# Shared Public Water Services Feasibility Study

Inc. Village of Farmingdale
Nassau County, New York

H2M Project No. FARM 09-02

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H2M

# VILLAGE OF FARMINGDALE

## SHARED PUBLIC WATER SERVICES
## FEASIBILTY SERVICES

## TABLE OF CONTENTS

**June 2010**

H2M

# VILLAGE OF FARMINGDALE

## SHARED PUBLIC WATER SERVICES
## FEASIBILTY SERVICES

## TABLE OF CONTENTS

**June 2010**

H2M

# VILLAGE OF FARMINGDALE

## SHARED PUBLIC WATER SERVICES
## FEASIBILTY SERVICES

## TABLE OF CONTENTS

**June 2010**



## LIST OF FIGURES



## LIST OF TABLES

H2M

**VILLAGE OF FARMINGDALE**

**SHARED PUBLIC WATER SERVICES**
**FEASIBILTY SERVICES**

**TABLE OF CONTENTS**

**June 2010**

## 1.0 INTRODUCTION

This Feasibility Study on Shared Public Water Services was undertaken by the Incorporated Village of Farmingdale (Village) with the consent of the South Farmingdale Water District (District). Holzmacher, McLendon & Murrell, P.C. (H2M) has been retained to perform this study. The study serves to identify and evaluate a broad range of restructuring options for the Village in an effort to improve the efficiency of their water supply operations. In recent times, the need to improve operational efficiency and reduce costs, while still maintaining a high level of water service, has become apparent to many water suppliers. The current economic conditions and high costs of operations have initiated a movement within the water supply industry to improve efficiencies for the betterment of the communities they serve. This translates into the ultimate goal of providing the highest level of service at the lowest possible cost. The necessity to optimize operational methods and performance of public water suppliers is also evident in the mutual challenges they currently face. Throughout the country, staffing issues, workforce experience, and regulatory compliance have become increasing concerns among water suppliers. The Village and the District understand the current difficulties in operating a reliable and cost effective water supply system and have committed to sustaining the high quality water service they have been providing for many years, as evidenced in their authorization of this feasibility study.

As public water suppliers, the Village and the District have concluded that they have an obligation to explore opportunities to maintain and expand their technical, managerial, and financial capabilities to enable them to consistently provide a safe and adequate drinking supply. This responsibility is the basis of this study and the incentive in analyzing restructuring options. The Incorporated Village of Farmingdale has taken a lead role in this investigation due to their present operational and managerial deficiencies. The South Farmingdale Water District is a logical partner in the shared services investigation as it is a full-time neighboring water supplier. The analysis focuses on combining Village and District services and administration. Through funding from a General Efficiency Planning Grant under the NY State Department of State,

Local Government Efficiency Grant Program, the following Feasibility Study on Shared Public Water Services for the Incorporated Village of Farmingdale has been conducted.

## 2.0 SCOPE & OBJECTIVES

The purpose of this study is to evaluate and recommend shared public water service alternatives for the Village. In doing so, the functions and needs of the Village and the District as it relates to public water supply will be assessed. The study aims to identify areas of water supply system operation and management that can be integrated to increase efficiency and achieve cost savings. A wide range of cooperative measures will be discussed and the feasibility of each examined at varying levels of cooperation. In order to fully evaluate the feasibility of a shared services agreement between the Village and the District, a review of current facility operation and financial status will be provided in this study. In addition, funding mechanisms for the implementation of recommended shared services alternatives will be presented.

# 3.0 DESCRIPTION AND ASSESSMENT OF WATER SYSTEMS AND OPERATIONS

The Incorporated Village of Farmingdale and the South Farmingdale Water District are located within the Town of Oyster Bay in the eastern portion of Nassau County. The Village of Farmingdale functions as a full governing organization in charge of all operations and facilities within its juridical region. The Village maintains a Water Department that provides public water supply to its residents. The South Farmingdale Water District is a special local district that provides potable water supply service. Geographically, the Village and the District maintain adjacent service areas, as portrayed in Figure 3-1. The water supply systems and governance of the Village and District will further be discussed in the following subsections.

In addition, this section of the study will assess each water system as it relates to regulatory compliance, capacity and current and projected needs. Although not directly enforceable, the operational Standards of the American Water Works Association (AWWA) are regarded to represent best practices within the water supply industry. Accordingly, AWWA Standards G-I 00 and G200 (*current editions*) have been used to determine and assess best practices, respectively, in Water Treatment Plant Operation and Management and in Distribution Systems Operation and Management. Major assessment categories consist of regulatory compliance requirements, operational management practices, plant / facility management and maintenance, water quality management and distribution system management programs.

## 3.1- VILLAGE OF FARMINGDALE WATER DEPARTMENT

### 3.1.1– GOVERNANCE AND STAFFING

Administration of the Village is directed by a Mayor and Board of Trustees (Board). The Board of Trustees is the legislative body responsible for establishing policy and sanctioning expenditures. In addition to the Mayor, the Board is comprised of four members, each elected to staggered four-year terms. The Mayor serves as the chief executive officer of the Village. A

Clerk-Treasurer is appointed by the Board to administrate fiscal duties. The Village also employs a Superintendent of Public Works to oversee facility operation.

All water operations within the Village are carried out by the Water Department which functions under the supervision of the Public Works Department. A Grade IB New York State Health Department (NYSDOH) certified Water Treatment Plant Operator is required to operate the Village Water System. This Grade level is predicated on the population that is served by the water system. Historically, the Water Department has been directly operated under the management of a full-time Water Plant Supervisor, however this position has been vacant since the retirement of its last holder in 2008. Since that time, the Village has retained a part-time consulting operator certified at the 1B Grade Level for Water Treatment Operators pursuant to the NY State Sanitary Code. The consulting operator has been designated as the Water Operator in Responsible Charge for the Village of Farmingdale Water Department and is responsible for making water facility operation decisions that require the 1B Grade Level certification under State code. Additional staff within the Water Department includes two water servicers who perform daily system operations and report to the Water Operator in Responsible Charge. Both water servicers hold a NYSDOH Grade IIB Water Plant Operator certification.

Administration functions are also performed by the Village Superintendent of Public Works, Village Clerk and administrative staff on a prorated based. Based on this proration of Water Department support, the operations and administrative staffing is presently equivalent to 3.8 full time positions.

### 3.1.2 – EXISTING WATER SUPPLY SYSTEM

The Incorporated Village of Farmingdale supplies potable water to an estimated population of 9,091 in an area of about 1.1 square miles. During 2008, the population of the Village was reported to be 8,400 however a review of current data during 2009 computed the population to be 9,091. The Village's water supply service area is essentially comprised of the entire Incorporated Village of Farmingdale bordered on the west and south by the South Farmingdale Water District, to the north by the Bethpage State Park, and on the east by the Nassau/Suffolk County-line and a small section located outside of the Village boundary within

the Town of Oyster Bay. This section is identified as the Northeast Farmingdale extension. Currently, the Village distributes water to approximately 2,135 services through the use of 30.9 miles of water main.

The Village obtains its entire water supply from groundwater sources by means of three (3) deep wells drilled into the Magothy Aquifer. The supply wells are located on two separate plant sites within the Village boundaries. Well No. 1-3 is located at Plant No. 1 on Eastern Parkway and Well Nos. 2-2 and 2-3 are located at Plant No. 2 on Ridge Road. The total approved capacity of the wells is 5.4 million gallons per day (MGD). The Village employs water treatment consisting of hypochlorite for disinfection and sodium hydroxide for pH adjustment at each of the well sites. Both well facilities are operated primarily by electric power and are equipped with auxiliary diesel power diesel engines for emergency use. A summary of existing supply wells is tabulated in Table 3-1.

The distribution system consists of two (2) storage tanks with a combined volume of 0.9 million gallons (MG). A 500,000 gallon elevated storage tank is located at Plant No. 1. The elevated storage tank is utilized to maintain the distribution system's pressure, resulting in a single pressure zone. The second storage tank is a 400,000 gallon ground storage tank located at Plant No. 2. The Village's storage facilities are summarized in Table 3-2.

The Village maintains five (5) emergency interconnections with its neighboring public water suppliers. These include one (1) interconnection with the Bethpage Water District, two (2) interconnections with the South Farmingdale Water District, and two (2) interconnections with the East Farmingdale Water District. Currently, four (4) of the five (5) interconnections are operational. The interconnection with the South Farmingdale Water District on Hempstead Turnpike (NYS Route 24) is inoperable at this time. The Village's interconnections and locations are outlined in Table 3-3. Based on recent calculations, the Village has more than ample interconnection capacity with four (4) operational interconnections.

The repair to the Hempstead Turnpike (State Route 24) interconnection is on hold at this time due to cost and traffic concerns. The cost to excavate and restore the state roadway is

prohibitive at this time. Furthermore this state road is a vital major thoroughfare for the area. Repair and restoration would severely impact traffic conditions. Based on the fact that the Village has more than adequate interconnection capacity, the cost and impact to traffic does not justify repair at this time. The valves on both side of the cracked section of interconnecting pipe are in the closed position. Therefore there is no leakage of water under the roadway.

The Village is presently performing a significant upgrade of the water meter reading system. This upgrade when completed during January 2010, resulted in the replacement of all meters with radio read technology. The installation of new meters resulted in the reliable and accurate recording of water usage which will result in increased water sales revenue. It is recommended that residential water meters be replaced at ten to fifteen year intervals since these devices will lose accuracy and under record consumption. The radio read technology that is presently used by the Village improves efficiency related to meter reading and billing. A fixed net system is used by the Village which uses an antenna / receiver installed on the Eastern Parkway elevated tank to acquire meter readings. This receiver has the ability to read meters throughout the entire Village and several miles beyond its boundaries.

Up until November 2008, the Village Water Department provided service to residents within the entire Village and to a small section located outside of the Inc. Village boundary within the Town of Oyster Bay. This section was referred to as the "Northeast Farmingdale extension" and was identified as a separate area since residents did not pay property taxes to the Village. The extension contained approximately 300 residential connections with all customers billed directly by the Village. There was no reselling of water on a wholesale basis. Furthermore the extension area distribution system is fully hydraulically integrated with the Village water system. Isolation of the extension cannot be performed without an adverse impact to water supply operations since the Village and Northeast extension operate as a single system. The Nassau County Health Department had recommended that the extension be assigned the same Federal Public Water Supply Identification (PWS ID) number as the Village as a means to coordinate and consolidate water quality sampling and other water supply regulatory activities.

Upon review of the request by the Responsible Operator In Charge of the Village system it was conclusively determined that the assigning of a single PWS ID number will provide economic benefit to both the Village and county health department through the consolidation and coordination of distribution water sampling schedules and related regulatory compliance programs. The consolidation was implemented and notification was provided to the Town of Oyster Bay and Nassau County Department of Health.

### 3.1.3 – REGULATORY COMPLIANCE

The quality of the water supplied by the Village complies with the stringent requirement of Part 5 of the New York State sanitary code. At present only basic treatment for pH adjustment and disinfection is performed. No comprehensive wellhead treatment is performed at this time.

As a public water supplier, the Village is committed to maintaining a high level of regulatory compliance to ensure a safe and adequate drinking supply. The water department operates under the regulation of Federal, State, and local water supply law. Although not directly enforceable, the operational Standards of the American Water Works Association (AWWA) are regarded to represent best practices within the water supply industry. The Village has historically demonstrated conformity with the guidelines established in the AWWA standards.

Pursuant to the State Sanitary code, comprehensive sanitary surveys are required to be conducted at a minimum 3 year interval for community water systems. The most recent sanitary survey of the Village's water supply system was conducted by the Nassau County Department of Health in August of 2009. The survey consisted of a complete system inspection and review of regulatory records to determine compliance with the requirements of Part 5 of the New York State Sanitary Code (NYSSC) and Article VI of the Nassau County Public Health Ordinance

(NCPHO). As part of the survey, a field inspection was performed on all three of the Village supply wells and both storage tanks. Overall, the results of the sanitary survey indicate a high level of regulatory compliance with the exception of the following violations:

- The Village maintains an extensive Cross Connection Control Program as required by Subpart 5-1.31(a)(3) of the NYSSC and the Nassau County Department of Health (NCDOH). The Sanitary Code requires that all backflow prevention devices be tested at least annually. A review of the Village's Cross Connection Control Program Reports submitted to the County Health Department revealed incomplete reporting for the year 2007 as well as less than 100% compliance in years 2006 and 2008. In response to these findings, the Village Water Department has submitted the complete 2007 Cross Connection Control Report. In order to ensure 100% annual testing compliance, the Water Department has modified their existing customer notification process to begin during the month of June. In the past, the process began with a reminder letter issued in the month of August with a second warning notice issued during the month of September should compliance not be met. If testing compliance was not achieved by the end of October, a Notice of Violation was issued. Failure to comply with the Notice of Violation resulted in the issuance of a court appearance ticket. Although the actual process of notification has remained the same, the earlier initiation of notification will help achieve full testing compliance by the end of the calendar year.

- As previously stated, the Village maintains five (5) interconnections with its neighboring water suppliers. Article VI, Section 14 (e) of the NCPHO requires interconnections between water supply systems to be tested on at least an annual basis. The sanitary survey indicates the Village's failure to comply with this regulation. As presented in the Village of Farmingdale Water Department's Monthly Operating Reports, only two of the five interconnections were tested in 2008. In order to correct this violation, the Village had committed to completing a full interconnection test by December 31, 2009.

- Physical inspection of the water supply system exposed violations of Subpart 5-1.71(b) of NYSSC which calls for "due care and diligence in the operation and maintenance of these

facilities [water treatment plants] and their appurtenances to ensure continued compliance with the provisions of this Subpart [5-1 Public Water Systems]." Theses violations were related to minor maintenance repairs and the need for additional security measures at the Village's plant sites. All violations have been addressed by the Village and corrective actions have or will be made.

- Lastly, the sanitary survey presented recommended upgrades/modifications to the Village's water storage tanks and supply wells, pursuant to AWWA standards. The upgrades included tank painting and minor well rehabilitation measures. The Village has reviewed the recommendations and has exhibited its intent to comply with these upgrades within the near future.

The Village has successfully responded to all violations disclosed in the 2009 sanitary survey and continues to meet its regulatory obligations.

### 3.1.4 – CURRENT AND PROJECTED NEEDS

The Village Water Department is currently facing a capacity deficiency. As defined by the U.S. Environmental Protection Agency (EPA), water system capacity is "*the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Capacity has three components: technical, managerial, and financial.*" Many of the capacity issues within the Water Department relate to the fact that the Village does not specialize in water supply and must function to serve all aspects of the community. Although the water department operates a relatively small water supply system, the same level of attention and specialization is necessary to provide safe drinking water to all of its costumers as is with larger water suppliers.

The most significant challenge the Village is currently facing is related to the daily management of the water system by a NYSDOH qualified operator. As previously discussed, the Water Plant Supervisor position is currently vacant and the Village must rely upon a temporary consulting operator. The Village Superintendent of Public Works has also taken on the responsibilities associated with the administration of water supply operations. The need for a

full-time water department supervisor is apparent. The Village must obtain a water treatment plant operator certified at the Grade 1B level as reliance on the consulting operator in responsible charge shall not be prolonged for an extended period of time. The Water Department also lacks management and service personnel. The Village employs only two water servicemen to perform daily facility operations. Staff from the public works highway department is utilized on an as-needed basis for assistance in certain operational duties, such as water main repairs. In order to effectively operate the water supply system, additional staff trained in water supply operations must be retained.

To determine the current and future supply and storage capacity needs of a water system, average day, maximum day, peak hour and maximum day plus fire flow statistics are reviewed and analyzed. Average daily demand represents the total yearly pumpage uniformly distributed or averaged over the entire calendar year. This statistic provides a basis of forecasting estimated revenues budgetary purposes and is utilized in long-range water resources planning with respect to safe yield. Average day demand as it relates to system capacity assessment is used to establish the base need for minimum standby power pumping capacity during short-term regional electrical power outages.

Maximum day pumpage statistics are reviewed to evaluate available supply well capacity while peak hour and maximum day plus fire flow demand is used to analyze combined supply well and storage facility capacity requirements. Supply sources must be designed and maintained to satisfy average and maximum day demand. Storage facilities and excess well capacity must be capable of providing an adequate supply of potable water to satisfy peak hour and fire flow demands on the maximum day. Inadequate supply well and / or storage capacity under maximum day, peak hour and maximum day plus fire flow demand conditions can result in system pressures that are far below normal operating requirements.

Based on a review of Village Water Department pumpage statistics and capacity data, the system has adequate capacity to satisfy average day, maximum day and peak hour / maximum day plus fire flow demand conditions. This determination is summarized as follows:

| Village of Farmingdale Water Department System Capacity Summary* | | | |
|---|---|---|---|
| **Demand Category** | **Actual System Capacity (MGD)** | **Peak Demand Recorded (MGD)** | **Surplus/ (Deficit) (MGD)** |
| Average Day | 3.6 | 1.6 | 2.0 |
| Max. Day | 5.4 | 3.2 | 2.2 |
| Peak Hr. | 6.8 | 5.5 | 1.3 |
| Max Day + Fire Flow | 6.8 | 4.5 | 2.3 |

* Based on data from 2007 Emergency Plan

The current daily capacity of the system sufficiently meets historic maximum day demands however it may prove to be inadequate during emergency situations. AWWA Standards recommend maintaining a total source capacity equaling or exceeding the design maximum day demand with the largest producing supply well out of service. In this case the Village Ridge Road Plant (Plant 2) provides 3.72 MGD of supply well capacity and 0.4 million gallons of storage. Should this Plant site be removed from service, the system would not be capable of meeting maximum day demands, and be unable to provide adequate fire flow. The Village has been aware of this concern and pursued obtaining land for a potential well site but has not obtained a suitable location at this time.

The Village system has a strong track record of regulatory compliance based on the commitment of the Village government and diligence of the Public Works staff. Since the Village has the responsibility to provide other services and maintain non-water supply infrastructure, funds to invest into the water supply infrastructure to provide continuous upgrades are not always available. Village governments are presently under significant pressure to keep property taxes as low as possible. The Mayor and Board of Trustees have taken progressive and proactive steps to fund Water Department operations and maintenance by recently increasing water rates to appropriate levels.

The water supply facilities, while regulatory compliant, range in age from 20 to 40 years and are approaching the time that significant rehabilitation is required in order to ensure reliable

operation and efficiency. Controls and instrumentation are antiquated and have resulted in more frequent and expensive repair. Rehabilitation of the Eastern Parkway elevated storage tank is required in the next two years and the same is recommended for the Ridge Road ground storage facility within the next three years.

Recently the Village became aware of three (3) known Superfund sites that are located upgradient of the Village's public water supply wellfield known as Plant No. 1 (Eastern Parkway). Each site is being investigated/remediated by a separate potentially responsible party (PRP). In addition, the Village has been informed by NYSDEC that the State is conducting an area-wide study to locate other potential groundwater contamination sources in the area that have the potential of impacting the Village water supply wells. NYSDEC has stated that there could be several additional hazardous waste spills upgradient of the Village water system. Therefore wellhead treatment for VOC removal at Plant 1 may be required in the future. Unless a responsible party that has the financial resources is identified, the Village will have to incur the significant cost of wellhead treatment. If the Village does not properly plan for future wellhead treatment, it will be requires to remove 33 percent of its capacity from service due to water quality issues.

## 3.2 – SOUTH FARMINGDALE WATER DISTRICT

### 3.2.1– GOVERNANCE AND STAFFING

The South Farmingdale Water District is administered by an elected Board of Water Commissioners. The Board is comprised of three members who set policy and approve expenditures. Positions on the Board include Chairman, Secretary and Treasurer. The Water District also employs a Superintendent who oversees day-to-day operations, supervises a General Foreman and seven (7) water operators, and who reports to the Board of Commissioners. The District's Business Manager is responsible for day-to-day management of five administrative staff.

### 3.2.2 – EXISTING WATER SUPPLY SYSTEM

The South Farmingdale Water District presently supplies potable water to an estimated population of 44,700 through 12,675 metered service connections. Geographically, the District water supply service area covers an approximate 5.5 square mile area. Adjacent water purveyors to the District include the Massapequa Water District and New York Water Service Corp. to the south; New York Water Service Corp. to the west; East Farmingdale Water District to the east; and the Incorporated Village of Farmingdale and Bethpage Water District to the north.

The District currently obtains its entire potable water supply from the Magothy formation through eleven (11) wells at six (6) individual plant sites throughout its service area. All eleven (11) supply facilities provide a combined available capacity of 20.74 million gallons per day (MGD). A summary of each supply well is presented in Table 3-4.

Water treatment methods employed by the District include pH adjustment for corrosion control, iron sequestering, and disinfection for all active wells. Sodium hydroxide is currently used for pH adjustment while sodium hypochlorite is employed for disinfection. A long chained phosphate (Aqua Mag) is utilized by the District for iron sequestering purposes at all eleven well sites. Iron removal systems are in place to remove the naturally occurring iron from the raw water at Well Nos. 2-2, 2-3, 5-1, and 6-2. A granular activated carbon (GAC) plant is in place at Well No. 5-1 for the removal of a volatile organic compound (VOC), 1,1-Dichloroethane. VOC treatment at Plant No. 1 has been authorized and construction is scheduled to commence during 2010.

The District currently maintains four (4) storage tanks with a total volume of 3.2 million gallons (MG) at four (4) locations in the system. A 1.0 MG elevated storage tank is located at Plant No. 1. This elevated storage facility is used primarily to maintain and regulate static pressures throughout the service area. The remaining tanks are ground storage tanks ranging in individual capacity from 0.6 to 1.0 MG and located at plant sites throughout the service area. A summary of each storage tank is provided in Table 3-5.

The Water District maintains seventeen (17) emergency interconnections with five (5) other adjacent water suppliers. As previously discussed the Hempstead Turnpike (State Route 24) interconnection with the Village is not operational at this time. Therefore the District maintains sixteen (16) operational interconnections. All of the operational interconnections are for emergency use in either direction by agreement with the adjoining water suppliers. The interconnection locations, sizes and adjacent suppliers are listed in Table 3-6.

### 3.2.3 – REGULATORY COMPLIANCE

Similar to the Village Water Department, the Water District also provides high quality potable water that meets the rigorous requirements of the New York State Sanitary code. As described in the prior section, the Water District has successfully faced water quality challenges that required the significant capital investment for wellhead treatment for VOC and iron removal at many facilities.

As a large community water supplier, the South Farmingdale Water District is fully aware of its obligation to comply with all applicable Federal, State, and local regulations. Historically, the District has exhibited a high level of regulatory compliance. The most recent sanitary survey of the District's facilities and operations was conducted in 2005. The survey included a field inspection of the District's supply wells and storage facilities as well as a review of office records in order to determine the level of compliance with Part 5 of the NYSSC and Article VI of the NCPHO. The results indicate the District's water system to be in high regulatory conformance with minimal violations.

A review of the District's semi-annual cross connection reports reveal a violation of Section 5-1.31(a)(3) of the NYSSC which requires all backflow prevention devices be tested at least annually. Cross connection reports submitted for 2002, 2003, and 2004 indicate less than full compliance with this sanitary code requirement.

The District was also found to be in violation of the requirements of Article VI, Section 14e of the NCPHO which regulates interconnection testing. Pursuant to this section of the

NCPHO, all interconnections must be exercised and inspected to ensure they are operational on at least an annual basis. The District's annual interconnection valve tests were determined to be unsatisfactory as valves were not fully opened during time of inspection. The District has expressed its intent to upgrade all interconnections to facilitate full testing in order to achieve full compliance of Article VI.

The remaining results of the sanitary survey consisted of recommended actions to be taken by the District pursuant to AWWA standards. These actions included minor infrastructure upgrades and additional plant site security measures to be taken. As evidenced in this sanitary survey, the District remains in high regulatory compliance and continues to exhibit its commitment to providing a high level of water supply service.

### 3.2.2 – CURRENT AND PROJECTED NEEDS

The Water District system has adequate capacity to satisfy average day, maximum day and peak hour / maximum day plus fire flow demand conditions based on the review of recent pumpage and capacity data as summarized on the following table:

| South Farmingdale WD Capacity Summary* | | | |
|---|---|---|---|
| **Demand Category** | **System Capacity (MGD)** | **Demand Recorded (MGD)** | **Surplus/ (Deficit) (MGD)** |
| Average Day | 13.1 | 4.9 | 8.2 |
| Max. Day | 20.5 | 13.4 | 7.1 |
| Peak Hr. | 23.7 | 21.4 | 2.3 |
| Max Day + F.F. | 23.7 | 18.4 | 5.3 |

* Based on data from 2007 Emergency Plan

An assessment of the Water District with the largest plant out of service revealed that the system has ample capacity. This is based on the removal of the Langdon Road Plant (Plant 1)

from service. This plant is the location of three supply wells (combined capacity of 5.5 MGD) and a 1.0 MG elevated storage tank.

The Water District has a practice of performing a "present and future needs" study of its system on a 5 to 10 year basis. It is considered good management practice to perform such planning studies at least every 10 years to assess critical water system parameters such as capacity, quality and infrastructure condition. Such plans must proactively address the various aspects of operations, including water supply and treatment, storage, transmission / distribution and building facilities. Recent studies were completed during 1996 and 2004 which resulted in the formulation and implementation of many capital improvement projects that improved the reliability and performance of the water supply, storage and distribution system.

The most recent 2004 study recommend water system improvements that included the following projects which have been implemented or are under current design / construction:

- Plant 1 - Shop building renovations and fire sprinkler
- Plant 1 - New diesel powered engine / generator
- Plant 1 - Well 1-2 replacement
- Plant 2 - Replace filter vessels
- Plant 3 - New primary service & interior renovations
- Plant 5 – New primary service & interior renovations
- Distribution System - Replacement of asbestos water main
- Distribution System - Replacement of water main on Crestwood Ave.

Other recommended projects which include Plant 6 – Security lighting, meter replacement & interior renovations; Plant 6 - New engine /generator; and water meter upgrades to radio read have financing in place but have not been authorized by the Water District at this time.

The 2004 study was used as the basis and justification to obtain authorization for long term financing in the amount of $8,550,000 through the Town of Oyster Bay. Significant water and tax rate increases have been avoided through the use of reserve funds, proper planning and