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**MAP, PLAN AND REPORT
FOR
ESTABLISHMENT OF
HOPEWELL WEST WATER DISTRICT
TOWN OF EAST FISHKILL
DUTCHESS COUNTY, NEW YORK**

JANUARY 2019

CPL NO. 60059.37

PREPARED BY:

**CPL
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POUGHKEEPSIE, NY 12601**

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I. SUMMARY

1.1 Summary

This study represents the Map, Plan and Report for formation of the Hopewell West Water District, located within the Town of East Fishkill.

The history of the development of this Water Plan is discussed in Chapter II. The proposed Water District consists of a total of 141 parcels, including 136 residential parcels, 1 commercial parcel, 2 vacant parcels and the 2 existing water supply parcels.

This Map, Plan and Report contains the information required by Town Law §203, including the proposed boundaries and general plan for the District, a report of existing and future water demands, source of water, and storage of water. The proposed Water District is described in Chapter III. The water system is currently owned and operated by Hopewell Service Corporation. The proposed system purchase and recommended improvements are included in Chapter IV of this report.

Chapter V discusses a proposed benefit assessment formulation, while Chapter VI presents the total annual costs for the Water District, along with the typical user costs, based upon the total capital and operation and maintenance (O&M) costs associated with the District.

For a typical, single family, developed residential dwelling within the proposed Water District, the following cost summary has been projected:

<u>Bond Term</u>	<u>Payment Year</u>	<u>Capital Cost</u> ¹		<u>O&M Cost</u> <u>(1st Year)</u>	<u>Total</u> <u>Cost</u>
30 yr	First Year	\$428	+	\$467 ³ =	\$895 ²

The total costs shown in the above table are for the average user. Those using less water than average will pay less and those using more water than average will pay more.

The parcel with the highest assessment is the Smoke Haus and Deli, with total estimated benefit units of 4.0 and a total estimated annual cost of: 4 x \$895 = \$3,580.

¹Based on a 30-year bond with an assumed interest rate of 2.25%. Detailed cost breakdowns are shown in Appendix C.

²O&M costs can be expected to increase over time, with inflation.

³Total costs reported for average user.

1.2 Procedure Under Town Law Article 12-A

The following steps are set forth in Town Law Article 12-A for the creation of a Water District by Town Board resolution. Audit & Control approval is required when the projected annual cost for a typical property and/or a typical one or two family house exceeds the threshold as established by the NYS Comptroller for the formation of a water district. The threshold for 2019 is \$898. It is set yearly.

1. The Map, Plan and Report for the proposed formation and operation of the Water District is filed with the office of the Town Clerk.
2. Subsequent to the filing of the Map, Plan and Report with the Town Clerk, the Town Board adopts an order, which specifies the date, time and place of a public hearing. It states that the Map, Plan and Report is available for public inspection at the office of the Town Clerk and any other additional locations. It also recites the boundaries of the proposed District, the extent of proposed improvements, and the maximum amount to be expended.
 - a. Town Clerk publishes the Order in the official newspaper no less than 10 and no more than 20 days before the scheduled hearing date and posts a copy of the Order on the designated notice board at Town Hall.
 - b. Town Clerk forwards a copy of the Order to the NYS Comptroller on or about the date of publication.
3. The Town Board conducts a public hearing.
4. Town Board determines that:
 - a. Notice of the hearing was published and posted as required by law and is otherwise sufficient.
 - b. All the properties in the proposed District are benefited.
 - c. All benefited properties are included in the District.
 - d. It is in the public interest to establish the District.
5. The Town Board passes a resolution, which approves the creation of the District. Such resolution will be subject to a permissive referendum.
6. If this improvement is determined to need the approval of the New York State Department of Audit and Control, submit the above information to the office of the State Comptroller, Department of Audit and Control, seeking permission to form this District.

7. After the expiration of time for the filing of a petition requesting a referendum, and assuming that no such request has been made, the Town Clerk shall file a certification with the County Clerk stating that no such petition has been filed.
8. The final Order of the Town Board is recorded with the County Clerk and filed with Audit and Control.

II. INTRODUCTION

2.1 Background

The existing Worley Homes – Hopewell Services water system has been in operation since the 1950's and has supplied water to the Worley Homes development and parcels along Crest Court in the Town of East Fishkill.

The existing system has a reported water source consisting of two (2) wells, although only a single well is authorized for use at this time. A newly drilled well reportedly has excessive levels of iron and manganese present, which has prevented it from being placed into operation. The storage facilities reportedly consist of 2 buried 30,000 tanks at the high point of the system along Crest Court, although the latest Dutchess County Department of Health inspection noted that the tanks were only 10,000 gallons in capacity each. The existing distribution system consists of 6" diameter and smaller asbestos cement (A.C.) water main. The water system is not fire rated and there are no individual water meters present.

There are a number of reported issues with the existing water system, which are noted in previous letters and inspections included in Appendix A of this report. According to the Department of Health, the most significant issues are: having only a single well source available; excessive chloride levels as noted in a recent inspection; age, condition and actual capacity of existing storage tanks (tank was reported to be leaking), rusting of the chlorine contact tank, the presence of A.C. pipe with some smaller sized piping present, exposed electrical wire within the treatment facility building, lack of an emergency generator and pressure issues near the storage tanks.

The Town of East Fishkill has continued to note their concerns with the existing water system issues and this has resulted in the Town negotiating with the current owners of the system an option to purchase the existing water system. The existing water system would become a Town Water district, with system improvements being performed to provide a more reliable water supply as part of the formation of the Water District.

As a result of the above information, this Map, Plan and Report will consider the formation of the Hopewell West Town Water District.

2.2 Purpose and Scope

The purpose of the Map, Plan and Report is to provide the information required by Town Law. It will identify the specific boundaries of the proposed Water District, including a plan and written description based upon tax map information, and also develop both capital and operation and maintenance (O&M) cost estimates for the proposed Water District, in accordance with Town Law.

III. DESCRIPTION OF THE DISTRICT

3.1 Proposed Water District Boundary

Town Law requires that the Town Board determine what specific area of the Town is “benefited” by a proposed District. The proposed benefited area is indicated on the Hopewell West Water District boundary map, as shown on Drawing 1 of 1, located in the back of this report. A description of the revised area for the proposed Water District, which consists of tax map information, appears in Appendix B of this Map, Plan, and Report. The proposed Water District includes a total of 141 parcels, consisting of 136 residential parcels, 1 commercial parcel, two (2) vacant parcels and the two (2) water system parcels. The district boundary has been developed based upon the existing customers reportedly being served, along with parcels that may be directly connected along the existing water main.

3.2 Water Source and Supply

3.2.1 Water System Demands

The current estimated average day demands for the existing water system are approximately 28,200 GPD and the estimated maximum day demand for the system is approximately 38,400 GPD. It is not anticipated that there will any significant increase in future demands for the proposed water district.

3.2.2 Adequacy of Existing Systems

The existing water system has a reported water source consisting of two (2) wells, although only a single well is authorized for use at this time. A recently drilled well reportedly has excessive levels of iron and manganese present, which has prevented it from being placed into operation. The storage facilities reportedly consist of 2 buried 30,000 tanks at the high point of the system along Crest court, although the latest Dutchess County Department of Health inspection noted that the tanks were only 10,000 gallons in capacity each. The existing distribution system consists of 6” diameter and smaller asbestos cement (A.C.) water main. The water system is not fire rated and there are no individual water meters present.

As noted in the background section of the report, there are a number of issues with the existing water system. Based upon Recommended Standards for Water Works (Ten States Standards) and Subpart 5-1 of the State Sanitary Code, which are the design standards utilized by the Health Department, the existing Worley Homes Water system does not meet the requirements of having multiple wells in service, providing one day's worth of storage on an average day basis, or meeting water quality requirements with respect to chlorides. As the majority of the water system components date back to the 1950's, these components are considered to be at the end of their useful service life.

Based upon the above information, it appears that the existing water system components are not adequate to reliably supply the water system needs for the existing service area in the long term.

3.2.3 Individual Water Service and Meters

If the District is established, all benefited parcels will be eligible to connect to the system. The water supply parcels do not require a service connection.

Any these parcels currently not connected or vacant that wish to receive water and do not have an existing service connection will be required to provide the connection from the curb stop to their home or building at their own expense, using materials which meet the specifications of the Town. The District will provide for all connections between the water main and the curb stop for each individual parcel and will also replace any existing curb valves not operating. Although the costs of connection will naturally vary from lot to lot based on site conditions (e.g. distance from road to house, rock excavated, etc) it has been estimated that an average cost to connect might be in the neighborhood of \$2500 for a typical 50 ft. setback from the curb stop to the home or building.

Each parcel will be allotted a single residential size water meter (1" meter for commercial parcel). Included in the cost for the meters is the basic charge for installation of a single water meter for each parcel. The district will install the meters over a roughly 6 month period after the District is formed. There will be no separate charges to an individual homeowner (other than

normal water district charges) for installation of this type of water meter, if the homeowner provides access to the contractor during the period of time when the meters are to be installed, and there is an existing, operating shut off valve that will allow the water to be turned off to the house during the meter replacement. If these conditions are not met, then it will be the responsibility of the homeowner, at their sole expense, to install the meter within one (1) year of formation of the District.

IV. ACQUISITION CONSIDERATIONS

4.1 System Purchase

As noted in Section 3.2.2 of the Map, Plan and Report, the water system components are generally considered at the end of their useful service life, so the only value associated with the existing water system is the existing land value. The water system consists of two (2) parcels, with total assessed values of \$105,000 for the water supply parcel and \$47,500 for the storage tank parcel, totaling \$152,500. Recent negotiations between the Town and Hopewell Services Corporation have resulted in an option to purchase price agreement of \$100,000. In review of the system purchase, information on an existing easement for the water main crossing between Worley Homes and Crest Court has not been provided by the current owners. As a result, the system purchase amount of \$100,000 shall be held in escrow until the easement is confirmed.

4.2 Recommended Improvements

In order to form the Hopewell West Water District, there are a number of improvements, which should be made for the continued, long-term operation of the water system. The recommended improvements consist of the following items:

4.2.1 Connection to Hopewell Hamlet Water System

Extensions to the existing Hopewell Hamlet water system are being made to supply water to the Hopewell Glen Development. Utilizing the Hopewell Glen water distribution system, it is proposed to install a 3,900' water transmission main connection (10") between Hopewell Glen and Fishkill Plains, as well as a 500' water transmission main connection (8") between Brettview-Fishkill Plains and the Hopewell West Water District, in order to allow potable water to be supplied from the Hopewell Hamlet Water System to Worley Homes. A preliminary report and application were made to the New York State Department of Health (NYSDOH) in 2017, and this project was approved for obtaining subsidized loan rates from the New York State Environmental Facilities Corporation (NYSEFC), subject to final review and approval by NYSDOH/NYSEFC. The Hopewell West Water District will be allocated source and storage capacity from the Hopewell Hamlet Water System, eliminating the need for any on-site

source, treatment or storage facilities at Worley Homes. The existing water source, treatment and storage systems will be disconnected and abandoned after completion of the connection to Hopewell Hamlet.

4.2.2 Water Meters

A master meter vault is proposed to be installed near the proposed transmission main connection point at Elk Road. Individual meters will be required for each developed parcel connected to encourage water conservation. A standard water meter has been allocated for each of the developed parcels.

4.2.3 Water Distribution System

The recommended distribution improvements consists of the replacement of the portions of the existing water distribution main with reported smaller diameters of 4" or less. It is proposed to replace an estimated 700 ft of existing 4" diameter water main with 8" diameter water main along Elk Road. This work would also include installation of complete new service lines where replacement water mains are installed and abandonment in place of any sections of water main replaced.

Based upon the age of the water distribution system, it may be necessary in the future to replace the remaining water distribution main. This would include an estimated 12,500 ft of the remaining existing 4"- 6" water main. The Town will continue to pursue grants for the proposed and future distribution improvements in order to minimize the costs for pipe replacement.

V. ALLOCATION OF COSTS AND BENEFIT ASSESSMENT

5.1 Capital Costs

Article 12-A of Town Law governs the establishment of a Water District by resolution of the Town Board. Before establishing a District, Town Law Section 203 requires the Town Board to determine that the establishment of said District benefits all property within the proposed District and that all property benefited by establishment of the District is included within the proposed limits of the District. After considering all the relevant issues, the Town Board must make a determination that it is in the public interest to establish the District.

As permitted by Town Law Section 203, the capital costs of the proposed District are to be borne entirely by the lands that will be benefited by the establishment of the District. The Town Board will assess each separate lot or parcel of land within the District in proportion as nearly as possible to the benefit which each separate lot or parcel of land will derive from the establishment of the District. The Town Board shall apportion and assess upon, levy and collect from each lot or parcel of land deemed benefited a charge in just proportion to the amount of benefit that the establishment of the District confers upon the lot or parcel of land. For the present, it is proposed that capital costs be assessed as benefit charges. Future capital costs may be assessed as benefit charges. However, in the future, it is possible that some or all of the capital costs may also be collected in the form of water rents in accordance with Town Law § 198(3)(d).

Properties may lawfully be considered "benefited" even though they are not presently physically connected to the water system. The mere availability of the water line is considered a benefit. The Town Board has the responsibility of determining the relative degree of the benefit among the various properties, whether actually connected or not. "If the Town Board does its figuring well, those who benefit most will pay the most and those who benefit only a little will pay only a little." (29 Op. St. Compt. 24 (#73-139))

5.2 Operation and Maintenance

Operation and Maintenance costs will also be charged on a benefit basis. The cost of operation and maintenance must be assessed by the same method as is used for the cost of establishing the District (Town Law Section 203) (1967 Opn. St. Compt. 934). In accordance with

Town Law Section 203, some or all operation and maintenance costs may be raised by the collection of user fees in the form of water rents as the Town Board deems appropriate. Water rents are properly charged only to the properties that are actually connected to the system.

5.3 Annual Assessment Roll and Public Hearing

In accordance with Town Law Section 203, the Town Board must annually prepare detailed written estimates setting forth the anticipated revenues and expenditures for the District. This is necessary in order to determine the amount of money required to meet the expense of paying both capital costs and operation and maintenance of the water system for each fiscal year commencing the first day of January.

After preparation of the annual estimate, the Town Board prepares an annual assessment roll setting forth a description of the lots or parcels of land, the name(s) of the owner of each lot or parcel of land, and the amount to be assessed against each lot or parcel of land in proportion to the benefit derived. A public hearing is then scheduled and conducted to entertain comments or objections regarding the assessment roll. The Town Board must adopt the assessment roll, or make amendments and conduct another public hearing before adoption. Once adopted, the assessment roll is filed with the Town Clerk. The amounts contained in the assessment roll are then levied against the lots and parcels of land in the District and collected in the same manner as a tax.

5.4 Benefit Formula

A benefit assessment can be made through various types of benefit formulas. The formula to be applied in any given case is set by the Town Board. The formula should fit the individual case, and the equities of a given situation. The State Comptroller does not become directly involved in reviewing the fairness of the benefit assessment formula. An Article 78 proceeding is available to challenge the fairness of the benefit formula.

As part of the yearly assessment process, the Town Board has the authority to adjust the benefit formula from time to time. Perhaps the benefit to a parcel has changed (e.g. if a parcel is vacant one year and is then improved the next; 1976 Opn. St. Compt. 440). Thus, over the years, as costs and/or benefits change, the Town has the flexibility to modify the benefit formula. It could increase the amount based on benefit unit and decrease the amount based on rent, or vice-versa.

All water users in the proposed District will be metered. Adjustments in benefit charges may be made based upon actual usage. Additionally water rents may be adjusted from time to time. At the public hearing on the Map, Plan and Report, the Board will receive comments on all issues relating to benefit assessment formulas, including potential use of water rents, the share of costs to be paid by vacant properties, etc.

The benefit formula and assessment developed for the previous Brettview and Fishkill Plains Water Districts will be applied for this District. All of the benefit assessment formulas have been developed relative to a "benefit unit". One (1) benefit unit is the equivalent of the benefit provided to one (1) residential parcel developed with a one-family house.

Within the District, the vast majority of parcels are single family residential parcels and would be assessed a base charge of one (1) benefit unit each, whether the house is actually connected to the water system or not. These lots could connect to the system at any time. Lots not connected to the system will not be charged any Operation and Maintenance (O&M) costs.

There is a single commercial parcel, Smoke Haus and Deli, with an estimated demand of approximately 1,000 GPD. This parcel would be assessed 4 benefit units.

The two (2) vacant parcels will each be assessed 0.8 benefit units but will not be charged any O&M costs.

The two (2) water system parcels are not assessed any benefit units.

The Benefit Unit Formula appears in Table 5-1 of this report.

VI. PROJECT COSTS AND USER COSTS

Cost information for the proposed Water District is presented in this section based upon the updated information developed in this Map, Plan, and Report.

Capital cost estimates have been projected based upon the size and the cost of the required water supply system improvements. Operation and Maintenance Costs (O&M) are based upon current estimates to operate the Hopewell Hamlet Water Systems. Based upon the total Capital and O&M costs, the typical costs per user can be estimated.

6.1 Capital Costs

The total capital costs for the proposed Water District represents the sum of the purchase price, fair share contribution, preparation of this Map, Plan and Report, and the recommended improvements developed in Section IV of this report. The purchase price of \$100,000 was agreed to by the Owners and the Town of East Fishkill. The fair share contribution was determined based upon the connection cost allocation for Hopewell West, using a base cost of \$790,000 for the total contribution of Revere Park and Hopewell West for the connection between Hopewell Glen and Fishkill Plains, as this represents the estimated minimum cost for providing a water main connection between the Hamlet and Revere Park/Hopewell West water systems. The total estimated capital costs for the proposed improvements, including contingencies, professional fees and administrative costs will be approximately \$1,311,000.

6.2 Operation and Maintenance Costs

The Hopewell Hamlet Water system is currently being upgraded to support the North Hopewell Water District (EPA Ryan Drive Superfund Site) and Hopewell Glen. It is proposed to apply an out of district water rate to compensate for Hopewell West not participating in any system contributions. The Town has indicated that an O&M rate of \$6.40 /1000 gallons would apply for Hopewell West, which is higher than the rate currently in place for the Hopewell Hamlet water system.

6.3 Typical User Costs

This Map, Plan and Report proposed that the District will be established on a benefit basis. It is proposed that all costs for this Water District be

raised on a benefit basis, i.e. in proportion as nearly as possible to the benefit which each lot or parcel will derive therefrom.

In this report, the capital costs have been proposed to be assessed as benefit assessments, while the O&M costs will be collected based upon water rents. The total estimated capital costs will be applied to all benefitted users with the proposed Water District.

The total estimated capital costs of \$1,311,000 are assumed to be bonded using level debt for a term of thirty (30) years with an assumed subsidized interest rate of two point two five percent (2.25 %), based upon the project qualifying for low interest loans under the New York State Revolving Loan Fund (SRF).

Based on the thirty (30) year bond term analysis, the capital cost per benefit unit has been estimated at approximately \$428/year using level debt. This value represents the annual capital cost for a typical, residential, developed user.

The estimated annual Operation and Maintenance (O&M) costs will only be applied to users which are connected within the proposed Water District. The O&M costs will be based on water rents, as described in Section V (5.2) of this report and will be assessed based upon the amount of water used by each customer. The first year operation and maintenance (O&M) costs per typical customer based upon the current estimated average flow of 200 GPD per parcel and rates obtained from the Town has been estimated to be approximately \$467 per year.

A summary of the total cost for a typical, single family residential dwelling unit, are as follows:

<u>Bond Term</u>	<u>Payment Year</u>	<u>Capital Cost¹</u>	<u>O&M Cost (1st Year)</u>	<u>Total Cost</u>
30 yr	First Year	\$428	+ \$467 ³ =	\$895 ²

The total costs shown in the above table are for the average user. Those using less water than average will pay less and those using more water than average will pay more.

The parcel with the highest assessment is the Smoke Haus and Deli, with total estimated benefit units of 4.0 and a total estimated annual cost of: 4 x \$895 = \$3,580.

TABLE 5-1
Benefit Unit Summary

DESCRIPTION	BENEFIT UNITS
<u>Residential Parcels</u>	
Base Assessment – Single Family Residence	1.0
Base Assessment – Duplex Residence	2.0
Base Assessment – Multi-Family or Apartments	1.0 per dwelling unit
Base Assessment – Vacant Residential Parcel	0.8
Additional Assessments for Residential Zoned Parcels:	
0-4.99 Acres:	0.0
5.00 – 9.99 Acres:	0.5
10.00 – 14.99 Acres:	1.0
15.00 – 24.99 Acres:	2.0
25.00 – 34.99 Acres:	3.0
35.00 – 49.99 Acres:	4.0
<u>Commercial/Industrial Parcels</u>	
Base Assessment – Commercial Improved Parcel	Est. Flow/250, min 1.0
Base Assessment – Industrial Improved Parcel	Est. Flow/250, min 1.0
Base Assessment – Vacant Commercial/Industrial Parcel	1.0
Additional Assessment – Commercial /Industrial Parcels	(T.A. – 1)*0.4*0.8
(T.A. – Total acreage, 40% developable, 0.8 Vacant Factor)	

Note: Additional assessment for commercial industrial parcels will apply to commercial or industrial zoned parcels of 2.00 acres or greater. Commercial and industrial parcels will be assessed either by the total estimated flow, or by the sum of the minimum assessment of 1.0 and the additional assessment based upon acreage, whichever is greater.

APPENDIX A

Copy
Requested by home owner
11/14/16
Received
1/5/16

MARCUS J. MOLINARO
COUNTY EXECUTIVE



COUNTY OF DUTCHESS
DEPARTMENT OF BEHAVIORAL AND COMMUNITY HEALTH
DIVISION OF ENVIRONMENTAL HEALTH SERVICES

October 7th, 2016

Certified Mail # 7016 1970 0000 5260 2648

Michael E. Gillespie, PE
Hopewell Services Inc.
847 Route 376
Wappingers Falls, NY 12590

Re: Hopewell Services - Public Water Supply Inspection
Federal ID# 1302764
Town of East Fishkill

Dear Mr. Gillespie:

Part 5 of the New York State Sanitary Code addresses your responsibilities relative to ownership, operation and monitoring of the above referenced facility. On July 22, 2016 this Department conducted a scheduled sanitary survey of the above referenced public water supply system in company of your grade C certified New York State certified operator, John DeCicco.

Below is a summary of the community water system's general operation.

- The system currently serves approximately 414 people through 140 service connections to residential homes and one business.
- Monthly operation reports provided to this Department over the past year indicate an average daily usage of 28,206 gallons per day and a maximum day of 38,400 gallons per day in June 2016. Daily free chlorine residuals were generally maintained within an acceptable range and thereby were able to meet disinfection requirements. The chlorine residual at the plant from the entry point was 0.3 parts per million (ppm).
- Three groundwater wells exist at the supply. Well 1 has not been used since 2005 due to a decrease in yield. Well 1 is located inside the treatment plant. Well 2 is located approximately 90 feet north of the treatment plant. Well 3 was installed in 2005 but is not approved for use. All wells are adequately sealed. Per WSA 8425, the total allowed combined pumping rate from wells 1 and 2 is 37.5 gallons per minute.
- Raw water is pumped into the nearby treatment plant where it is injected with a sodium hypochlorite solution for disinfection. The water passes through a 5,000 gallon chlorine contact tank. The chlorine contact tank is partially buried. The end of the contact tank which protrudes inside the treatment plant shows signs of corrosion. The treatment plant is built partially below grade. The pressure at the plant is typically around 35 - 40 pounds per square inch.
- Two 10,000 gallon underground metal storage tanks are reportedly located at the end of Crest Court. These storage tanks provide storage capacity and pressure for most of the consumers however those located at the same elevation gradient as the storage tank have individual booster pumps. Well water is pumped directly into the distribution system and into the storage tank after disinfection. The well pump is activated/deactivated based on the storage tank level. The storage tank area is overgrown with vegetation. The location of the tanks is unclear. The

vegetation must be cut back on a regular basis, the tank or tanks should be identified as to approximate location, and the appurtenances must be made available for inspection.

- Our records indicate that the water mains consist of 4" and 6" asbestos concrete pipe and the operator indicates that the service lines consist of copper pipe. The operator also indicates that breaks typically occur along the service connections; rarely do they occur along the mains.
- The operator indicated that the mains are not flushed often because flushing causes turbidity problems.
- The operator indicates that repairs are generally contracted out to a private contractor.
- The water system does not have backup power however the operator stated that this water system seldom loses power.
- Our records indicate that water hardness was 294 mg/l in 2013. The water is considered hard. The operator stated that many consumers have water softeners.
- Sodium levels have been between 109 and 120 mg/l. Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

The following code non-compliance table is provided:

No.	Code Section	Description	Public Notification	Corrective action plan
1	5-1.71 (a) The supplier of water and the person or persons operating a public water system shall exercise due care and diligence in the maintenance and supervision of all sources of the public water systems to prevent, so far as possible, their pollution and depletion.	This system is currently operated with only one well.	No public notification required.	Well 3 was drilled in 2005. In 2013 you submitted a report to this Department for review and approval of well 3. The report was found to be incomplete and a review letter was sent by this Department within 30 days of receipt of the report. In 2014 you contacted the Town of East Fishkill regarding the possibility of a Town acquisition of the water system and with the understanding that the system is in need of various upgrades including source, filtration, storage and distribution. The Town's attempt to seek approval to connect this water district to the Fishkill Plains/Brettview Water District failed due to existing source capacity issues at Fishkill Plains. To date this Department has not received a revised proposal. Submit a proposed compliance schedule by November 30th, 2016.

No.	Code Section	Description	Public Notification	Corrective action plan
2	5-1.71(b) The supplier of water and the person or persons operating a water treatment plant or distribution system shall exercise due care and diligence in the operation and maintenance of these facilities and their appurtenances to ensure continued compliance with the drinking water standards.	<ul style="list-style-type: none"> • The chlorine contact tank is rusted. • An electrical control box in the treatment plant has exposed wires. • The storage tank is leaking. • The storage tank area is overgrown with vegetation. 	No public notification required.	<ul style="list-style-type: none"> • Contact tank must be repainted by November 30th, 2016. • A cover must be installed on the electrical control box by November 30th, 2016. • The area covering and located within 10 feet of the storage tanks and access to the tanks must be cleared of brush and trees by November 30, 2016. • An internal inspection of the storage tanks must be conducted by December 31st, 2016. A report must be submitted to this Department summarizing the size, condition of the tanks and identifying the location of the leak by January 15th, 2016.
3	5-1.72(h)(6) By the first of September, each community water system must mail a copy of the certification form to the State Health Department and the county or district health department office which has jurisdiction over the water system.	Certification was not received by September 1 st , 2016.	No public notification required.	
4	5-1.52 Table 1 If the results of a monitoring sample analysis exceed the MCL, the supplier of water shall collect one more sample from the same sampling point within 2 weeks or as soon as practical.	Failure to collect the confirmation sample for chloride.	Table 13 of 5-1.52 requires a Tier 3 public notification.	Resample by 11/30/2016

Below is a list of observations/requirements.

1. You have been directed by this Department to resolve the source capacity issue for many years. In a letter dated November 7, 2014, you were required to submit revised plans by December 31st, 2014 for approval of well 3. To date this Department has not received such plans. It is hereby required that you submit a proposed compliance schedule to this Department by November 30th, 2016.

2. You have been directed by this Department for many years to repaint the contact tank, to install the cover over the electrical control box and to maintain the area covering and located within 10 feet of the storage tanks and access to the tanks clear of brush and trees. Please complete this work by November 30, 2016.
3. Storage tank inspections are recommended every five years. This Department is concerned regarding the structural integrity of the existing tanks. It is hereby required that an internal inspection of the contact and storage tanks be conducted by December 31st, 2016 and that a report be submitted to this Department summarizing the size, condition of the tanks and identify the location of the leak. Such report must be submitted by January 15th, 2016.
4. Any reduced pressure zone devices that exist within the water system require yearly testing by a certified tester. Please submit proof that the backflow prevention device installed at East Fishkill Provisions was tested in 2015 and 2016 by November 30th, 2016.
5. It is strongly recommended that signs be installed at the entrance to the treatment plant, at the treatment plant, and the elevated storage tank indicating "Hopewell Services Public Water Supply – No Trespassing". The water supply is responsible for minimizing vandalism and dumping that can occur on the property.
6. It is strongly recommended that an emergency generator be purchased to provide power to the well pump and the treatment plant during an outage.
7. Modifications to the water system require prior approval by this Department.
8. All water quality monitoring is to be performed according to methods and procedures as required by the New York State Sanitary Code, Part 5, Subpart 5-1 and the National Primary Drinking Water Regulations. Sample results are to be submitted in a timely manner to this Department for review. A violation will be issued for failure to comply with the sampling requirements and due dates. Monthly operation reports indicating daily treated water volumes, daily entry point chlorine residuals, and any water system issues that developed are to be submitted to this Department by the 10th of the following month for review. This Department is to be promptly notified if delivery of water is interrupted for more than four hours.
9. An Annual Water Quality Report (AWQR) is to be submitted to this Department for review each year well before the State required distribution date of May 31st. Certification that the AWQR was distributed to consumers by May 31st must be submitted to this Department by September 1st.

Reporting:

Revised Total Coliform Rule Sample Siting Plan: Please submit a Revised Total Coliform Rule Sample Siting Plan to this Department by December 31st, 2016.

Monthly Operation Reports:

Monthly operation reports are submitted complete.

Sampling results:

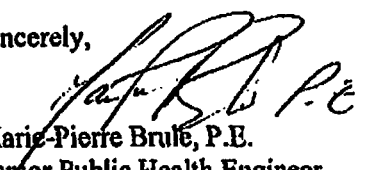
Sampling is generally conducted in accordance with current standards and submitted timely.

Annual Water Quality Report (AWQR):

The 2015 AWQR was received on May 31st, 2016. Certification that the 2015 AWQR was distributed to consumers by May 31st, 2016 was not received.

I would like to thank John DeCicco for his assistance during the inspection. Please report completion of maintenance items listed above on operation report. Should you need to discuss this further, I may be reached at (845) 486-3404.

Sincerely,



Marie-Pierre Brulé, P.E.
Senior Public Health Engineer
Environmental Health Services

cc: John DeCicco, Operator (w/encl.)
Town of East Fishkill Supervisor
File

Encl.

November 19, 2010

Michael E Gillespie
Gillespie and Associates
847 Route 376
Wappingers Falls, NY 12590

Re: Hopewell Services, PWS ID: NY1302764, East Fishkill (T)

Dear Mr. Gillespie:

Your water system was inspected on October 13, 2010. Your operator, John DeCicco, assisted.

Water System Description

Your water supply serves about 137 service connections and 489 people. The water comes from three wells and is treated with sodium hypochlorite.

Sources

The system was originally designed with two wells. A third well was added after the second well (in the building) failed. Well 1 is in the treatment building. Well 2 is to the north. Well 3 is to the north west.

The well in the pump house must be properly capped.*

Well 3 has never been formally approved. Initial testing showed the well was high in iron. You must gain approval to use well 3 so that your system has proper source capacity. The conduit to well 3 is broken where it attaches to the well.

Treatment house

The system pressure in the treatment building ranged from 30 to 40 psi. The water meter was broken.* The meter read 31413050 gallons.*

The pressure tank is rusted.* Several valve handles are rusted or missing.* Clean, repair and paint equipment. Label pipes.

Rodents and vandals are damaging the treatment house.* These problems are chronic. Develop a strategy to reduce or eliminate these issues. One of the electrical boxes is not properly attached. It is hanging by one of the power cables. Properly attach all electrical equipment.

As is required, NSF approved hypochlorite is used for disinfection.

The chlorine injector fitting is leaking and must be replaced. The current fitting is a simple tee. Replace with a proper injector for better mixing.

Storage

Trees are growing on the storage tanks.* Ensure that the tanks are structurally sound. Remove trees growing on top of the tanks. An old tarp protects some of the level sensor controls. Make sure that all controls are suitable for outdoor use and that the tank is protected from surface water intrusion.

Dutchess
County
Department
of Health

William R. Steinhaus
County Executive

Michael C. Caldwell,
MD, MPH
Commissioner

Environmental
Health
Services

387 Main Street
Poughkeepsie
New York
12601
(845) 486-3404
Fax: (845) 486-3545



Distribution

Particulate build up has been a problem in the past. Complaints have been received regarding particulates in the water or discolored water. Although three flushing hydrants were installed, they are not adequate to flush the entire system. Ensure that flushing hydrants and your flushing program are adequate.

Cross connection control

Provide the inspection report for the RPZ at East Fishkill Provisions. You must maintain an inventory of control devices and must be able to locate situations which would require a cross connection control device.*

A cross connection at the chlorine crock was removed by your operator during the inspection. A permanent fill system should be installed.

Sampling

Your water system appears to be delinquent in several categories of sampling. Disinfection byproduct samples were taken in 2008 but the sample point was not reported. What is the status of your IDSE compliance? Samples were taken again in 2010. Report the 2008 sample point. Principal Organic Contaminants were sampled in 2008 but again, the sampling point was not reported. Lead and copper samples are overdue. No radiation testing is on file since 2002. No asbestos sampling is on file since 1998.*

A review of our records indicates the following sample schedule:

Group	Number	Where	How Often	Next Due
Lead and Copper	10	first draw	every 6 months	between July 1, 2010 – December 30, 2010.
Table 8A	1	entry point	every 9 years	by December 31, 2007
Table 8B	1	entry point	every 3 years	by December 31, 2011
Nitrate	1	entry point	every year	by December 31, 2011
Sodium & Chloride	1	entry point	every 3 years	by December 31, 2013
Table 9A	1	DBP MAX	every three years	in August, 2011
Table 9B	1	each raw well	every six years	by December 31, 2008
Table 11	1	distribution	every month	
Radiation	1	entry point	quarterly	by September 30, 2010

Emergency

Your water system relies on storage to provide water during a power outage. For this reason it is especially important that the storage tanks be properly maintained.

An emergency plan which includes contact information, key system information, and standard operating procedures for expected emergency scenarios should be updated yearly.

Management

Your 2008 annual water supply statements (AWQR) was never received. Your 2009 annual water supply statement (AWQR) was late and contained errors. The storage tank floats on the system rather than getting water directly from the pump house. You must include the last five years of

Hopewell Services, Federal PWS ID #: NY1302764

November 19, 2010

sample results in your report. You must include any violations in your report. Next year's report must include mention that the 2009 report was missing information.

Your failure to address chronic issues at your supply indicates a change in management approach is necessary. Explain how the flow numbers on your operation reports were developed without benefit of a working water meter.

Security

Consider fencing around the wells. See section on treatment building about vandalism.

Violations

The following violations of the state sanitary code have been recorded with the New York State Department of Health:

5-1.42: Failure to monitor. Violation date January 1, 2009.

5-1.51: Failure to monitor (Tables 9A,9B,12). Violation date January 1, 2009.

5-1.71b: Failure to operate in accordance with approved plans. Broken equipment (well in building). Violation date January 1, 2009. Storage tank; October, 2010.

5-1.72: Annual water quality report. Violation dates June 1, 2009 and 2010. Operation reports, 2010.

Violations must be reported in your 2010 annual water quality report.

Action

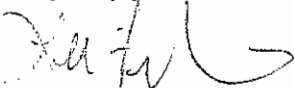
You must submit a report on how and when you intend to rectify the above noted violations and deficiencies.* The report is due December 3, 2010.

The items with asterisks represent items from the previous inspection report which were not addressed or corrected.

Your cooperation in complying with the New York State Sanitary Code is appreciated. Failure to comply will lead to administrative action, including fines. At this time, your supply is being referred for formal action.

If you have any questions, please call me at (845) 486-3404.

Very truly yours,



Lee M. Felshin, P.E.
Senior Public Health Engineer
Environmental Health Services

LMF:lc

cc: John DeCicco
File

1302764 MK

SDWIS/State Water Sample Schedule Report

HOPEWELL SERVICES INC PWS ID: NY1302764

Due 2012	Contaminant (Group)/ Sample Location/Frequency	Last Compliance Results	Sample Requirements
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Coliform, Total (TCR)

<input checked="" type="checkbox"/>	Location: Distribution System Frequency: 1 Sample Monthly		1 Sample must be collected every month.
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Asbestos

<input checked="" type="checkbox"/>	Location: DISTRIBUTION SYSTEM ID: DS199 Frequency: 1 Sample Every 9 years Sample Point: DISTRIBUTION SAMPLE Sample Point No.: DIST Sample Point Type: DS-Distribution System		Sample must be collected by 12/31/2012
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Note: This PWS has submitted an Asbestos sample dated 12/5/2010 which is invalid due to the entry point location of the sample; a distribution sample is required for compliance and is due to this Department by 12/31/2012.

If a system is vulnerable to asbestos contamination due to corrosion of asbestos cement pipe it shall take one sample at a tap served by asbestos cement pipe where contamination is most like to occur.

Chloride

<input checked="" type="checkbox"/>	Location: TREATMENT PLANT ID: TP199 Frequency: 1 Sample Yearly Sample Point: ENTRY POINT Sample Point No.: EP Sample Point Type: EP-Entry Point	Samples last collected: 8/23/2011	Sample must be collected by 12/31/2012
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Part 5-1.42 - Lead and Copper

<input checked="" type="checkbox"/>	Location: DISTRIBUTION SYSTEM ID: DS199 Frequency: 10 Samples Every 6 months Sample Point: DISTRIBUTION SAMPLE Sample Point No.: DIST Sample Point Type: DS-Distribution System	7 Samples Collected on or Before: 12/1/2011	10 Samples must be collected by 6/30/2012
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Violation: This public water supply is in violation for failure to monitor for Lead and Copper in the 1st six-month period of 2011 as required by letter dated 9/20/2010.

Once two consecutive six-month sampling events are completed at the proper number of sites and the 90th percentile is under the action level every time, the PWS may be eligible for further reduced monitoring to once a year.

The last sampling event of 9/8/2011-12/1/2011 may represent the 1st of the 2 consecutive sampling events. The 2nd six-month sampling event of 10 samples is due by 6/30/2012.

Part 5-1.52 Table 12 - Radiological

<input checked="" type="checkbox"/>	Location: TREATMENT PLANT ID: TP199 Frequency: 1 Sample Quarterly Sample Point: ENTRY POINT Sample Point No.: EP Sample Point Type: EP-Entry Point	12/5/2010	1 Sample must be collected each calendar quarter.
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SDWIS/State Water Sample Schedule Report

HOPEWELL SERVICES INC PWS ID: NY1302764

Due Contaminant (Group)/ 2012 Sample Location/Frequency	Last Compliance Results	Sample Requirements
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Violation: This PWS is in violation for failure to complete the initial monitoring for the Radionuclide Rule which required four-consecutive quarterly samples to be completed by 12/31/2007; this quarterly requirement was reiterated in the inspection letter dated 9/21/2010. This requirement has still not yet been met.

Please note that quarterly compositing is allowed. All compositing must be done in the lab. It must be for all of the four quarters collected within one year's time.

Each Radiological sample must be taken from the entry point to the distribution system and shall be analyzed for Gross Alpha, combined Radium 226 and Radium 228, and Uranium.

Part 5-1.52 Table 9B - Principal Organic Chemicals

<input checked="" type="checkbox"/> Location: WELL #1 ID: W001 Frequency: 1 Sample Yearly Sample Point: RAW WELL 1 Sample Point No.: RAW Sample Point Type: RW-Raw Water Source	Samples last collected: 9/21/2000	Sample must be collected by 12/31/2012
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Principal Organic Contaminant samples are required to be taken at a location which is representative of the individual well before mixing with other sources. Samples not obtained from the correct sampling points cannot be used for compliance and a monitoring violation will apply.

<input checked="" type="checkbox"/> Location: WELL #2 ID: W002 Frequency: 1 Sample Yearly Sample Point: RAW WELL 2 Sample Point No.: RAW Sample Point Type: RW-Raw Water Source	Samples last collected: 9/21/2000	Sample must be collected by 12/31/2012
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Principal Organic Contaminant samples are required to be taken at a location which is representative of the individual well before mixing with other sources. Samples not obtained from the correct sampling points cannot be used for compliance and a monitoring violation will apply.

Part 5-1.52 Table 9C - Synthetic Organic Chemicals

<input checked="" type="checkbox"/> Location: TREATMENT PLANT ID: TP199 Frequency: 1 Sample Every 3 years Sample Point: ENTRY POINT Sample Point No.: EP Sample Point Type: EP-Entry Point	Samples last collected: 12/2/1998	Sample must be collected by 12/31/2012
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Enclosed is the "Sampling Requirement or Treatment Technique Waiver Request Form" that may be completed to apply for a waiver from SOC sampling requirements. Either the completed waiver request or a sample from the entry point is required by 12/31/2012.

Sodium

<input checked="" type="checkbox"/> Location: TREATMENT PLANT ID: TP199 Frequency: 1 Sample Yearly Sample Point: ENTRY POINT Sample Point No.: EP Sample Point Type: EP-Entry Point	Samples last collected: 8/23/2011	Sample must be collected by 12/31/2012
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Nitrate

<input type="checkbox"/> Location: TREATMENT PLANT ID: TP199 Frequency: 1 Sample Yearly	Last Sample Collected on or Before: 1/4/2012	Next sample must be collected between 1/1/2013 and 12/31/2013
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SDWIS/State Water Sample Schedule Report
HOPEWELL SERVICES INC PWS ID: NY1302764

Due Contaminant (Group)/
2012 Sample Location/Frequency

Last Compliance Results

Sample Requirements

Sample Point: ENTRY POINT
Sample Point No.: EP
Sample Point Type: EP-Entry Point

Part 5-1.52 Table 8B - Primary Inorganic Chemicals

Location: TREATMENT PLANT ID: TP199	Samples last collected: 8/23/2011	Next sample must be collected by 12/31/2014
Frequency: 1 Sample Every 3 years		
Sample Point: ENTRY POINT		
Sample Point No.: EP		
Sample Point Type: EP-Entry Point		

Part 5-1.52 Table 9A - Disinfection Byproducts

Location: DISTRIBUTION SYSTEM ID: DS199	Samples last collected: 8/7/2011	Next sample must be collected by 12/31/2014
Frequency: 1 Sample Every 3 years		
Sample Point: DISTRIBUTION DBP MAX		
Sample Point No.: DBP MAX		
Sample Point Type: MR-Maximum Residence Time		

Stage 1 Disinfection By-Products: A sample must be obtained from a sampling point reflecting the maximum residence time in the distribution system during the warmest month of the year. Samples taken in July, August, or September will be accepted for compliance.

13-2764

New York State Department of Health
Annual Water Quality Report Certification Form

Community Water System Name: Worley Homes (Hopewell Service)
Community Water System Address: 894 Route 376, Wappingers Falls, NY 12590
PWS ID #: 1302764

The community water system named above hereby confirms that its Annual Water Quality Report has been distributed to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the health department.

Certified by: Name: Michael Gillespie
Title: Owner
Phone #: (845) 227-6227 Date: 9/9/11

Please indicate how your report was distributed to your customers:

- Annual Water Quality Report was distributed to bill-paying customers by mail.
- Annual Water Quality Report was distributed to bill-paying customers by direct delivery (please specify the direct delivery method used).
 - Hand delivered.
 - Published in local paper (i.e., *Penny Saver*) that was directly delivered or mailed to all bill-paying customers.
 - Published in local municipal newsletter that was directly delivered or mailed.
 - Other (please specify) _____

POSTED SDWIS
SEP 12 2011
BY: ~

System does not have bill-paying customers.

For systems serving at least 100,000 persons, in addition to distributing your report using the methods described above, your Annual Water Quality Report must also be posted on the Internet.

Annual Water Quality Report is posted on the Internet at www._____

Please indicate what "Good Faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the New York State Department of Health.

- Posting the Annual Water Quality Report on the Internet at www._____
- Mailing the Annual Water Quality Report to postal patrons within the service area.
- Advertising the availability of the Annual Water Quality Report in the news media.
- Publication of the Annual Water Quality Report in a local newspaper.
- Posting the Annual Water Quality Report in public places (attach a list of locations).
- Delivery of multiple copies to single-bill addresses serving several persons such as: apartments, businesses, and large private employers.
- Delivery to community organizations.

Water system includes single family residential homes of which all are bill paying customers.

Annual Drinking Water Quality Report for 2010

Hopewell Services Water Corp. (Worley Homes) Water Supply

Town of East Fishkill, Dutchess County, New York
(Public Water Supply ID# NY1302764)

INTRODUCTION

To comply with State regulations, the Hopewell Services Water Corp. is required to issue an annual report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerns regarding your drinking water, please contact Dutchess Environmental Control Inc. at (845) 227-4387. We want you to be informed about your drinking water. If you want to learn more, please call our office.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 140 homes (or approximately 523 people). Our water source comes from two (2) groundwater wells located with the Worley Homes Development between Fox Road and Tiger Road. The water is chlorinated at the pump house and enters directly into the distribution system. A storage tank located at the end of Crest Court 'floats' on the system and provides for water when the wells are not capable of keeping up with demand during peak periods (morning and dinner typically).

In 2005, one (1) of the production wells continually dropped in yield by which a new well was required to be installed. This well was drilled and tested accordingly. The yield on this well was determined as 50 gallons per minute.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.

AWQR

Received	_____	date	_____
Accepted	_____	_____	2/2/11
Certification	_____	_____	2/8/11
Unacceptable	_____	_____	_____

- review

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Dutchess County Health Department at 845-486-3404.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During the year 2010, minor violations occurred of the State Sanitary Code including the filing of a late-incomplete 2009 annual water supply statement, a missing 2009 certification and late 2010 annual water supply statement. These violations have since been rectified.

Over the past five (5) years your water system was tested for a number of parameters (in addition to monthly bacteriological sampling) of which the following were detected:

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Nitrate	No	1/04/10	0.37	mg/l	10	10	Sewage Disposal Systems
Na (Sodium)	No	4/13/10	92000	ug/l	NDL	NDL	naturally occurring deposits
Cl (Chloride)	No	4/13/10	150	mfl	250	250	reaction of chlorine and metal
Cu (Copper)	No	12/5/10	0.102	mg/l	0	AL-1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Pb (Lead)	No	12/5/10	0.002	mg/l	0	AL-15	Corrosion of household plumbing systems; Erosion of natural deposits
As (Arsenic)	No	12/5/10	3.9	ug/l	10	10	naturally occurring deposits
Ba (Barium)	No	12/5/10	91.1	ug/l	2000	2000	naturally occurring
Cr (Chromium)	No	12/5/10	5.2	ug/l	1.0	1.0	naturally occurring
Ni (Nickel)	No	12/5/10	2.6	ug/l	50	50	naturally occurring
Se (Selenium)	No	12/5/10	2.2	ug/l	50	50	naturally occurring
Uranium	No	12/5/10	2.2	pCi/L	0	30	Erosion of Natural Deposits
Gross Alpha	No	12/5/10	4.5	pCi/L	0	15	Erosion of Natural Deposits
Mn (Manganese)	No	5/12/08	120	ug/l	300	300	naturally occurring deposits
Sulfate	No	5/12/08	51	mg/l	250	250	naturally occurring

Many other parameters were tested for which provided values so low they were listed as undetectable.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Nephelometric Turbidity Unit (NTU): A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Picograms per liter (pg/l): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Millirems per year (mrem/yr): A measure of radiation absorbed by the body.

Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

No designated Limits (NDL): There is no maximum limit.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2010, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded, so get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up can you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

!!!! It is worthy to note that water usage increases significantly in the summer months. Typically usage in the summer doubles as compared to winter. This is due to activities including car washing, filling & 'topping off' pools and sprinkler systems. The water system was not designed to accommodate this additional usage. We ask that during the summer months you consider your water usage as excessive use can effect pressure and create outages. Having water for the necessities is more important then having a green lawn. Please considerate of your neighbor.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

APPENDIX B

ALL those certain parcels of land situated in the Town of East Fishkill, County of Dutchess, State of New York and more particularly described as follows:

As per the Dutchess County Tax Rolls (Revised 2017), the parcels in the Town of East Fishkill listed on the page below:

6357-01-450505	6357-03-441485	6357-03-476483	6357-04-509364	6357-04-543437
6357-01-463515	6357-03-443475	6357-03-477456	6357-04-514462	6357-04-544333
6357-01-471520	6357-03-443498	6357-03-478360	6357-04-514493	6357-04-544428
6357-01-477525	6357-03-444467	6357-03-479389	6357-04-515337	6357-04-547419
6357-01-478504	6357-03-446458	6357-03-479442	6357-04-516330	6357-04-549411
6357-01-483510	6357-03-448449	6357-03-480411	6357-04-516470	6357-04-551403
6357-01-485529	6357-03-450440	6357-03-481434	6357-04-519478	6357-04-552312
6357-01-491534	6357-03-452432	6357-03-482351	6357-04-520308	6357-04-552395
6357-01-493517	6357-03-453423	6357-03-483427	6357-04-521380	6357-04-553332
6357-01-497510	6357-03-455415	6357-03-484381	6357-04-522487	6357-04-553386
6357-01-497539	6357-03-456406	6357-03-487344	6357-04-522497	6357-04-554379
6357-02-503503	6357-03-458399	6357-03-488375	6357-04-524371	6357-04-555371
6357-02-504542	6357-03-459391	6357-03-488401	6357-04-525353	6357-04-556362
6357-02-510527	6357-03-459480	6357-03-488411	6357-04-525363	6357-04-557355
6357-02-511547	6357-03-461368	6357-03-491393	6357-04-528336	6357-04-558346
6357-02-514521	6357-03-461383	6357-03-492498	6357-04-532352	6357-04-562331
6357-02-518513	6357-03-462467	6357-03-494368	6357-04-536369	6357-04-591430
6357-02-518551	6357-03-463458	6357-03-495340	6357-04-536376	6357-04-600400
6357-02-520532	6357-03-465493	6357-03-495386	6357-04-536385	6357-04-601318
6357-02-524555	6357-03-466450	6357-03-497465	6357-04-538362	6357-04-601340
6357-02-527521	6357-03-467441	6357-03-498332	6357-04-540455	6357-04-602420
6357-02-528537	6357-03-469432	6357-03-498360	6357-04-540464	6357-04-603361
6357-02-531560	6357-03-470369	6357-03-498473	6357-04-540472	6357-04-604385
6357-02-535542	6357-03-470425	6357-04-501315	6357-04-541351	6357-04-623342
6357-02-538508	6357-03-472407	6357-04-501480	6357-04-541446	6357-04-623421
6357-02-538526	6357-03-473498	6357-04-502380	6357-04-541488	6357-04-629363
6357-04-591430	6357-03-475398	6357-04-505372		6357-04-510428
	6357-03-475471	6357-04-506488		6357-04-634380
		6357-04-508354		6357-04-637396

6357-04-518321 v 6357-04-641412 v

And the portions of Elk Road, Fox Road, Tiger Road, Deer Run, Oxen Lane, Cow Path, Beaver Lane, and Crest Court abutting said parcels.

APPENDIX C

Capital Cost Estimate
Hopewell West Water District
Revised January 2019

<u>Item Description</u>	<u>Units</u>	<u>Unit Cost</u>	<u>Quantity</u>	<u>Estimated Cost</u>
10" Water Connection - Route 376 (Fair Share Contribution)	L.S.	\$ 505,750	1	\$ 505,750
8" Transmission Connection - Brettview to Hopewell West	LF	\$ 140	500	\$ 70,000
Master Meter Vault	Each	\$ 60,000	1	\$ 60,000
Individual Meters & Connections	Each	\$ 1,000	137	\$ 137,000
Seal Wells, Disconnect and Abandon Bldg/Storage Facil.	Each	\$ 30,000	2	\$ 60,000
8" Water Distribution Main Replacement	LF	\$ 250	700	\$ 175,000
Subtotal Estimate Construction Costs				\$ 1,007,750
Construction Contingencies				\$ 50,388
Total District Construction Costs				\$ 1,058,138
Legal, Admin, Engr., Fiscal				\$ 137,558
Water System Purchase				\$ 100,000
Map, Plan and Report				\$ 15,000
Total Estimated District Capital Costs:				\$ 1,310,695
SAY:				\$ 1,311,000

Table C-2

LEVEL DEBT PAYMENT METHOD

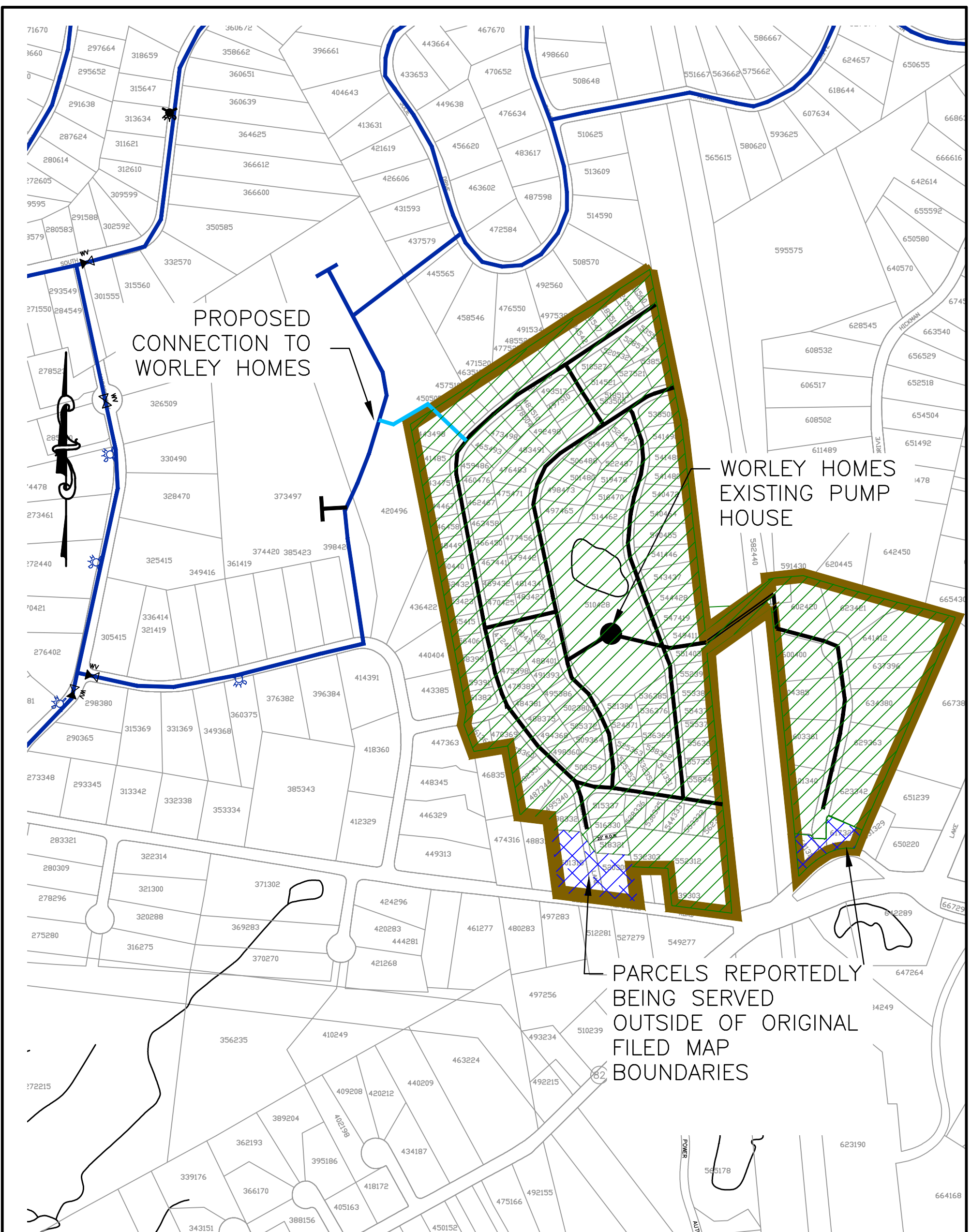
JOB TITLE: Tall Trees Water to UWWD
 JOB NUMBER: W21215.2

DATE: 1/25/2019
 BOND TERM: 30
 PRINCIPAL: \$1,311,000
 INTEREST: 2.25%

<u>YEAR</u>	<u>PRINCIPAL</u>	<u>INTEREST</u>	<u>TOTAL</u>	<u>REMAINING</u>
1	\$31,070	\$29,498	\$60,567	\$1,279,930
2	\$31,769	\$28,798	\$60,567	\$1,248,161
3	\$32,484	\$28,084	\$60,567	\$1,215,678
4	\$33,215	\$27,353	\$60,567	\$1,182,463
5	\$33,962	\$26,605	\$60,567	\$1,148,501
6	\$34,726	\$25,841	\$60,567	\$1,113,775
7	\$35,507	\$25,060	\$60,567	\$1,078,268
8	\$36,306	\$24,261	\$60,567	\$1,041,961
9	\$37,123	\$23,444	\$60,567	\$1,004,838
10	\$37,958	\$22,609	\$60,567	\$966,880
11	\$38,813	\$21,755	\$60,567	\$928,067
12	\$39,686	\$20,882	\$60,567	\$888,381
13	\$40,579	\$19,989	\$60,567	\$847,802
14	\$41,492	\$19,076	\$60,567	\$806,311
15	\$42,425	\$18,142	\$60,567	\$763,885
16	\$43,380	\$17,187	\$60,567	\$720,505
17	\$44,356	\$16,211	\$60,567	\$676,149
18	\$45,354	\$15,213	\$60,567	\$630,795
19	\$46,374	\$14,193	\$60,567	\$584,421
20	\$47,418	\$13,149	\$60,567	\$537,003
21	\$48,485	\$12,083	\$60,567	\$488,518
22	\$49,576	\$10,992	\$60,567	\$438,943
23	\$50,691	\$9,876	\$60,567	\$388,252
24	\$51,832	\$8,736	\$60,567	\$336,420
25	\$52,998	\$7,569	\$60,567	\$283,422
26	\$54,190	\$6,377	\$60,567	\$229,232
27	\$55,410	\$5,158	\$60,567	\$173,822
28	\$56,656	\$3,911	\$60,567	\$117,166
29	\$57,931	\$2,636	\$60,567	\$59,235
30	\$59,235	\$1,333	\$60,567	\$0
<u>TOTAL</u>	<u>\$1,311,000</u>	<u>\$506,020</u>	<u>\$1,817,020</u>	

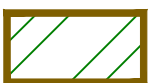


JOB SUMMARY

AVERAGE END OF YEAR PAYMENT= \$60,567
NUMBER OF ASSESSED BENEFIT UNITS: 141.6
AVERAGE ANNUAL PAYMENT PER BENEFIT UNIT= \$427.74



NOTE:
EXISTING FACILITY LOCATIONS ARE BASED UPON
FILED MAP NO. 2771, 2810, & 4464

LEGEND

-  WATER DISTRICT BOUNDARY
-  EXISTING WORLEY HOMES WATER MAIN
-  EXISTING WATER MAIN

MORRIS ASSOCIATES,
ENGINEERING CONSULTANTS, PLLC
9 Elks Lane, Poughkeepsie, New York 12601
Phone No. (845) 454-3411 Fax No. (845) 473-1962
64 Green Street, Hudson, New York 12534
Phone No. (518) 828-2300 Fax No. (518) 828-3963

DATE	SCALE	DESIGNED BY: JFL	FILE No.
7/12/2018	1"=400'	DRAWN BY: SRH	13110.537
		CHECKED BY: JFL	

1	REVISED BOUNDARY	7/12/2018	
REV. No.	DESCRIPTION	DATE	BY
HOPEWELL WEST (AKA WORLEY HOMES) WATER DISTRICT			
TOWN OF EAST FISHKILL		DUTCHESS COUNTY, NY	
DISTRICT MAP			
			DWG 1-1