	1.330	246.880	7.964
August	0	183.510	34.795	1.755	220.060	7.099
September	0	194.378	14.092	1.745	210.215	7.007
Totals	108.127	2,192.541	154.872	20.560	2,476.100	6.765

TABLE 23  
WATER DISTRIBUTION SYSTEM  
BATH STREET HIGH SERVICE PUMPING STATION  
OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	Electrically-Driven Pumps						Gasoline Engine-Driven Pump		
	Pump No. 1 2500 GPM. TDH 100'		Pump No. 2 2500 GPM. TDH 100'		Power Used*		Pump No. 3 5000 GPM. TDH 100'; 150 HP Climax Engine		
1967	Operated		Operated				**Operated		
1968	Hours and		Hours and				Hours and		
	Days	Minutes	Days	Minutes	KWH	Cost	Days	Minutes	Gas. Used Gals.
October	29	264-00	31	276-30	31,080	\$600.12	5	5-00	81
November	28	228-00	26	200-30	27,580	566.74	4	4-00	69
December	20	207-00	22	237-00	28,840	580.41	4	4-00	85
January	30	312-30	30	278-30	34,440	638.70	5	5-00	65
February	26	271-15	25	245-15	34,860	642.65	2	2-00	49
March	28	271-00	28	270-00	26,880	558.30	2	2-00	30
April	30	294-00	30	318-30	36,400	659.23	5	5-00	71
May	31	334-30	29	335-00	38,220	672.09	4	4-00	67
June	29	294-30	28	316-30	37,380	667.44	2	2-00	32
July	31	481-45	30	446-00	48,720	770.64	1	1-00	16
August	30	412-30	30	378-00	31,640	605.13	3	3-00	48
September	29	386-30	29	377-30	61,040	886.78	1	1-00	0
Totals	341	3,757-30	338	3,679-15	437,080	\$7,848.23	38	38-00	613

\*Narragansett Electric Co. Power Rate G.  
\*\*Engine Test Run.

TABLE 23 (Continued)  
WATER DISTRIBUTION SYSTEM  
BATH STREET HIGH SERVICE PUMPING STATION  
OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

	Electrically-Driven Pumps		Gasoline Engine-Driven Pump	Total Water Pumped	
	Pump No. 1 2500 GPM. TDH 100'	Pump No. 2 2500 GPM. TDH 100'	Pump No. 3 5000 GPM. TDH 100' 150 HP Climax Engine	Mil. Gals.	
	Water Pumped Mil. Gals.	Water Pumped Mil. Gals.	Water Pumped Mil. Gals.	For Month	Avg. per Day
1967					
1968					
October	36.827	38.738	1.430	76.995	2.484
November	32.236	28.069	1.200	61.505	2.050
December	30.200	34.775	1.175	66.150	2.134
January	43.593	38.752	1.335	83.680	2.699
February	37.555	33.675	0.580	71.810	2.476
March	37.839	37.731	0.560	76.130	2.456
April	39.958	43.337	1.465	84.760	2.825
May	45.554	45.221	1.190	91.965	2.967
June	40.796	42.479	0.560	83.835	2.795
July	63.529	58.556	0.285	122.470	3.951
August	55.605	50.755	0.850	107.210	3.458
September	52.309	50.896	0.290	103.495	3.450
Totals	516.001	503.084	10.920	1,030.005	2.814



TABLE 24

## WATER DISTRIBUTION SYSTEM

## AQUEDUCT DISTRIBUTION RESERVOIR\*

OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

Operating Characteristics During Month														
1967 1968	7 A.M. Statistics on First Day of Month													
	Water Level	Storage Mil.Gals.	Water Level			Storage-Mil. Gals.			Daily Water Level Fluctuation-Ft.			Daily Storage Fluctuation-M.G.		
			Max.	Min.	Avg.**	Max.	Min.	Avg.**	Max.	Min.	Avg.	Max.	Min.	Avg.
October	229.70	41.23	230.19	226.63	229.53	42.06	35.97	40.94	3.46	1.66	2.27	5.56	1.49	3.75
November	229.48	40.85	230.27	218.83	229.14	42.19	22.58	40.27	8.12	1.49	2.64	13.94	2.56	4.47
December	229.83	41.45	230.28	220.05	228.96	42.20	24.67	39.96	9.75	1.12	2.49	16.73	1.92	4.27
January	228.57	39.30	229.80	226.08	228.99	41.40	35.02	40.02	2.80	1.48	2.29	4.80	2.54	3.58
February	229.06	40.14	230.19	223.21	229.10	42.06	30.10	40.20	6.89	0.84	2.49	11.81	1.44	4.27
March	228.61	39.36	229.88	226.18	229.03	41.54	35.19	40.08	2.56	0.93	1.92	4.39	1.60	3.29
April	229.39	40.70	230.09	220.85	229.19	41.89	26.05	40.36	9.13	1.26	2.57	15.66	2.16	4.39
May	229.53	40.94	230.22	226.04	229.45	42.11	34.95	40.80	3.21	0.97	2.33	5.49	1.67	3.99
June	229.17	40.32	230.35	226.54	229.71	42.32	35.81	41.25	3.75	0.92	2.09	6.41	1.58	3.59
July	230.15	41.99	230.70	226.05	229.96	42.90	34.97	41.67	3.69	0.87	2.27	6.32	1.47	3.88
August	230.15	41.99	230.56	226.50	230.04	42.67	35.74	41.81	3.93	1.12	2.17	6.18	1.72	3.49
September	229.48	40.85	230.33	225.51	229.89	42.29	34.04	41.55	4.07	1.04	2.32	6.98	1.78	3.97
For Year			230.70	218.83	229.42	42.90	22.58	40.74	9.75	0.84	2.32	16.73	1.44	3.91

\*Storage capacity at overflow elevation of 231.00=43,400,000 gallons. \*\*Average of 7 A.M. statistics.  
NOTE: Water levels are elevations in feet above mean high water in Providence harbor.

TABLE 25  
WATER DISTRIBUTION SYSTEM  
NEWTACONAWUT DISTRIBUTION RESERVOIR\*  
OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

1967 1968	7 A.M. Statistics on First Day of Month		Water Level			Storage-Mil. Gals.			Daily Water Level Fluctuation-Ft.			Daily Storage Fluctuation-M.G.		
	Level	Mil. Gals.	Max.	Min.	Avg.**	Max.	Min.	Avg.**	Max.	Min.	Avg.	Max.	Min.	Avg.
October	226.48	41.18	226.91	224.05	226.40	41.95	36.91	41.04	2.70	0.77	1.62	4.75	1.35	-2.85
November	226.46	41.14	226.83	218.75	226.22	41.61	27.57	40.72	7.40	0.92	1.87	13.03	1.61	3.30
December	226.40	41.04	226.69	219.61	226.17	41.55	29.45	40.64	6.71	0.41	1.71	11.80	0.71	3.01
January	226.14	40.58	226.53	223.77	226.12	41.27	36.42	40.55	2.73	0.77	1.59	4.43	1.35	2.73
February	226.06	40.44	226.65	222.64	226.22	41.48	34.43	40.72	3.88	0.86	1.85	6.82	1.50	3.26
March	225.96	40.27	226.54	224.19	226.21	41.26	37.15	40.71	2.08	0.32	1.37	3.66	0.55	2.41
April	226.33	40.91	226.67	220.50	226.11	41.52	30.66	40.53	6.05	0.77	1.89	10.64	1.36	3.32
May	226.04	40.41	226.67	223.10	226.24	41.52	35.24	40.76	2.86	0.46	1.75	5.04	0.80	3.09
June	226.41	41.05	226.91	223.40	226.37	41.95	35.76	40.98	3.19	0.74	1.79	5.62	1.29	3.05
July	226.49	41.19	227.01	221.51	226.25	42.11	32.44	40.77	4.50	1.11	2.57	7.92	1.95	4.52
August	226.36	40.97	226.77	222.43	222.43	41.70	34.06	41.09	3.64	0.68	2.18	6.40	1.20	3.83
September	226.23	40.74	226.76	222.95	226.32	41.68	34.97	40.90	3.66	0.77	2.11	6.43	1.36	3.71
For Year			227.01	218.75	226.25	42.11	27.57	40.78	7.40	0.32	1.86	13.03	0.55	3.26

\*Storage capacity at over-flow elevation of 227.00=42,090,000 gallons. \*\*Average of 7 A.M. statistics.  
NOTE: Water levels are elevations in feet above mean high water in Providence Harbor.

TABLE 26

## WATER DISTRIBUTION SYSTEM

## LONGVIEW DISTRIBUTION RESERVOIR\*

OPERATING STATISTICS - YEAR ENDED SEPTEMBER 30, 1968

1967 1968	7 A.M. Statistics on First Day of Month			Water Level			Storage-Mil.Gals.			Daily Water Level Fluctuation-Ft.			Daily Storage Fluctuation-M.G.		
	Water Level	Storage Mil. Gals.		Max.	Min.	Avg.**	Max.	Min.	Avg.**	Max.	Min.	Avg.	Max.	Min.	Avg.
October	304.65	11.78		305.14	302.65	304.44	12.00	10.85	11.68	2.13	1.16	1.49	0.99	0.17	0.68
November	304.75	11.82		305.35	302.78	304.66	12.10	10.91	11.78	2.31	1.24	1.57	1.07	0.57	0.73
December	304.70	11.80		305.42	302.78	304.67	12.13	10.91	11.78	2.60	1.13	1.62	1.01	0.52	0.74
January	304.34	11.63		305.11	302.61	304.37	11.99	10.83	11.64	2.18	0.97	1.41	1.02	0.45	0.65
February	304.45	11.68		305.16	301.78	304.40	12.01	10.45	11.66	2.27	1.07	1.53	1.05	0.50	0.72
March	304.40	11.66		305.48	302.16	304.33	12.16	10.62	11.63	2.35	1.05	1.50	1.09	0.49	0.69
April	304.75	11.82		305.13	302.58	304.37	12.00	10.82	11.64	1.90	1.12	1.47	0.88	0.51	0.68
May	304.15	11.54		305.09	302.16	304.46	11.98	10.62	11.69	2.54	1.09	1.65	1.18	0.50	0.77
June	304.80	11.85		305.23	301.70	304.72	12.04	10.41	11.81	3.14	1.07	1.62	1.45	0.51	0.76
July	304.55	11.73		305.48	299.18	304.70	12.16	9.24	11.80	6.30	1.12	2.53	2.92	0.52	1.19
August	304.56	11.73		305.49	301.93	304.46	12.16	10.52	11.69	3.13	0.72	1.54	1.45	0.34	0.72
September	304.75	11.82		305.12	302.25	304.43	11.99	10.67	11.67	2.23	0.87	1.52	1.03	0.41	0.70
For Year				305.49	299.18	304.50	12.16	9.24	11.71	6.30	0.72	1.62	2.92	0.17	0.75

\*Storage capacity at overflow elevation of 305.00=12,400,000 gallons. \*\*Average of 7 A.M. statistics.

NOTE: Water levels are elevations in feet above mean high water in Providence harbor.

TABLE 27  
WATER PIPE LAID, REMOVED AND ADDED  
YEAR ENDED SEPTEMBER 30, 1968

City or Town	Pipe Laid in Feet								Total
	6"	8"	10"	12"	16"	20"	24"	30"	
Providence	5,476.26	3,254.15	0	505.80	635.36	0	0	0	9,871.57
Cranston	3,334.70	5,465.26	0	583.30	0	0	0	0	9,382.96
Johnston	706.55	3,808.68	0	0	0	0	0	0	4,515.23
North Providence	450.95	4,648.09	0	0	0	0	0	0	5,099.04
Totals	9,968.46	17,176.18	0	1,088.80	635.36	0	0	0	28,868.80

	Pipe Removed in Feet								Total
	6"	8"	10"	12"	16"	20"	24"	30"	
Providence	7,809.56	997.35	0	1,817.21	98.57	0	0	0	10,722.69
Cranston	1,042.00	25.65	0	44.85	0	0	0	0	1,112.50
Johnston	0	0	0	0	0	0	0	0	0
North Providence	0	0	0	0	0	0	0	0	0
Totals	8,851.56	1,023.00	0	1,862.06	98.57	0	0	0	11,835.19

	Net Length Added to Distribution System								Total
	5"	8"	10"	12"	16"	20"	24"	30"	
Providence	-2,333.30	2,256.80	0	-1,311.41	536.79	0	0	0	-851.12
Cranston	2,292.70	5,439.61	0	538.15	0	0	0	0	8,270.46
Johnston	706.55	3,808.68	0	0	0	0	0	0	4,515.23
North Providence	450.95	4,648.09	0	0	0	0	0	0	5,099.04
Totals	1,116.90	16,153.18	0	-773.26	536.79	0	0	0	17,033.61

PUBLIC WATER MAINS IN USE ON SEPTEMBER 30, 1968

	Special High Pressure Fire Service Included			
The length of	6-inch mains	tabulated for Providence	includes	691.45 feet in Pawtucket.
"	"	"	"	"
"	12-inch mains	"	"	44.47 "
"	"	"	"	"
"	12-inch mains	"	Johnston	146.00 " Smithfield.
"	"	"	"	"
"	6-inch mains	"	North Providence	179.30 " Pawtucket.

\*Special High Pressure Fire Service Included

The length of 6-inch mains tabulated for Providence includes 691.45 feet in Pawtucket.

[illegible][illegible]

"	"	"	" North Providence"	179.30	" Pawtucket.
"	"	"	" North Providence"	179.30	" Pawtucket.

TABLE 29

GATES IN USE ON SEPTEMBER 30, 1968

Stop Gates												Gates on Public Fire Hydrants*		Gates on Unwatering Hydrants		Gates on Blow-offs			Total number of Gates	
6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"	60"	Total	5"	8"	Total	6"	8"	12"	Total	
PROVIDENCE																				
4453	984	16	651	276	28	72	39	6	3	10	0	6,538	1,588	1,480	3,068	8	14	22	1 2 1 4	9,632
CRANSTON																				
1737	905	0	216	9	0	11	16	13	13	4	1	2,925	1,115	7	1,122	3	5	8	0 2 3 5	4,060
JOHNSTON																				
336	386	1	31	12	6	5	0	0	0	1	0	780	276	11	287	3	0	3	0 0 2 2	1,072
NORTH PROVIDENCE																				
452	286	0	72	0	0	5	1	1	0	0	0	817	339	0	339	0	3	3	0 0 0 0	1,159
TOTALS																				
6978	2563	17	970	297	34	93	56	20	16	15	1	11,060	3,318	1,498	4,816	14	22	36	1 4 6 11	15,923

NOTE: The above table includes all gates in the special high pressure fire system in Providence and gates on Neutaconkavit Summit and Situate Apeduct east of the Siphon Chamber.

\*Gates on public fire hydrants not tabulated in 1967 are included in this report.



TABLE 30

SERVICE PIPES INSTALLED AND REMOVED--YEAR ENDED SEPTEMBER 30, 1968

City or Town	INSTALLED				REMOVED			
	General		Fire Supply	Total	General		Fire Supply	Total
	Copper 3/4"-2"	Cast Iron 4"-12"	Cast Iron 4"-12"		Lead or Copper 1/2"-2"	Cast Iron 4"-12"	Cast Iron 4"-12"	
Providence	189	21	19	229	157	7	6	170
Cranston	267	6	1	274	79	0	0	79
Johnston	138	2	1	141	13	0	0	13
North Providence	148	4	0	152	14	0	0	14
Totals	742	33	21	796	263	7	6	276

TABLE 31

NUMBER AND SIZE OF ACTIVE SERVICES--YEAR ENDED SEPTEMBER 30, 1968

	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	16"	24"	30"	Totals
Providence	222	24,904	7,516	1,762	495	394	557	6	1,003	900	85	4	8	2	0	0	37,858
Cranston	5	6,921	7,982	1,802	42	380	322	0	96	83	27	0	4	0	1	1	17,666
Johnston	0	762	2,258	837	9	184	64	0	9	13	2	0	0	0	0	0	4,138
North Providence	0	1,074	2,443	816	6	232	76	0	24	8	4	0	2	0	0	0	4,685
Totals	227	33,661	20,199	5,217	552	1,190	1,019	6	1,132	1,004	118	4	14	2	1	1	64,347

TABLE 32

## PUBLIC FIRE HYDRANTS

HYDRANT ACTIVITIES DURING YEAR ENDED SEPTEMBER 30, 1968

	Providence	Cranston	Johnston	North Providence	Totals
Post Hydrants Installed	145	40	6	23	214
Post Hydrants Removed	27	17	6	1	51
Flush Hydrants Removed	115	0	0	0	115

HYDRANTS IN DISTRIBUTION SYSTEM ON SEPTEMBER 30, 1968

Post Hydrants	2,807	1,123(1)	301	342	4,573(1)
Flush Hydrants	332	0	0	0	332
Totals	3,139	1,123(1)	301	342	4,905(1,2)

(1) One Extra Post Hydrant in 1967 Annual Report - Corrected.

(2) Includes Post Hydrants and Flush Hydrants in Special High Pressure Fire Service in Providence.

TABLE 33  
NUMBER, MAKE AND SIZE OF METERS ON ACTIVE SERVICES  
YEAR ENDED SEPTEMBER 30, 1968

Size	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	16"	24"	Total
PROVIDENCE														
Make														
Trident	27,577	2,953	887	1,168	1,563	83	62	60	16	5	-	-	-	34,374
Thomson	2,813	273	190	41	108	-	3	-	-	-	-	-	-	3,428
Empire	35	-	8	6	3	-	-	-	-	-	-	-	-	52
Crown	14	4	2	2	-	-	-	-	-	-	-	-	-	22
Hersey	-	-	-	2	3	2	13	68	6	-	-	-	-	94
Venturi	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Totals	30,439	3,230	1,087	1,219	1,677	85	78	128	22	5	-	2	-	37,972

*CRANSTON														
Make														
Trident	14,715	1,093	434	261	302	2	6	13	4	-	1	-	-	16,831
Thomson	729	25	15	8	11	-	-	-	-	-	-	-	-	788
Hersey	-	-	-	-	1	-	-	3	4	-	-	-	-	8
Venturi	-	-	-	-	-	-	-	-	-	-	2	-	-	2
Dallsert	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Totals	15,444	1,118	449	269	314	2	6	16	8	-	3	-	1	17,630

\*Includes 1-6" Trident Compound Meter supplying City of Warwick  
 2-6" Trident Protectus Meters supplying City of Warwick  
 1-12" Trident Crest Meter supplying Kent County Water Authority  
 1-12" Venturi Meter supplying Kent County Water Authority at Water Purification Works  
 1-24" Dallsert Flow Tube Meter supplying City of Warwick

*JOHNSTON														
Make														
Trident	3,224	549	110	51	53	-	-	-	1	-	-	-	-	3,988
Thomson	141	5	3	-	-	-	-	-	-	-	-	-	-	149
Totals	3,365	554	113	51	53	-	-	-	1	-	-	-	-	4,137

\*Includes 1-8" Trident Crest Meter supplying East Smithfield Water Co.

*NORTH PROVIDENCE														
Make														
Trident	3,592	524	235	56	44	1	2	3	-	-	1	-	-	4,458
Thomson	211	5	3	1	1	-	-	-	-	-	-	-	-	221
Hersey	-	-	-	-	-	-	-	5	-	-	-	-	-	5
Venturi	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Totals	3,803	529	238	57	45	1	2	8	-	-	2	-	-	4,685

\*Includes 1-12" Trident Crest Meter supplying East Smithfield Water Co.  
 1-12" Venturi Meter supplying Town of Smithfield

TABLE 34  
CAPACITY AND CONSUMPTION

Year Ended Sept. 30	Purification Works Capacity M.G.D.	Total During Year M.G.	Average M.G.D.	Consumption			Rate in M.G.D.	Maximum Hour	
				Total M.G.	Maximum Day Percent of Plant Capacity	Percent of Average Day		Percent of Plant Capacity	Percent of Average Day
1941	61.6	11,020.9	30.2	40.8	66.2	135.1	66.7	108.3	220.9
1942	61.6	11,409.3	31.3	38.3	62.2	122.4	54.7	88.8	174.8
1943	61.6	11,586.8	31.7	46.7	75.8	147.3	77.0	125.0	242.9
1944	61.6	12,538.9	34.3	49.5	80.4	144.3	69.8	113.3	203.5
1945	61.6	12,528.9	34.3	43.6	70.8	127.1	71.3	115.7	207.9
1946	61.6	12,685.3	34.8	50.5	82.0	145.1	82.1	133.3	235.9
1947	61.6	13,169.0	36.1	49.8	80.8	138.0	71.8	116.6	198.7
1948	61.6	13,644.7	37.3	54.7	88.8	146.6	82.3	133.6	220.6
1949	61.6	13,510.3	37.0	60.2	97.7	162.7	89.3	145.0	241.4
1950	61.6	13,373.8	36.6	62.0	100.6	169.4	98.4	159.7	268.9
1951	61.6	13,721.6	37.6	56.4	91.6	150.0	91.2	148.1	242.6
1952	61.6	13,829.3	37.8	70.0	113.6	185.2	110.4	179.2	292.1
1953	61.6	14,182.8	38.9	66.4	107.8	170.7	100.8	163.6	259.1
1954	105.0	13,840.6	37.9	68.6	65.3	181.0	118.1	112.5	311.6
1955	105.0	14,933.0	40.9	70.2	66.9	171.6	117.1	111.5	286.3
1956	105.0	15,145.2	41.4	68.8	65.5	166.2	103.6	98.7	250.2
1957	105.0	15,963.8	43.7	84.7	80.7	193.8	131.0	124.8	299.8
1958	105.0	14,761.0	40.4	68.5	65.2	169.6	108.7	103.5	269.1
1959	105.0	15,430.0	42.3	71.1	67.7	168.1	111.5	106.2	263.6
1960	105.0	15,859.0	43.3	77.4	73.7	178.8	120.3	114.6	277.8
1961	105.0	16,495.9	45.2	69.3	66.0	153.3	112.3	107.0	248.5
1962	105.0	16,687.5	45.7	73.8	70.3	161.5	112.5	107.1	246.2
1963	105.0	17,488.8	47.9	87.2	83.0	182.0	129.3	123.1	269.9
1964	105.0	18,383.0	50.2	86.0	81.9	171.3	139.6	133.0	278.1
1965	105.0	19,470.6	53.3	88.5	84.3	166.0	134.1	127.7	251.6
1966	105.0	18,425.5	50.5	82.3	78.4	163.0	118.9	113.2	235.4
1967	105.0	17,561.3	48.1	74.2	70.7	154.3	108.6	103.4	225.8
1968	105.0	18,609.1	50.8	84.6	80.6	166.5	122.8	117.0	241.7

TABLE 35

## CONSUMPTION OF WATER - MILLION GALLONS

YEAR ENDED SEPTEMBER 30, 1968

	Low Service (1)			High Service (2)			Total Service (1,2)		
	Max. Day	Min. Day	Avg. Day	Max. Day	Min. Day	Avg. Day	Max. Day	Min. Day	Avg. Day
1967									
1968									
October	48.63	28.99	40.00	9.92	8.05	9.14	58.55	37.31	49.14
November	42.75	24.83	36.97	9.26	7.58	8.70	51.73	33.57	45.67
December	41.91	26.82	35.53	9.11	7.26	8.46	51.02	34.19	43.99
January	44.96	28.26	38.54	9.44	7.58	8.86	54.28	35.84	47.40
February	42.83	27.34	38.09	9.52	8.01	8.97	52.08	35.54	47.06
March	43.14	29.08	38.02	9.71	8.22	9.05	52.54	37.30	47.07
April	44.17	27.75	39.66	10.31	7.95	9.41	53.69	36.20	49.07
May	50.41	28.24	40.97	11.12	8.06	9.74	61.39	36.30	50.71
June	54.89	28.78	43.28	11.97	7.98	9.66	66.86	36.76	52.94
July	68.83	27.51	49.68	16.26	7.90	11.91	84.58	35.41	61.60
August	60.58	27.57	48.64	12.07	7.88	10.55	72.13	35.45	59.19
September	59.29	30.86	45.59	12.28	8.33	10.47	71.57	39.19	56.06
For Year	68.83(a)	24.83(b)	41.26	15,102.69	16.26(c)	7.26(d)	9.58	3,506.42	84.58(e)
	(a) July 23; (b) Nov. 4			(c) July 22; (d) Dec. 17			(e) July 23; (f) Nov. 4		
							50.84 18,609.11		

(1) Includes water supplied to City of Warwick, Kent County Water Authority and to State Institutions.

(2) Includes water supplied to East Smithfield Water Co. and Smithfield Water Department.

TABLE 36

## WATER SOLD TO STATE INSTITUTIONS AND CITY OF WARWICK

YEAR ENDED SEPTEMBER 30, 1968

	STATE INSTITUTIONS				CITY OF WARWICK				Average Gallons per Day
	S.S. 50, 767 Sackanosset Rd. Cranston 12"x5.50" Venturi Meter	S.S. 24, 215A East St. Cranston 8" Tri-Prot Meter	S.S. 47, 269 Petta -- consett Cranston 24" Dall- sert Flow Meter	S.S. 47, 475 Pawtuxet Bridge Cranston 6" Tri-Comp. Meter	S.S. 61, 515 Oaklawn Avenue Cranston 6" Tri- Protectus Meter	S.S. 61, 780 Dresden Street Cranston 6" Tri- Protectus Meter	Total Gallons per Month		
1967- 1968	Gallons per Month	Gallons per Month	Total Gallons per Month	Average Gallons per Day	Gallons per Month	Gallons per Month	Gallons per Month		
October	38,159,000	2,100	38,161,100	1,231,003	134,851,000	Closed	7,417,725	146,558,575	
November	33,654,000	0	33,654,000	1,121,800	121,955,000	"	6,094,650	131,920,775	
December	32,235,000	0	32,235,000	1,039,839	114,125,000	"	5,464,575	123,192,800	
January	38,133,000	0	38,133,000	1,230,097	133,075,000	"	6,590,400	143,831,425	
February	32,547,000	0	32,547,000	1,122,310	116,272,000	"	5,454,300	125,352,700	
March	34,786,625	0	34,786,625	1,122,149	122,589,000	"	6,009,150	132,473,550	
April	37,135,000	935,325	38,070,325	1,269,011	136,308,000	"	10,237,800	151,006,350	
May	37,432,000	41,700	37,473,700	1,208,829	153,973,000	"	13,638,000	173,534,575	
June	35,102,000	39,000	35,141,000	1,171,367	141,691,000	"	9,660,975	156,701,200	
July	42,677,000	29,175	42,706,175	1,377,619	201,881,000	"	25,363,050	238,609,775	
August	43,790,000	24,000	43,814,000	1,413,355	183,216,000	"	19,850,325	212,156,325	
September	43,161,750	3,000	43,164,750	1,438,825	179,499,000	"	18,242,925	205,916,925	
For Year	448,812,375	1,074,300	449,886,675	1,229,199	1,739,435,000	"	134,023,875	1,941,254,975	
								5,303,975	

TABLE 37

WATER SOLD TO EAST SMITHFIELD WATER COMPANY, SMITHFIELD WATER DEPARTMENT  
AND KENT COUNTY WATER AUTHORITY

YEAR ENDED SEPTEMBER 30, 1968

	EAST SMITHFIELD WATER COMPANY					SMITHFIELD WATER DEPT.					KENT COUNTY WATER AUTHORITY				
	S.S.51,198 Waterman Street No. Prov. 12" Tri-Crest Meter	S.S.52,403 Dean Avenue Smithfield 8" Tri-Crest Meter	Average Gallons per Day	Total Gallons per Month		S.S.71,980 Smithfield Road North Providence 12" Flow Meter	S.S.58,985 Oaklawn Avenue Cranston 12" Tri-Crest Meter	S.S.60,757 Purification Works Scituate 12" Venturi Meter			Total Gallons per Month	Average Gallons per Day			
1967-1968															
October	11,283,000	4,370,250	504,944	15,653,250		1,470,500	7,830,000	10,976,000			18,806,000	606,645			
November	9,985,545	4,111,500	469,902	14,097,045		1,237,000	7,108,500	11,972,000			19,080,500	636,017			
December	10,585,485	3,773,250	463,185	14,358,735		974,500	6,924,000	10,693,000			17,617,000	568,290			
January	11,571,937	4,685,250	524,425	16,257,187		896,500	8,245,500	14,138,000			22,383,500	722,048			
February	10,355,610	4,194,750	501,737	14,550,360		909,800	7,935,000	12,196,000			20,131,000	694,172			
March	10,029,915	4,413,750	465,925	14,443,665		928,100	7,136,250	14,467,000			21,603,250	696,879			
April	11,328,375	4,717,500	534,863	16,045,875		958,000	6,661,500	13,237,000			19,898,500	663,283			
May	11,328,375	5,239,500	534,448	16,567,875		1,167,600	7,455,750	15,104,000			22,559,750	727,734			
June	10,191,522	5,087,250	509,292	15,278,772		1,279,300	6,860,250	15,295,000			22,155,250	738,508			
July	10,027,353	6,492,000	532,882	16,519,353		1,638,900	10,268,250	20,715,000			30,983,250	999,460			
August	10,531,449	5,615,250	520,861	16,146,699		1,320,900	9,159,000	19,184,000			28,343,000	914,290			
September	10,882,497	6,090,000	565,750	16,972,497		1,640,200	8,847,750	16,229,000			25,076,750	835,892			
For Year	128,101,063	58,790,250	510,632	186,891,313		14,421,300	94,431,750	174,206,000			268,637,750	733,983			



TABLE 38

## AVERAGE DAILY CONSUMPTION OF WATER PER MONTH IN MILLION GALLONS

Year Ending Sept. 30	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
1877				2.27	2.26	1.84	2.25	2.53	2.94	2.91	2.76	3.01	2.53*
1878	2.61	2.22	2.30	2.16	2.15	2.20	2.32	2.85	2.89	3.88	3.12	3.17	2.66
1879	2.84	2.39	2.38	2.82	2.93	2.59	2.38	3.22	3.48	3.78	3.52	3.32	2.97
1880	3.38	2.89	2.97	2.94	2.86	2.90	2.96	3.68	5.05	4.18	3.92	3.82	3.46
1881	3.67	3.35	3.22	3.54	4.07	3.13	2.98	3.54	3.81	4.05	4.46	4.16	3.66
1882	3.92	3.60	3.38	3.30	3.27	3.06	3.05	3.24	4.02	4.69	5.09	3.84	3.70
1883	3.40	3.33	3.65	3.94	3.74	3.91	3.43	3.82	4.64	5.24	5.18	4.70	4.08
1884	3.81	3.67	3.58	4.24	3.87	3.90	3.43	3.79	4.70	4.38	4.06	4.82	4.02
1885	4.24	3.67	3.99	4.48	4.73	4.80	4.10	4.10	5.44	5.56	5.01	4.92	4.59
1886	4.37	4.20	4.71	4.82	4.75	4.83	4.33	4.53	4.93	6.02	4.88	4.94	4.78
1887	4.62	4.24	4.94	5.06	4.90	4.84	4.41	4.90	5.16	5.58	5.00	5.08	4.89
1888	4.80	4.40	5.10	5.44	5.79	5.39	4.86	4.84	6.17	6.51	5.87	5.32	5.37
1889	5.34	5.18	5.51	5.72	7.34	5.80	5.27	5.75	6.14	5.69	5.59	5.52	5.74
1890	5.41	5.17	6.14	6.34	6.79	6.28	6.84	6.60	6.90	8.11	7.13	6.72	6.54
1891	6.28	6.08	6.83	6.35	6.53	6.72	6.67	7.55	7.75	7.73	7.78	7.57	6.99
1892	7.53	7.32	7.69	7.65	7.83	7.62	7.27	6.77	8.37	9.30	9.11	8.63	7.92
1893	8.00	7.65	8.48	9.30	8.85	8.74	8.07	8.58	9.92	10.78	10.50	9.48	9.03
1894	8.79	7.85	8.61	9.11	9.07	9.09	8.73	9.97	11.28	12.39	10.76	10.22	9.66
1895	10.20	8.86	9.08	9.02	9.82	8.60	7.70	8.78	9.49	8.99	9.50	9.10	9.10
1896	8.15	8.19	9.56	10.19	8.79	8.74	8.60	9.26	9.64	9.93	9.70	8.83	9.13
1897	8.49	8.05	8.98	8.83	8.52	8.44	8.06	8.27	8.90	9.13	8.70	9.07	8.62
1898	8.76	8.29	8.63	8.56	9.09	8.68	8.38	8.35	10.04	10.10	9.44	9.84	9.01
1899	8.94	8.75	9.64	9.45	9.53	8.91	8.52	9.18	11.18	10.21	10.12	9.70	9.51
1900	9.15	9.27	9.53	9.81	9.49	9.66	9.23	8.59	10.48	12.11	10.95	11.71	10.00
1901	9.99	9.54	9.95	10.09	10.52	10.20	8.92	10.05	11.50	12.02	11.69	11.15	10.47
1902	10.91	10.70	11.02	11.65	11.00	10.92	10.52	10.48	11.85	12.09	11.97	11.66	11.23
1903	11.89	11.81	12.85	12.84	12.62	11.92	12.33	13.92	13.02	13.54	12.91	13.76	12.78
1904	13.09	13.89	13.49	14.29	14.58	13.42	12.07	12.72	13.94	14.21	13.18	13.85	13.56
1905	14.57	14.88	14.60	14.20	14.65	13.88	13.85	14.77	15.06	16.34	14.30	13.99	14.59
1906	13.73	14.96	14.63	15.00	15.07	14.77	14.49	15.01	15.69	15.08	15.74	16.06	15.02
1907	15.02	14.37	14.25	15.74	16.24	16.26	15.62	16.29	17.18	18.50	18.00	15.02	16.04
1908	15.34	15.13	15.34	15.46	16.07	15.21	14.53	14.67	16.63	16.77	15.42	15.62	15.52
1909	15.83	15.80	15.44	15.16	14.87	14.88	13.94	14.04	15.54	17.71	16.15	14.80	15.35
1910	14.76	14.66	15.28	15.62	15.65	15.22	14.74	14.72	15.53	17.13	15.95	15.61	15.40
1911	15.56	14.98	16.11	16.39	16.27	16.00	15.30	16.19	17.09	19.36	17.09	16.08	16.37
1912	16.29	16.49	16.44	16.12	18.14	17.16	16.39	16.70	17.32	20.54	17.62	17.06	17.36
1913	17.36	16.72	17.17	17.49	17.98	17.59	17.06	17.12	18.95	19.55	18.40	17.12	17.71
1914	16.76	16.87	17.27	17.83	18.52	17.60	16.99	17.43	20.24	17.62	17.09	18.51	17.73
1915	17.29	16.43	17.27	17.07	17.60	17.44	16.80	16.68	18.04	16.49	16.76	17.80	17.14
1916	16.90	17.03	17.79	18.16	18.47	18.57	17.43	17.57	17.82	17.90	16.58	18.76	17.75
1917	18.51	18.08	18.50	19.73	20.62	19.31	18.09	17.67	18.28	19.61	20.03	18.76	18.93
1918	18.62	18.71	20.64	23.82	22.98	23.07	22.43	22.31	21.85	22.23	21.50	20.63	21.56
1919	20.42	20.31	21.04	21.72	20.94	19.35	19.45	19.60	21.77	20.70	20.40	20.68	20.53
1920	20.62	20.18	21.64	23.80	23.16	23.03	20.67	20.45	20.98	21.06	21.58	21.89	21.59

\*Average for 9 months.

TABLE 38 (Continued)

## AVERAGE DAILY CONSUMPTION OF WATER PER MONTH IN MILLION GALLONS

Year Ending Sept.30	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
1921	21.41	20.46	20.97	21.64	21.43	20.77	20.21	20.92	22.84	21.18	21.63	22.86	21.36
1922	22.84	22.16	22.18	24.14	23.64	22.01	21.64	21.49	22.18	21.91	22.11	22.53	22.40
1923	22.78	23.23	23.08	23.66	24.96	23.84	22.95	24.12	24.49	23.90	24.08	24.31	23.78
1924	24.68	24.09	23.33	24.19	24.58	23.44	23.51	23.28	24.10	25.11	22.48	22.51	23.78
1925	22.84	23.70	23.76	24.22	23.61	22.70	23.13	23.03	24.82	23.54	23.20	23.81	23.53
1926	23.41	22.47	23.29	23.95	24.12	24.25	23.36	22.80	24.16	24.80	23.94	23.53	23.67
1927	21.76	22.60	23.24	22.92	22.41	22.57	22.32	22.68	23.62	23.27	22.27	23.27	22.74
1928	23.37	22.99	22.39	23.04	22.80	23.21	22.79	23.83	23.05	24.31	26.69	25.38	23.65
1929	26.82	25.54	26.17	26.84	27.01	25.42	23.05	22.91	25.73	26.53	24.94	24.24	25.43
1930	23.83	24.24	24.29	23.85	24.88	23.34	23.38	25.15	26.85	26.81	25.95	27.45	25.00
1931	26.30	24.04	23.80	23.71	24.36	23.64	23.11	23.76	25.35	26.20	26.22	26.31	24.73
1932	25.36	23.42	23.82	23.20	23.23	22.99	22.72	23.47	25.27	25.34	25.16	24.59	24.05
1933	24.15	23.65	23.51	24.00	24.25	24.01	23.41	25.32	26.92	28.77	27.65	26.00	25.14
1934	24.89	24.43	25.04	25.55	28.05	26.38	24.78	25.78	27.95	31.00	28.77	26.39	26.58
1935	26.50	25.39	25.16	26.35	27.06	26.31	25.71	27.02	27.47	29.47	31.14	28.23	27.15
1936	29.45	28.03	27.42	27.97	28.73	26.44	25.75	27.02	30.27	30.23	30.79	29.23	28.44
1937	27.94	26.72	27.06	25.77	26.13	27.16	25.73	25.93	28.45	31.43	31.85	29.18	29.79
1938	27.84	26.42	25.57	25.11	24.67	24.38	23.56	24.56	27.13	26.34	28.82	28.34	26.07
1939	27.90	27.21	26.85	27.07	27.62	27.16	26.25	27.48	30.84	32.81	33.62	30.31	28.77
1940	30.12	28.96	28.26	28.74	28.06	27.23	25.77	26.15	28.49	30.10	31.57	28.96	28.54
1941	29.55	27.86	28.36	28.67	29.02	28.78	29.07	29.91	31.74	32.87	32.66	33.78	30.19
1942	32.74	31.44	31.84	31.34	31.21	29.84	29.18	29.76	31.34	32.13	32.14	32.11	31.26
1943	29.88	29.27	30.40	29.93	30.67	30.35	30.05	29.65	35.13	36.35	35.47	33.71	31.74
1944	31.87	31.25	32.35	32.29	32.52	32.95	31.51	34.27	36.80	39.10	40.60	35.43	34.26
1945	33.77	32.77	33.33	34.89	34.57	33.78	33.37	33.23	35.44	35.73	36.34	34.67	34.32
1946	32.74	32.27	33.21	34.01	33.69	33.80	33.64	33.59	36.70	40.70	35.92	36.69	34.75
1947	36.37	35.34	35.58	35.95	35.83	35.01	33.27	33.94	35.72	37.35	39.34	39.21	36.08
1948	38.91	36.19	35.55	34.84	37.31	36.92	36.15	33.95	36.90	39.33	41.55	39.76	37.28
1949	36.27	35.34	35.11	33.98	34.00	33.88	33.12	35.12	46.65	44.56	40.18	35.77	37.01
1950	34.61	35.94	34.51	33.92	34.34	34.71	33.39	34.90	40.27	43.27	41.40	38.24	36.64
1951	39.96	36.91	34.80	36.10	35.92	34.81	34.21	37.21	39.31	43.49	39.98	38.20	37.59
1952	36.92	34.79	33.63	34.20	34.59	33.98	33.98	34.33	41.21	54.79	40.66	40.11	37.78
1953	37.09	35.75	35.27	34.59	33.95	34.20	34.61	35.63	50.68	46.76	43.63	43.95	38.86
1954	38.20	35.43	35.03	34.85	35.63	35.31	35.10	35.05	45.09	45.27	40.72	39.22	37.92
1955	39.84	37.82	37.17	37.24	38.42	37.85	37.00	41.54	44.52	49.90	47.08	42.25	40.91
1956	40.29	38.30	38.18	38.42	39.31	38.37	38.55	40.08	49.50	44.93	48.86	41.70	41.38
1957	40.78	38.65	36.74	39.14	38.43	36.98	38.50	44.48	60.45	57.12	48.16	45.16	43.74
1958	42.22	38.27	38.42	39.09	38.20	37.40	40.03	38.60	42.57	45.05	43.60	41.63	40.44
1959	40.35	38.01	39.35	39.34	39.46	38.65	39.04	44.02	45.05	45.16	51.33	47.28	42.27
1960	41.93	40.00	39.63	39.48	40.19	39.72	40.34	42.06	51.75	49.75	49.49	45.57	43.33
1961	42.22	42.53	40.99	41.24	43.54	42.26	41.00	42.96	51.71	51.06	52.80	50.01	45.19
1962	43.66	41.94	40.90	42.42	41.91	42.38	42.74	46.45	53.07	51.39	54.38	47.10	45.72
1963	45.66	44.44	43.38	44.26	44.81	44.80	45.77	47.96	55.81	55.87	54.40	47.58	47.91
1964	46.77	42.66	43.07	45.45	45.81	46.23	46.54	56.23	63.98	57.44	53.33	55.16	50.23
1965	51.52	49.17	47.99	47.66	47.94	46.33	46.89	53.98	65.25	63.33	63.37	56.32	53.34

TABLE 38 (Continued)

## AVERAGE DAILY CONSUMPTION OF WATER PER MONTH IN MILLION GALLONS

Year Ending Sept. 30	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Avg. for Year
1966	50.11	47.17	44.67	44.73	44.94	45.77	46.82	48.47	59.32	61.74	59.88	51.70	50.48
1967	48.22	46.08	44.52	45.59	45.91	45.98	43.99	44.96	55.39	50.26	53.10	53.36	48.11
1968	49.14	45.67	43.99	47.40	47.06	47.07	49.07	50.71	52.94	61.60	59.19	56.06	50.84

TABLE 39

## FUEL OIL CONSUMPTION

YEAR ENDED SEPTEMBER 30, 1968

1967-1968	Administration and Operations Building Gallons Used No. 6	Water Purification Plant Gallons Used No. 2	No. 6	Forestry and Maintenance Building Gallons Used No. 2	Neutaconkanut Pumping Station Gallons Used No. 2	Bath Street Pumping Station Gallons Used No. 2	Total	
							Gallons Used No. 2	Gallons Used No. 6
October	4,572	558	3,631	925	135	0	1,618	8,203
November	4,836	0	6,825	2,094	449	200	2,743	11,661
December	5,702	0	8,619	2,411	645	350	3,406	14,321
January	6,790	0	10,424	2,511	781	168	3,460	17,214
February	5,531	0	8,849	3,172	644	400	4,216	14,380
March	6,138	0	8,288	2,182	524	400	3,106	14,426
April	4,419	0	5,606	1,079	190	150	1,419	10,025
May	2,096	0	4,096	977	98	0	1,075	6,192
June	837	610	325	95	23	0	728	1,162
July	364	985	900	140	25	0	1,150	1,264
August	464	857	0	50	0	0	907	464
September	535	1,600	0	236	8	0	1,844	535
Totals	42,284	4,610	57,563	15,872	3,522	1,668	25,672	99,847

TABLE 40  
FINANCIAL STATEMENT  
YEAR ENDED SEPTEMBER 30, 1968

Operating Revenues		
Sale of Water		\$2,942,611.22
Hydrant Rental		109,562.48
Electric Power		23,304.50
Setting Meters		4,300.50
Repairing Meters		1,842.42
Repairs to Water Services		1,899.13
Repairs to Distribution Mains		5,216.86
Repairs to Hydrants		5,295.26
Installation of New Fire Supplies		9,249.00
Installation of New Water Services		67,365.00
Installation of New Water Mains		88,066.15
Water Meters - Revolving Fund		6,986.26
Sale of Pulpwood, Logs and Miscellaneous Timber Products		6,839.92
Total Operating Revenue		<u>\$3,272,538.70</u>
Operating Expenses		
Administrative	\$213,197.38	
Source of Supply	354,558.07	
Transmission and Distribution	876,289.74	
Accounting and Commercial	236,992.89	
Taxes	572,595.59	
Employees Retirement System	80,298.00	
Social Security	40,203.52	
Total	<u></u>	*\$2,374,135.19
Operating Income		<u>\$ 898,403.51</u>
Add Non-Operating Income		
Rental of Real Estate	\$ 414.38	
Sale of Scrap Material	6,853.68	
Sale of Material	425.28	
Sale of Abandoned Mains	4,558.56	
Other	2,965.48	
Total Non-Operating Income	<u></u>	<u>\$ 15,217.38</u>
Sub-Total		<u>\$ 913,620.89</u>
Less Non-Operating Expenses		
Interest on Floating Debt	\$ 1,557.93	
Interest on Bonded Debt	122,381.25	
Retirement-Serial Bonds	75,000.00	
Retirement-Floating Debt	59,350.00	
Total Non-Operating Expense	<u></u>	<u>\$ 258,289.18</u>
Net Income Payable to General Fund		<u>\$ 655,331.71</u>

\*See Table 41 for detailed account of Operating Expense.

TABLE 41  
WATER SUPPLY BOARD OPERATING EXPENSES  
YEAR ENDED SEPTEMBER 30, 1968

ADMINISTRATIVE

Salaries:

001	Officials	\$37,030.95
	Clerical-Chief Engineer's Office	5,243.71
	Clerical-Accounting	28,406.50
	Engineering	65,907.32
	Labor-General	12,998.67
008	Sick Leave Payrolls	2,571.62
009	Vacation Payrolls	8,648.13
	Total	\$160,806.90

Services Other Than Personal:

102	Expert Consultant and Other Service Fees	\$ 36.40
109	Fees Not Otherwise Classified	23.00
111	Telephone and Telegraph	2,224.18
112	Postage, Freight and Express	804.35
115	Transportation of Persons - Conventions	196.00
117	Travel Subsistence - Conventions	340.00
118	Travel Subsistence - Other	30.00
119	Special Subsistence	73.84
121	Printing, Binding and Reproduction Services	109.10
122	Advertising	55.00
131	Light and Power	1,800.00
141	Repairs - Office Machinery	836.89
142	Repairs - Automobiles	363.44
150	Repairs - Structures and Improvements	11,627.87
151	Maintenance and Servicing	305.59
181	Laundry and Cleaning	108.00
183	Dues and Subscriptions	279.00
199	Miscellaneous Services	10,631.00
	Total	\$ 29,843.66

Materials and Supplies:

201	Stationery and Office Supplies	\$ 1,469.21
202	Small Tools and Shop Supplies	155.40
211	Motor Fuel	726.17
212	Lubricants	80.40
213	Tires and Tubes	491.84
214	Repair Parts and Supplies - Trucks and Autos	288.23
231	Medical, Chemical and Laboratory Supplies	8.85
241	Fuel	1,076.50
244	Housekeeping Supplies and Minor Equipment	415.79
267	Paint and Painters' Supplies	83.46
268	Plumbing and Electrical Supplies	5.29
299	Miscellaneous Materials and Supplies	75.00
	Total	\$ 4,876.14

Special Items:

331	Payments for Claims and Damages	\$ 179.58
350	Blue Cross and Physicians Services	4,345.75
361	Expenses for Various Ceremonies	664.94
	Total	\$ 5,190.27

Capital Outlay:

501 Office Furniture, Machinery and Equipment	\$ 4,807.09
502 Books, Maps and Charts	76.50
511 Automobiles	5,736.93
591 Equipment Not Otherwise Classified	728.50

Total	<u>\$ 11,349.02</u>
-------	---------------------

Outstanding Commitments-Materials and Supplies	357.19
Outstanding Commitments-Capital Outlay	774.20

Total-Administrative	<u>\$213,197.38</u>
----------------------	---------------------

SOURCE OF SUPPLY

Hydro-Electric Station:

Salaries:

001 Labor-Operation	\$11,069.24
Repairs-Machinery and Equipment	11.94
Total	<u>\$ 11,081.18</u>

Services Other Than Personal:

111 Telephone and Telegraph	\$ 193.81
115 Transportation of Persons - Conventions	20.00
117 Travel Subsistence - Conventions	91.00
131 Light and Power	663.27
150 Repairs - Buildings	61.92
151 Maintenance and Servicing	668.52
Total	<u>\$ 1,698.52</u>

Materials and Supplies:

201 Stationery and Office Supplies	\$ 308.40
212 Lubricants	102.20
241 Fuel	542.11
Total	<u>\$ 952.71</u>

Water Purification Plant:

Salaries:

001 Supervision	\$16,587.46
Labor-Operation	54,577.14
Labor-Care of Grounds	3,709.19
Clerical	4,978.75
Technical	27,291.60
Total	<u>\$107,144.14</u>

Services Other Than Personal:

111 Telephone and Telegraph	1,001.92
112 Postage, Freight and Express	88.93
115 Transportation of Persons - Conventions	65.00
116 Transportation of Persons - Other	74.41
117 Travel Subsistence - Conventions	110.00
118 Travel Subsistence - Other	375.00
131 Light and Power (gas)	121.31
141 Repairs - Office Machinery	52.80
142 Repairs - Trucks and Autos	66.00
146 Repairs - Plant Equipment	1,217.19



149	Repairs - Other Equipment	\$	40.50	
150	Repairs - Buildings		2,515.00	
151	Maintenance and Servicing		910.69	
181	Laundry and Cleaning		1,517.21	
199	Miscellaneous Services		221.50	
Total				\$ 8,377.46
Materials and Supplies:				
201	Stationery and Office Supplies	\$	368.71	
202	Small Tools and Shop Supplies		86.00	
204	Wearing Apparel and Personal Supplies		123.60	
213	Tires and Tubes		70.84	
214	Repair Parts and Supplies - Trucks and Autos		121.07	
222	Repair Parts and Supplies - Plant Equipment		463.98	
231	Ferric Sulphate		50,317.87	
231	Lime		17,405.35	
231	Chlorine		4,860.00	
231	Sodium Silicofluoride		15,980.00	
231	Miscellaneous Laboratory Supplies		2,019.08	
241	Fuel		3,910.41	
244	Housekeeping Supplies		484.84	
252	Seeds, Fertilizer, Trees and Shrubs		240.00	
266	Lumber and Hardware		197.27	
267	Paint and Painters' Supplies		91.32	
268	Plumbing and Electrical Supplies		146.75	
271	Pipe		112.00	
272	Valves and Fittings		20.58	
299	Miscellaneous Materials and Supplies		70.00	
Total				\$97,089.67
Special Items:				
302	Liability Insurance	\$	125.00	
Total				\$ 125.00
Capital Outlay:				
502	Books, Maps and Charts	\$	21.75	
Total				\$ 21.75
Scituate Reservoir:				
001	Labor - Operation	\$	5,254.87	
	Repairs - Care of Grounds		3,636.48	
Total				\$ 8,891.35
Services Other Than Personal:				
102	Expert Consultant and Other Service Fees	\$	7.50	
111	Telephone and Telegraph		111.26	
142	Repairs - Trucks and Autos		243.25	
Total				\$ 362.01
Materials and Supplies:				
213	Tires and Tubes	\$	23.42	
214	Repair Parts and Supplies-Automotive Equipment		45.33	
252	Seeds, Fertilizer, Trees and Shrubs		519.54	
267	Paint and Painters' Supplies		140.87	
Total				\$ 729.16

Capital Outlay:		
511 Automobiles	\$ 1,331.33	
Total		\$ 1,331.33
Other Reservoirs:		
Salaries:		
001 Labor - Operation	\$ 5,327.70	
Repairs - Structures and Improvements	55.28	
Repairs - Care of Grounds	1,399.11	
Total		\$ 6,782.09
Services Other Than Personal:		
142 Repairs - Trucks and Autos	\$ 29.25	
Total		\$ 29.25
Materials and Supplies:		
213 Tires and Tubes	\$ 23.42	
214 Repair Parts and Supplies - Trucks and Autos	14.88	
Total		\$ 38.30
Capital Outlay:		
511 Automobiles	\$ 1,331.33	
Total		\$ 1,331.33
Forestry and Maintenance:		
Salaries:		
001 Supervision	\$ 9,751.05	
Labor-Operation	811.37	
Repairs - Care of Grounds	11,201.15	
Total		\$21,763.57
Services Other Than Personal:		
102 Expert Consultant and Other Service Fees	\$ 107.50	
109 Fees Not Otherwise Classified	5.50	
111 Telephone and Telegraph	196.23	
115 Transportation of Persons - Conventions	7.00	
117 Travel Subsistence - Conventions	75.00	
142 Repairs - Trucks and Autos	446.97	
143 Repairs - Construction & Other Automotive Equipment	678.84	
149 Repairs - Other Equipment	49.00	
183 Dues and Subscriptions	16.00	
199 Miscellaneous Services	109.00	
Total		\$ 1,691.04
Materials and Supplies:		
201 Stationery and Office Supplies	\$ 55.02	
202 Small Tools and Shop Supplies	194.95	
204 Wearing Apparel and Personal Supplies	276.39	
212 Lubricants	254.79	
213 Tires and Tubes	154.27	
214 Repair Parts and Supplies - Trucks and Autos	927.06	
231 Medical, Chemical and Laboratory Supplies	26.50	
241 Fuel	1,641.20	
252 Seeds, Fertilizer, Trees and Shrubs	421.24	
259 Other Agricultural, Horticultural and Landscaping Supplies	1,342.71	

260	Loam	\$	237.50	
261	Gravel, Sand and Stone		20.25	
265	Fabricated Metal Products		425.97	
266	Lumber and Hardware		232.84	
267	Paint and Painters' Supplies		254.30	
299	Miscellaneous Materials and Supplies		169.28	
Total				\$ 6,634.27
Capital Outlay				
502	Books, Maps and Charts	\$	31.90	
511	Automobiles		1,331.34	
512	Trucks and Autos		4,150.84	
571	Agricultural and Landscaping Equipment		13,970.35	
Total				\$ 19,484.43
General:				
Salaries:				
001	Clerical	\$	1,954.72	
	Labor - Operation		11,067.43	
	Repairs - Machinery and Equipment		71.40	
	Repairs - Care of Grounds		12,281.43	
	Repairs - Care of Grounds - Rockland Cemetery		326.32	
008	Sick Leave Payrolls		5,049.82	
009	Vacation Payrolls		6,907.60	
025	Injured Employee Payrolls		63.04	
034	Holiday Payrolls		3,434.32	
Total				\$ 41,156.08
Services Other Than Personal:				
102	Expert Consultant and Other Service Fees	\$	15.00	
109	Fees Not Otherwise Classified		56.00	
112	Postage, Freight and Express		204.55	
121	Printing and Binding		125.50	
142	Repairs - Trucks and Autos		188.86	
148	Repairs - Communication Equipment		29.03	
151	Maintenance and Servicing		608.71	
Total				\$ 1,227.65
Materials and Supplies:				
201	Stationery and Office Supplies	\$	115.33	
202	Small Tools and Shop Supplies		620.20	
211	Motor Fuel		2,673.52	
214	Repair Parts and Supplies - Trucks and Autos		290.80	
231	Medical, Chemical and Laboratory Supplies		14.31	
244	Housekeeping Supplies and Minor Equipment		5.35	
252	Seeds, Fertilizer, Trees and Shrubs		52.18	
265	Fabricated Metal Products		152.05	
267	Paint and Painters' Supplies		24.99	
279	Water System Materials and Supplies			
	Not Otherwise Classified		240.00	
Total				\$ 4,188.73
Special Items:				
350	Blue Cross and Physicians Service	\$	7,472.00	
Total				\$ 7,472.00
Outstanding Commitments-Materials and Supplies				4,939.81
Outstanding Commitments-Capital Outlay				15.24
Total-Source of Supply				\$354,558.07

# TRANSMISSION AND DISTRIBUTION

## Pumping Station:

### Salaries:

001 Labor - Operation	\$ 22,198.28	
Total		\$ 22,198.28

### Services Other Than Personal:

111 Telephone and Telegraph	\$ 641.64	
131 Light and Power	23,098.69	
146 Repairs - Plant Equipment	36.26	
151 Maintenance and Servicing	734.41	
181 Laundry and Cleaning	48.00	
199 Miscellaneous Services	25.00	
Total		\$ 24,584.00

### Materials and Supplies:

201 Stationery and Office Supplies	\$ 67.21	
211 Motor Fuel	300.48	
212 Lubricants	66.00	
241 Fuel	602.39	
252 Seeds, Fertilizer, Trees and Shrubs	734.37	
Total		\$ 1,770.45

## Pipe Lines:

### Salaries:

001 Supervision	\$ 8,811.60	
Clerical	10,753.66	
Labor - Operation	121,152.57	
Repairs - Trucks and Autos	5,020.87	
Repairs - Care of Grounds and Building	8,576.92	
Repairs - Transmission Mains	2,145.39	
Repairs - Distribution Mains	9,882.33	
Repairs - Gates and Valves	21,998.65	
Repairs - Hydrants	13,056.71	
Repairs - Services	16,498.01	
New Work - Distribution Mains	2,980.68	
New Work - Gates and Valves	2,209.79	
New Work - Hydrants	16,291.20	
New Work - Services	49,728.04	
Retirement Work - Distribution Mains	607.71	
Retirement Work - Gates and Valves	121.60	
Retirement Work - Hydrants	152.97	
Retirement Work - Services	7,179.33	
Total		\$297,168.03

### Services Other Than Personal:

102 Expert Consultant and Other Service Fees	\$ 409.90	
109 Fees Not Otherwise Classified	65.50	
111 Telephone and Telegraph	438.36	
112 Postage, Freight and Express	21.77	
131 Light and Power	456.17	
141 Repairs - Office Machinery	29.87	
142 Repairs - Trucks and Autos	4,259.90	
143 Repairs - Construction and Other		
Automotive Equipment	3,271.26	
149 Repairs - Other Equipment	7.84	
150 Repairs - Buildings	23.25	

151	Maintenance and Servicing	\$ 1,012.75	
153	Repairs - Street Openings	28,303.57	
163	Rental - Other Equipment	1,177.60	
165	Rental of Land	307.11	
181	Laundry and Cleaning	318.27	
184	Hospitalization	22.50	
199	Miscellaneous Services	1,049.38	
	Total		\$ 41,175.00
Materials and Supplies:			
201	Stationery and Office Supplies	\$ 318.51	
202	Small Tools and Shop Supplies	2,316.15	
204	Wearing Apparel and Personal Supplies	333.97	
211	Motor Fuel	5,301.10	
212	Lubricants	494.60	
213	Tires and Tubes	1,390.35	
214	Repair Parts and Supplies - Trucks & Autos	2,054.22	
222	Repair Parts and Supplies - Plant Equipment	175.81	
229	Repair Parts and Supplies - Other Equipment	34.67	
231	Medical, Chemical and Laboratory Supplies	245.76	
241	Fuel	223.20	
244	Housekeeping Supplies	237.35	
259	Agricultural, Horticultural and Landscaping Supplies	68.69	
261	Gravel, Sand and Stone	604.21	
262	Cement, Plaster and Related Products	491.45	
264	Fabricated Cement Products	76.93	
266	Lumber and Hardware	1,181.57	
267	Paint and Painters' Supplies	150.00	
268	Plumbing and Electrical Supplies	3,906.74	
271	Pipe - Cast Iron	2,600.87	
271	Pipe - Asbestos Cement	1,614.60	
271	Pipe - Services	7,711.80	
272	Hydrants, Valves and Fittings	83,813.65	
272	Gates and Valves	7,488.77	
279	Water System Materials and Supplies		
	Not Otherwise Classified	150.50	
299	Miscellaneous Materials and Supplies	180.00	
	Total		\$123,165.47
Special Items:			
331	Claims and Damages	\$ 3,762.83	
	Total		\$ 3,762.83
Capital Outlay:			
502	Books, Maps and Charts	\$ 9.95	
511	Automobiles	3,046.00	
521	Construction and Engineering Equipment	4,213.00	
571	Agricultural and Landscaping Equipment	154.30	
	Total		\$ 7,423.25
Other Structures and Improvements:			
721	New Main Extensions	\$141,529.09	
	Total		\$141,529.09

## Distribution Reservoirs:

## Salaries:

001 Labor - Operation

\$ 215.59

\$ 215.59

## Total

## Services Other Than Personal:

111 Telephone and Telegraph

\$ 120.00

131 Light and Power

132.77

159 Repairs - Other Structures

326.00

## Total

\$ 578.77

## Materials and Supplies:

201 Stationary and Office Supplies

\$ 115.55

222 Repair Parts and Supplies - Plant Equipment

18.48

252 Seeds, Fertilizer, Trees and Shrubs

24.50

## Total

\$ 158.53

## Metering:

## Salaries:

001 Supervision

\$ 7,012.34

Labor - Operation

14,972.94

Repairing Meters

11,050.08

Removing and Setting Meters

24,336.09

Testing Meters

4,856.00

Inspection - Services

4,460.91

## Total

\$ 66,688.36

## Services Other Than Personal:

102 Expert Consultant and Other Service Fees

\$ 5.00

109 Fees Not Otherwise Classified

10.50

142 Repairs - Trucks and Autos

336.38

199 Miscellaneous Services

183.90

## Total

\$ 535.78

## Materials and Supplies:

202 Small Tools and Shop Supplies

\$ 970.74

204 Wearing Apparel and Personal Supplies

275.15

211 Motor Fuel

792.40

212 Lubricants

23.40

213 Tires and Tubes

109.02

214 Repair Parts and Supplies - Trucks and Autos

830.32

231 Medical, Chemical and Laboratory Supplies

41.65

266 Lumber and Hardware

223.56

268 Plumbing and Electrical Supplies

53.41

272 Valves and Fittings

45.38

274 Meter Parts

8,795.80

## Total

\$ 12,160.83

## Capital Outlay:

512 Trucks and Tractors

\$12,227.00

## Total

\$ 12,227.00

## General:

## Salaries:

001 Labor - Operation	\$ 2,945.00	
Repairs - Trucks and Autos	48.24	
008 Sick Leave Payrolls	11,010.24	
009 Vacation Payrolls	15,461.79	
025 Injured Employees' Payroll	1,332.96	
034 Holiday Payrolls	7,454.32	
Total		\$ 38,252.55

## Services Other Than Personal:

109 Fees Not Otherwise Classified	\$ 88.65	
141 Repairs - Office Machinery	67.75	
150 Repairs - Buildings	1,250.00	
151 Maintenance and Servicing	230.10	
169 Rentals Not Otherwise Classified	32.20	
181 Laundry and Cleaning	108.00	
197 Shops - Revolving Fund Charges	19.45	
199 Miscellaneous Services	72.22	
Total		\$ 1,868.37

## Materials and Supplies:

201 Stationery and Office Supplies	\$ 294.77	
214 Repair Parts and Supplies - Trucks and Autos	11.37	
241 Fuel	791.46	
244 Housekeeping Supplies	311.11	
266 Lumber and Hardware	181.65	
Total		\$ 1,590.36

## Special Items:

350 Blue Cross and Physicians Service	\$14,339.80	
361 Expenses for Various Ceremonies	170.80	
Total		\$ 14,510.60

Outstanding Commitments - Materials and Supplies	1,694.53
Outstanding Commitments - Capital Outlay	1,255.00
Outstanding Commitments - New Main Extensions	61,777.07

Total-Transmission and Distribution	\$876,289.74
-------------------------------------	--------------

## ACCOUNTING AND COMMERCIAL

## Salaries:

001 Supervision	\$ 8,087.67	
Clerical	88,741.15	
Labor - Operation	3,345.08	
Meter Reading	45,277.09	
008 Sick Leave Payrolls	6,802.82	
009 Vacation Payrolls	6,592.75	
025 Injured Employees' Payrolls	428.85	
		\$159,275.41

Services Other Than Personal:

102	Expert Consultant and Other Service Fees	\$ 214.20	
109	Fees Not Otherwise Classified	7.50	
111	Telephone and Telegraph	2,000.00	
112	Postage, Freight and Express	1,044.10	
116	Transportation of Persons - Carfares	946.90	
121	Printing and Binding	1,847.00	
131	Light and Power	1,900.00	
141	Repairs - Office Machinery, Furniture and Equipment	1,715.43	
142	Repairs - Trucks and Autos	94.60	
150	Repairs - Buildings	322.88	
151	Maintenance and Servicing	84.87	
161	Rental of Office Machinery and Equipment	561.90	
181	Laundry and Cleaning	1,795.44	
183	Dues and Subscriptions	12.00	
190	Data Processing Charges	8,893.84	
199	Miscellaneous Services	30,452.93	
	Total		\$ 51,893.59

Materials and Supplies:

201	Stationery and Office Supplies	\$ 1,279.17	
202	Small Tools and Shop Supplies	248.00	
211	Motor Fuel	808.68	
213	Tires and Tubes	59.00	
214	Repair Parts - Trucks and Autos	27.21	
241	Fuel	357.49	
244	Housekeeping Supplies and Minor Equipment	264.86	
259	Agricultural, Horticultural and Landscaping Supplies	21.90	
266	Lumber and Hardware	32.00	
268	Plumbing and Electrical Supplies	1,176.27	
274	Meter Parts (Special)	45.50	
279	Water System Materials and Supplies Not Otherwise Classified	4.02	
299	Miscellaneous Materials and Supplies	141.09	
	Total		\$ 4,465.19

Special Items:

350	Blue Cross and Physicians Services	\$ 5,203.45	
394	Meter Conversion Revolving Fund	15,000.00	
	Total		\$ 20,203.45

Capital Outlay:

501	Office Machinery, Furniture and Equipment	\$ 499.00	
	Total		\$ 499.00

Outstanding Commitments - Capital Outlay	656.25	
--	--------	--

Total-Accounting and Commercial		\$ 236,992.89
---------------------------------	--	---------------

Taxes	572,595.59	
Employees' Retirement System	80,298.00	
Social Security F.O.A.S.I.	40,203.52	

Total Operating Expense		\$2,374,135.19
-------------------------	--	----------------



TABLE 42

## SUMMARY OF ANNUAL WATER WORKS REVENUES 1930-1968

Fiscal Years Ended September 30	Receipts from Sale of Water	Miscellaneous Receipts	Total
1930	\$1,384,369.54	\$218,844.87	\$1,603,214.41
1931	1,414,836.00	237,172.64	1,652,008.64
1932	1,375,450.77	223,058.31	1,598,509.08
1933	1,345,444.69	212,066.79	1,557,511.48
1934	1,387,876.73	184,133.47	1,572,010.20
1935	1,409,269.47	237,518.68	1,646,788.15
1936	1,427,881.10	265,357.71	1,693,238.81
1937	1,429,107.08	229,317.39	1,721,424.47
1938	1,426,986.49	106,359.70	1,533,346.19
1939	1,491,918.63	124,901.37	1,616,820.00
1940	1,551,917.24	115,540.98	1,667,458.22
1941	1,615,351.79	114,960.58	1,730,312.37
1942	1,679,058.50	103,368.22	1,782,426.72
1943	1,629,268.35	86,580.98	1,715,849.33
1944	1,761,016.12	87,946.71	1,848,962.83
1945	1,812,311.82	99,271.44	1,911,583.26
1946	1,808,993.17	123,247.90	1,932,241.07
1947	1,877,471.18	124,372.47	2,001,843.65
1948	2,005,242.58	222,419.41	2,227,661.99
1949	2,031,633.37	229,317.72	2,260,951.09
1950	2,082,814.82	199,061.80	2,281,876.62
1951	2,078,209.84	214,868.70	2,293,078.54
1952	2,053,427.76	322,761.07	2,376,188.83
1953	2,093,625.85	343,477.23	2,437,103.08
1954	2,146,947.18	302,707.38	2,449,654.56
1955	2,166,180.84	379,010.13	2,545,190.97
1956	2,236,331.86	371,715.61	2,608,047.47
1957	2,262,879.80	322,948.62	2,585,828.42
1958	2,273,583.77	318,752.87	2,592,336.64
1959	2,255,865.23	374,493.67	2,630,358.90
1960	2,528,805.97	330,120.32	2,858,926.29
1961	2,758,603.26	351,179.65	3,109,782.91
1962	2,794,556.45	440,769.75	3,235,326.20
1963	2,947,872.00	366,756.30	3,314,628.30
1964	2,986,556.95	441,238.98	3,427,795.93
1965	3,113,868.26	362,201.67	3,476,069.93
1966	3,149,078.53	373,307.57	3,522,386.10
1967	3,033,036.68	369,911.49	3,402,948.17
1968	2,942,611.22	345,144.86	3,287,756.08

TABLE 43  
STATEMENT OF REVENUE - ESTIMATED AND ACTUAL  
YEAR ENDED SEPTEMBER 30, 1968

Account	Estimated Revenue	Actual Revenue
Water Rents	\$2,990,000.00	\$2,942,611.22
Hydrant Rental	106,000.00	109,562.48
Electricity	15,000.00	23,304.50
Stores Account (Meters)	6,000.00	6,986.26
Repairing and Setting Meters	5,200.00	6,142.92
Fire Supplies and Miscellaneous Repairs	14,500.00	21,660.25
New Service Installations	95,000.00	57,365.00
New Main Extensions	120,000.00	88,066.15
Rentals	650.00	414.38
Other Miscellaneous Receipts	17,500.00	21,642.92
Total	\$3,369,850.00	\$3,287,756.08

TABLE 44  
STATEMENT OF WATER WORKS DEPRECIATION AND EXTENSION FUND  
YEAR ENDED SEPTEMBER 30, 1968

	Investment	Cash	Due from Other Funds	Total
Balance-Sept. 30, 1967	\$ 383,000.00	\$ 5,329.27	\$350,000.00	\$ 738,329.27
Increase during year ended Sept. 30, 1968	3,066,329.27	3,097,553.10		
Disbursements during year ended Sept. 30, 1968	1,777,329.27	3,066,343.66	350,000.00	
Balance-Sept. 30, 1968	\$1,672,000.00	\$ 36,538.71	Nil	\$1,708,538.71

TABLE 45  
STATEMENT OF SERIAL BONDS OUTSTANDING  
YEAR ENDED SEPTEMBER 30, 1968

Description	Rate of Interest %	Year of Issue Maturity	Serial Requirement	Bonds Issued	Outstanding
Additions, Alterations and Improvements to the Water Purification Works	3 $\frac{1}{4}$	1962 1992	\$25,000.00	\$1,100,000.00	\$ 990,000.00
New 40 Million Gallon Distribution Reservoir	3 $\frac{1}{4}$	1962 1992	50,000.00	2,050,000.00	1,815,000.00
Total Serial Bonds and Requirements			\$75,000.00	\$3,150,000.00	\$2,805,000.00

TABLE 46  
STATEMENT OF FLOATING DEBT OUTSTANDING  
YEAR ENDED SEPTEMBER 30, 1968

	Issued	Interest	Principal	Outstanding
Water Purification Improvements II Note No. 9977	\$273,000.00	\$1,433.24	\$54,600.00	Nil
Water Purification Improvements II Note No. 10023	19,000.00	124.69	4,750.00	Nil
Totals-Floating Debt	\$292,000.00	\$1,557.93	\$59,350.00	Nil

Note: The final payment on the Floating Debt was made on August 30, 1968.

TABLE 47  
A SUMMARY OF INVENTORIES OF PERSONAL PROPERTY  
YEAR ENDED SEPTEMBER 30, 1968

REMOVABLE PROPERTY INVENTORY		\$222,707.87
SOURCE OF SUPPLY:		
Purification Works	\$ 28,931.38	
Laboratory	3,422.06	
General and Reforestation	11,256.10	43,609.54
TRANSMISSION AND DISTRIBUTION:		
Pipe Lines	\$167,603.28	
Pumping Stations	576.38	
Garage	6,592.06	174,771.72
METERING		64,047.26
SUPPLIES		4,562.97
Total Personal Property Inventory		\$509,699.36

TABLE 48  
STATEMENT OF STORES REVOLVING FUND  
YEAR ENDED SEPTEMBER 30, 1968

Cash Balance		\$ 10,000.00
Outstanding Commitments - September 30, 1967		23,153.42
Receipts - October 1, 1967 to September 30, 1968		83,089.53
Total Available		\$116,242.95
Disbursements - September 30, 1968	\$ 73,094.52	
Outstanding Commitments - September 30, 1968	26,162.17	
Transferred as Income to General Fund September 30, 1968	6,986.26	
Total Disbursements		\$106,242.95
Cash Balance - September 30, 1968		\$ 10,000.00

TABLE 49  
STATEMENT OF THE MISCELLANEOUS WATER MAIN EXTENSIONS ACCOUNT  
YEAR ENDED SEPTEMBER 30, 1968

Transferred from Depreciation and Extension Fund - July 29, 1957		\$ 15,000.00
Transferred from Depreciation and Extension Fund - July 15, 1958		50,000.00
Transferred from Depreciation and Extension Fund - May 21, 1959		60,000.00
Transferred from Depreciation and Extension Fund - July 7, 1961		35,000.00
Transferred from Depreciation and Extension Fund - July 24, 1962		75,000.00
Transferred from Depreciation and Extension Fund - January 11, 1963		60,000.00
Transferred from Depreciation and Extension Fund - September 13, 1963		15,000.00
Transferred to Acc't. 3-91 Purification Works - December 26, 1963		-1,014.57
Total Available		\$308,985.43
Disbursements - September 30, 1968	\$307,108.83	
Outstanding Commitments - September 30, 1968	Nil	
Total Disbursements		\$307,108.83
Cash Balance - September 30, 1968		\$ 1,876.60

TABLE 50

## STATEMENT - ACCOUNT FOR INSERTING NEW VALVES

Transferred from Depreciation and Extension Fund - May 12, 1958		\$ 10,000.00
Transferred from Depreciation and Extension Fund - May 13, 1959		30,000.00
Transferred from Depreciation and Extension Fund - July 7, 1961		65,000.00
Transferred from Depreciation and Extension Fund - May 25, 1962		60,000.00
Total Available		\$165,000.00
Disbursements - September 30, 1968	\$154,488.77	
Outstanding Commitments - September 30, 1968	Nil	
Total Disbursements		\$154,488.77
Cash Balance - September 30, 1968		\$ 10,511.23

TABLE 51

CONSTRUCTION OF MAJOR IMPROVEMENTS TO WATER SUPPLY SYSTEM  
SUPPLEMENTAL TUNNEL AND AQUEDUCT

Authorized Bond Issue (Chapter 46 P.L. of R.I.) Approved April 26, 1965		\$13,000,000.00
Minus Adjustment to Land Condemnation & Easement Acc't. Res. No. 742		171,000.00
Minus Adjustment to Rapid Sand Filters Account Res. No. 257		2,500,000.00
Balance		\$10,329,000.00
Disbursements - September 30, 1968	\$3,772,616.19	
Transferred to Federal Program EDA October 16, 1967	400,000.00	
Transferred to Federal Program EDA November 15, 1967	480,000.00	
Transferred to Federal Program EDA December 19, 1967	370,000.00	
Transferred to Federal Program EDA January 16, 1968	535,000.00	
Total Disbursements		\$ 5,557,616.19
Unexpended Balance of Authorized Bond Issue - September 30, 1968		\$ 4,771,383.81

TABLE 52

## CONSTRUCTION OF RAPID SAND FILTERS - PURIFICATION PLANT

Transferred from Tunnel and Aqueduct Account - April 12, 1967		\$ 2,500,000.00
Disbursements - September 30, 1967	\$ 86,383.81	
Transferred to Federal Program EDA October 16, 1967	35,000.00	
Transferred to Federal Program EDA November 15, 1967	50,000.00	
Transferred to Federal Program EDA December 19, 1967	30,000.00	
Transferred to Federal Program EDA January 17, 1968	65,000.00	
Transferred to Federal Program EDA February 21, 1968	75,000.00	
Transferred to Federal Program EDA April 30, 1968	50,000.00	
Transferred to Federal Program EDA May 15, 1968	150,000.00	
Transferred to Federal Program EDA June 19, 1968	70,000.00	
Total Disbursements		\$ 611,383.81
Balance September 30, 1968		\$ 1,888,616.19

TABLE 53

## FEDERAL PROGRAMS

## SUPPLEMENTAL TUNNEL AND AQUEDUCT (EDA 01-1-00087)

	Allotments	Encumbrances	Expenditures	Unencumbered Balance
Land Condemnations and Easements	\$ 189,000.00		\$ 117,657.34	\$ 71,342.66
Construction	11,409,500.00	\$4,303,523.32	7,492,479.91	-386,503.23
Architectural and Engineering	488,000.00	59,248.79	552,890.35	-124,139.14
Legal and Administrative	1,500.00		100.00	1,400.00
Totals (EDA 01-1-00087)	\$12,088,000.00	\$4,362,772.11	\$8,163,127.60	\$ -437,899.71

## RAPID SAND FILTERS - PURIFICATION PLANT (EDA 01-1-00088)

Construction	\$ 2,417,900.00	\$ 828,075.88	\$ 784,577.68	\$ 605,246.44
Architectural and Engineering	82,100.00	4,990.00	92,463.51	-15,373.51
Totals (EDA 01-1-00088)	\$ 2,500,000.00	\$ 833,065.88	\$ 877,061.19	\$ 789,872.93

## RAW WATER BOOSTER PUMPING STATION (EDA 01-1-00089)

Construction	\$ 1,148,000.00	\$ 151,003.94	\$ 990,349.71	\$ 6,646.35
Architectural and Engineering	44,200.00	6,978.75	50,398.31	-13,177.06
Legal and Administrative	1,000.00			1,000.00
Project Contingency	6,800.00			6,800.00
Totals (EDA 01-1-00089)	\$ 1,200,000.00	\$ 157,982.69	\$1,040,748.02	\$ 1,269.29

TABLE 54

## TAXES PAID TO VARIOUS CITIES AND TOWNS

(OCTOBER 1, 1967 TO SEPTEMBER 30, 1968)

Location of Property	ASSESSED VALUATIONS				TAX	
	Land Area (Acres)	Land	Buildings and Improvements	Total	Rate per \$100	Amount Paid
City of Warwick	0.060	\$ 160.00	\$ 0	\$ 160.00	\$3.96	\$ 6.34
City of Cranston	110.627	48,200.00	942,340.00	990,540.00	----	43,369.83
Town of Foster	1,994.280	198,930.00	3,000.00	201,930.00	4.65	9,389.75
Town of Glocester	73.300	14,980.00	0	14,980.00	4.48	671.10
Town of Johnston	103.130	42,163.00	321,937.00	364,100.00	4.40	16,020.40
Town of North Providence	8.529	30,900.00	185,100.00	216,000.00	4.40	9,504.00
Town of Scituate	13,149.552	1,112,500.00	9,250,000.00	10,375,000.00*	----	492,812.50
Town of West Warwick	8.940	15,370.00	280.00	15,650.00	4.87	762.16
Total Real Estate	15,448.418			\$12,178,360.00		\$572,536.08**

\*Includes \$12,500.00 Tangible Personal

\*\*In addition to this amount, \$53.32 was paid to the West Glocester Fire District and \$6.19 to the Harmony Fire District.

Notes: Cranston was paid three installments totalling \$32,523.42 @ \$4.38 per \$100 tax rate and one payment of \$10,846.41 @ \$4.38 per \$100 tax rate.

Scituate was paid three installments totalling \$365,718.75 @ \$4.70 per \$100 tax rate and one payment of \$127,093.75 @ \$4.90 per \$100 tax rate.

TABLE 55  
SUMMARY OF STATISTICS  
PROVIDENCE WATER SUPPLY BOARD  
YEAR ENDED SEPTEMBER 30, 1968

PROVIDENCE* (City or Town)	PROVIDENCE (County)	RHODE ISLAND (State)
GENERAL STATISTICS		
Estimated population of Providence (1968)		184,215
Estimated population supplied in suburbs (1968)		206,967
Total population supplied		391,182
Date of Construction	1870-76; 1915-28; 1935; 1938-40; 1954; 1960-1962	
By whom owned	City Of Providence	
Source of Supply	Surface water collected in Scituate Reservoir and five smaller reservoirs on north branch of Pawtuxet River.	
Available storage capacity of six impounding reservoirs		39,746 m.g.
Mode of supply	81.2% by gravity; 18.8% by pumping	

STATISTICS OF CONSUMPTION OF WATER

1. Estimated population supplied	391,182
2. Total raw water influent for the year, gallons	19,349,187,000
3. Average daily raw water influent, gallons	52,867,000
4. Raw water consumption per capita, gallons daily	135.1
5. Total consumption for the year, gallons	18,609,110,000
6. Total registration on customers' meters, gallons	17,246,797,500
7. Percentage of consumption accounted for on customers' meters	92.7%
8. Average daily consumption, gallons	50,845,000
9. Per capita consumption, gallons daily	130.0
10. Gallons per day to each tap	790

\*Supplying Providence, Cranston, and portions of Johnston, North Providence, Warwick, Smithfield, Coventry, West Warwick and Scituate.



TABLE 55 (Continued)  
SUMMARY OF STATISTICS  
PROVIDENCE WATER SUPPLY BOARD  
YEAR ENDED SEPTEMBER 30, 1968

FILTRATION

1. Type of filters	Rapid Sand
2. Number of filter units	14
3. Capacity of filter plant	14 units @ 7.5=105 m.g.d.
4. Chemicals used	Ferri-Floc, Quicklime, Chlorine and Sodium Silicofluoride
5. Total water filtered during year, gallons	18,779,568,000
6. Average quantity filtered per day, gallons	51,310,000
7. Total filtered water delivered to the distribution system during the year, gallons	18,608,410,000

STATISTICS RELATING TO THE DISTRIBUTION SYSTEM

1. Kind of pipe	Asbestos-Cement, Cast Iron, Steel and Concrete
2. Sizes	From 6 to 66 inches
3. Installed	28,868.80
4. Removed	11,835.19
5. Net Increase	17,033.61
6. Total now in use	806.45
7. Number of leaks per mile	0.09
8. Range of pressure on mains	14 to 95 pounds
9. Range of pressure on mains (special high pressure fire service)	94 to 130 pounds
10. Number of hydrants installed	214
11. Number removed	166
12. Net increase	48
13. Number of hydrants now in use	4,905
14. Number of stop gates installed	102
15. Number removed	54
16. Net increase	48
17. Number of stop gates now in use	11,060

TABLE 55 (Continued)  
SUMMARY OF STATISTICS  
PROVIDENCE WATER SUPPLY BOARD  
YEAR ENDED SEPTEMBER 30, 1968

STATISTICS RELATING TO THE DISTRIBUTION SYSTEM  
(Continued)

18. Kind of services	Lead, Copper and Cast Iron
19. Sizes	$\frac{1}{2}$ -inch to 30 inches
20. Number of service taps installed	796
21. Number removed	276
22. Net increase	520
23. Number of services now in use	64,347
24. Number of meters installed	1,500
25. Number removed or condemned	1,007
26. Net increase	493
27. Number of meters now in use	64,424*
28. Per cent of services metered	100

\*Many large services have batteries of meters.