

**TOWN OF CARMEL
60 McALPIN AVENUE
MAHOPAC, NEW YORK 10541**

**CARMEL WATER DISTRICT NO. 2
ENGINEERING REPORT**

PUTNAM COUNTY, NEW YORK



DECEMBER 2017

TABLE OF CONTENTS

	PAGE
1.0 <u>BACKGROUND</u>	3
2.0 <u>PROJECT DESCRIPTION</u>	5
3.0 <u>RECOMMENDED ALTERNATIVE AND ANNUAL COSTS</u>	6

List of Tables

Table 1.1	Pre and Post Flushing Sample Results
Table-2.1	Description of Proposed Distribution System Upgrades
Table-3.1	Estimated Capital Project Costs
Table-3.2	Financing Options

List of Figures

Figure-1	Carmel Water District No. 2 District Limits
Figure-2	Typical Segment of Tuberculated Main
Figure-3	Carmel Water District No. 2 Areas of Historic and Consistent Complaints
Figure-4	Carmel Water District No. 2 Mains Being Considered for Upgrade

Appendices

Appendix-A	Town Board Resolution
Appendix-A.1	Formation of Carmel Water District No. 2, December 31, 1935
Appendix-A.2	Extension of Carmel Water District No. 2, December 29, 1998
Appendix-B	Sampling Results
Appendix-B.1	Pre-Flushing Sample Results
Appendix-B.2	Post-Flushing Sample Results

1.0 BACKGROUND

1.1 District Formation, Supply and Treatment

The Town of Carmel (Town) Water District Number 2 (“the District”) was formed by resolution of the Town Board on December 31, 1935, and was extended by resolution of the Town Board on December 29, 1998. Please refer to Appendices-A.1 and A.2 for copies of resolutions. See Figure-1 for District Limits. The sole source of supply for the District is Lake Gleneida, located at the intersection of New York State (NYS) Routes 6 and 52 in the Hamlet of Carmel. As Lake Gleneida is a surface water supply, raw water must be treated prior to distribution for consumption in order to comply with the 1986 Amendments to the Safe Drinking Water Act. An eight (8) inch diameter raw water intake transfers water from the lake via a pump station in the area of the intersection, under NYS Route 52, thence to the treatment plant located approximately 1,000 feet to the east along NYS Route 6. The plant, based on engineering records, was constructed in 1976 and is permitted to treat and distribute up to 1.0 Million Gallons per Day (1.0 MGD). It is a direct filter facility consisting of three (3) Diatomaceous Earth (DE) filters that discharge to a 95,000 gallon clearwell. From the clearwell, water is pumped to three (3) storage tanks for final distribution to the consumer.

1.2 Description of the Existing System

The District provides service to residential, commercial, institutional and government facilities within its limits. The distribution system consists of nearly 52 miles of water main and approximately 1,770 service connections. Within that 52 miles of water main the system demonstrates a wide variety of pipe materials, including: asbestos-cement (ACP); unlined cast iron (CI); unlined and lined ductile iron (DI); and poly-vinyl chloride (PVC). Much of this variety is based on eight decades of development by multiple developers. Many of these installed what was the most economically viable material at the time then dedicated the system to the Town.

Each type of pipe material exhibits similar hydraulic characteristics at the time of installation, yet each ages differently. ACP, lined DI and PVC all resist chemical reaction with minerals contained in the water being conveyed through the system. On the other hand, unlined CI & unlined DI both react with minerals in the water. This reaction typically takes the form of metallic salt growth on the interior wall of the water main, commonly referred to as tuberculation. See Figure 2 for typical segment of tuberculated main. Because the tuberculation occurs in the main downstream of treatment, it can lead to delivery of discolored water to the consumer despite high quality finished water being provided by the treatment facility. This is the case in certain segments of the District.

Since the summer of 2016 the Town has received consistent complaints from District residents regarding discolored water. More specifically, the complaints originate in the area of Gleneida Ridge Road, Glenvue Drive, Glenvue Drive North, and Ridge Court (The Gleneida Ridge area). Historically complaints have also been received from Sunset Ridge, Collier Drive, Collier Drive East, and Collier Drive West (the Collier Drive area), from the Lakeview/ Avery Road area and from the Lindy/Tower Road area. See Figure 3. The piping in question is predominantly 6-inch unlined iron. Historically these complaints have been relieved through aggressive flushing of the mains in the affected areas. However, in 2017 the effectiveness of such measures was proven significantly more short lived than in previous years.

In August 2017 the Town Engineer requested that the Town Board authorize the department to seek bids for rehabilitating the existing mains in order to improve water quality. Nearly simultaneously with this approval additional complaints were received. The Town, in conjunction with the County Health Department, embarked upon a sampling protocol that collected tap water samples from residents both before and after a very aggressive flushing routine. The NYS DOH standard for iron in drinking water is 0.30 mg/l. Pre and post flushing sample results are provided in Table 1.1. Full laboratory results are provided in Appendix B.1 and B.2. The results clearly indicate the need to address the issue in a timely fashion.

With Board approval in October, the Town Consulting Engineer undertook a program of examination of the water mains to determine their fitness to undergo a reaming and lining rehabilitation program. It was anticipated that periodic flushing of the mains would be sufficient to ensure continued delivery of potable water until such time as the lining project could be designed, bid and executed. The program consisted of excavating the existing main and removing a six foot long coupon from the main. Each coupon was segmented into 6 inch sections. The pipe wall on each end of the segment was evaluated for thickness in comparison with standard manufacturing specifications and for deterioration resulting from the metallic salt reaction. Coupon removal was completed at Gleneida Ridge Road, Tower Road and West Collier Drive; an additional coupon was photographically documented from a 2016 repair in Route 301 near the Glenview Road intersection. The pipe wall for each coupon passed the evaluation. However, based on the amount of sediment and tuberculation exhibited in the coupon from the Gleneida Ridge area it is not possible to guarantee continued delivery of potable water without high iron content there until the lining project can be executed.

TABLE 1-1 Pre and Post Flushing Sample Results			
SAMPLING POINT	Iron September 8	Iron September 11	Iron September 15
21 Glenview	0.817		0.265
27 Glenview	0.378	0.479	
63 Glenview	0.207	0.148	
63 Gleneida Ridge	0.250	0.309	
161 Gleneida Ridge	0.036	0.029	
10 Ridge Court	0.143	0.151	
CWD No. 2 Finished Water	0.029	0.043	

2.0 PROJECT DESCRIPTION

The streets, along with their associated pipe runs under consideration for upgrade, are as follows:

TABLE 2-1 Description of Proposed Distribution System Upgrades	
STREET	APPROXIMATE LENGTH OF PIPE
Gleneida Ridge Road	4,950 LF
Glenvue Drive	2,700 LF
Glenvue Drive North	450 LF
Ridge Court	495 LF
NYS Route 301	4000 LF
Total Pipe Footage	12,600 LF

Refer to Figure 4.

2.1 Alternatives

There are three potential alternatives to the project as described: No Action; Continue with Lining; and Full Water Main Replacement.

ALTERNATIVE 1: No action taken.

ALTERNATIVE 2: Continue with lining as originally intended, but on an expedited basis.

ALTERNATIVE 3: Consider full water main replacement on an expedited basis.

2.2 Alternative Analysis

ALTERNATIVE 1 is clearly the least expensive alternative. However, given the combination of consumer complaints and laboratory results, the No Action alternative is judged unresponsive.

ALTERNATIVE 2 directly addresses the concerns of the District residents as well as the laboratory results. However, a reaming and lining program requires the installation of a temporary water supply; such a system is typically installed at grade. At-grade temporary supplies are subject to prevailing weather. Given the season such a system will be subject to both freezing and the action of snow plows for at least one half of the project duration. This Alternative is therefore not recommended as responsive or realistic.

ALTERNATIVE 3 directly addresses the concerns of the District residents as well as the laboratory results.

Table 3.1, below, identifies estimated construction scope and costs for comparison. Unit prices shown are based on actual costs bid for similar work in Putnam and Westchester Counties within the past twenty four (24) months.

3.0 **RECOMMENDED ALTERNATIVE AND ANNUAL COSTS**

3.1 Recommendation

Based on the analysis above, Alternative 3 is the Recommended Alternative.

3.2 Estimated Costs

Preliminary construction costs are estimated as follows:

TABLE 3-1 Estimated Capital Project Costs			
ITEM	UNIT QUANTITY	ESTIMATED UNIT COST	ESTIMATED COST
6" Water Main	12,600 LF	\$110.00	\$1,386,000.00
Rock Excavation	500 CY	\$ 75.00	\$ 37,500.00
House Connections	120	\$1,100.00	\$ 132,000.00
Maintenance and Protection of Traffic		Lump Sum	\$ 75,000.00
Subtotal			\$1,630,550.00
Contingency @ 20%			\$326,100.00
Estimated Total Construction Cost			\$1,956,600.00
Design/Build Engineering @ 9%			\$ 175,000.00
Permitting: DOH/ NYSDOT @ 3 %			\$ 58,700.00
Bonds/ Legal/Admin @ 3.5%			\$ 68,500.00
Total Estimated Cost			\$2,258,800.00

3.3 Annual Costs

The Town Comptroller has provided debt service costs for the recommended alternative, with 15 year, 20 year and 30 year financing options. These are identified in Table 3-2.

TABLE 3-2
Carmel Water District No. 2 Financing Options

Fund	15 Years	20 Years	30 Years
Total Cost of Capital Project	\$2,300,000.00	\$2,300,000.00	\$2,300,000.00
Total Debt Service Cost	\$2,826,291.00	\$3,062,681.00	\$3,571,428.00
Principal	\$2,300,000.00	\$2,300,000.00	\$2,300,000.00
Interest	\$526,291.00	\$762,681.00	\$1,271,428.00
Estimated Annual Debt Service Cost (15/20/30 Year Bond)	\$188,419.00	\$153,134.00	\$119,048.00
Number of Parcels	2,123	2,123	2,123
Total District Assessed Value	\$807,372,662.00	\$807,372,662.00	\$807,372,662.00
Average Assessed Value	\$380,298.00	\$380,298.00	\$380,298.00
Rate per thousand	0.00023	0.00019	0.00015
Estimated Annual Debt Service Per Taxpayer	\$88.75	\$72.13	\$56.08
<i>Formula used</i>			
Total Assessed Value / # of parcels = Average Assessed Value			
Est. Annual Debt /Total Assessed Value = Rate per thousand			
Rate per thousand x Average Assessed Value = Est annual debt per tax payer			

FIGURES

FIGURE-1

Carmel Water District No. 2 District Limits

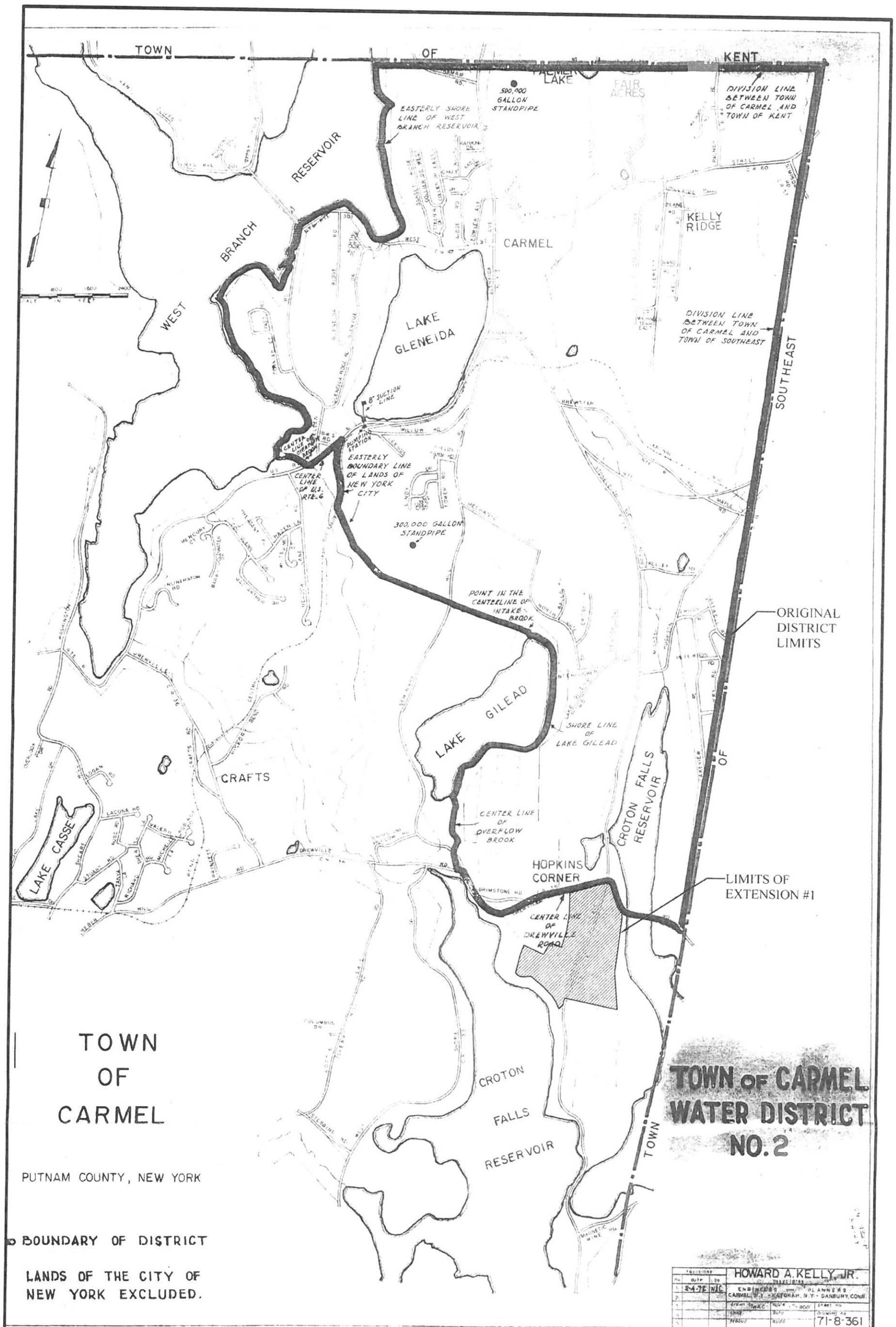


FIGURE-2

Typical Segment of Tuberculated Main



J
R
F
A

J. ROBERT FOLCHETTI &
ASSOCIATES, P.E., L.S.

CIVIL / ENVIRONMENTAL ENGINEERS
www.jrfa.com
31 SODOM ROAD
BREWSTER, NY 10809
845-363-1560

TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK
CARMEL WATER DISTRICT No. 2

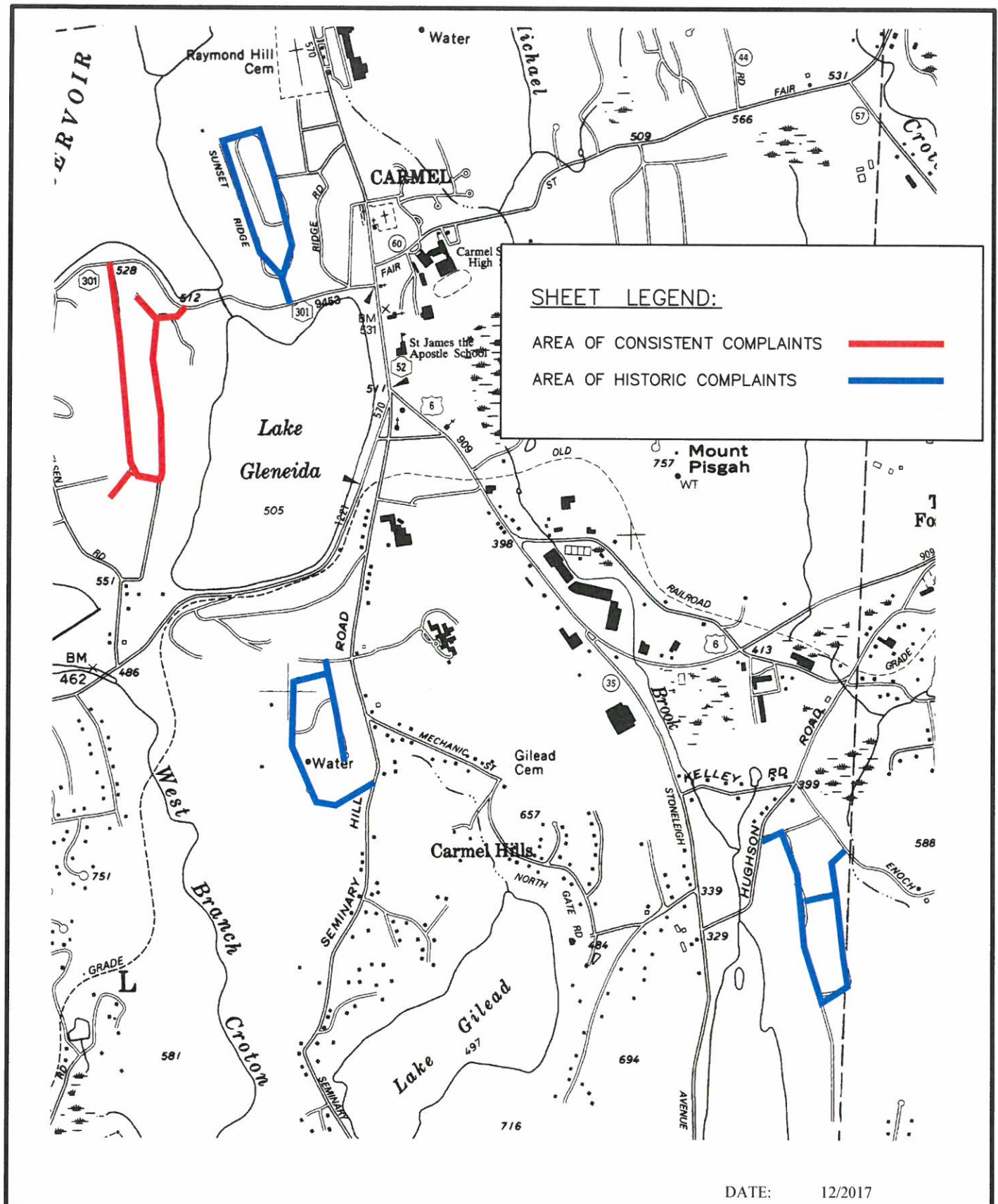
DATE: 12/2017

SCALE: N.T.S.

DWG. NO. Fig. 2

FIGURE-3

Carmel Water District No. 2 Areas of Historic and Consistent Complaints



J
R
F
A

J. ROBERT FOLCHETTI &
ASSOCIATES, P.E., L.S.

CIVIL / ENVIRONMENTAL ENGINEERS
www.jrfa.com
31 SODOM ROAD
BREWSTER, NY 10509
(845) 363-1560

TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK
CARMEL WATER DISTRICT No. 2

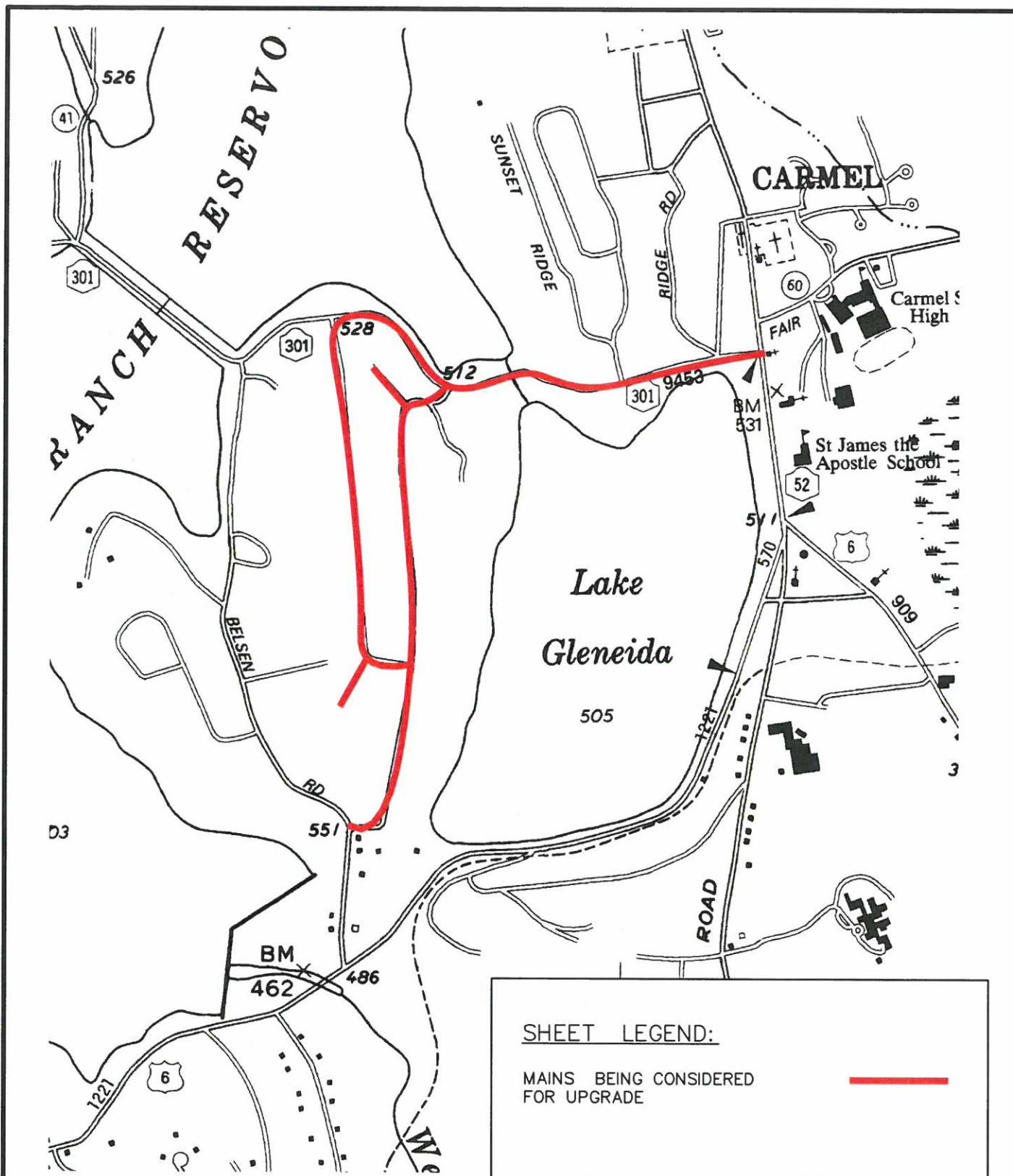
FIGURE: Fig. 3

SCALE: N.T.S.

DWG. NO.

FIGURE-4

Carmel Water District No. 2 Mains Being Considered for Upgrade



DATE: 12/2017

J
R
F
A

J. ROBERT FOLCHETTI &
ASSOCIATES, P.E., L.S.
CIVIL / ENVIRONMENTAL ENGINEERS
www.jrfa.com
31 SODOM ROAD
BREWSTER, NY 10809
845-363-1560

TOWN OF CARMEL
PUTNAM COUNTY, NEW YORK
CARMEL WATER DISTRICT No. 2

FIGURE: Fig. 4

SCALE: N.T.S.

DWG. NO.

APPENDICES

APPENDIX A

Town Board Resolutions Forming and Extending

Carmel Water District #2

APPENDIX A.1

Town of Carmel Town Board
Resolution Forming Carmel Water District No. 2

Dec 31 1935

Meeting of the Town Board held in the Town Hall, Mahopac, N.Y.

Meeting was called to order by the Supervisor.

The following members were present: J. H. Smith, Joseph C. Kanong, William A. Mead, Clayton C. Mason, Orson H. Lyon, Harry M. Baneth.

The reading of the minutes of the previous meeting were omitted.

Supervisor Smith explained that the purpose of the meeting was to put the people a choice, to voice their sentiments either in favor or against the establishment of the Carmel Water District.

The Supervisor asked Attorney Cloer to file the necessary petition, consent of Rose Oakina, affidavit of the Supervisor, plan of posting notice of hearing, plan of marking notices to all Public Utility Corporations, promulgation of notice of hearing.

Upon action which was carried all papers were accepted and filed with the Town Clerk.

Attorney Cloer explained in detail the legal end of the proposed district.

Engineer Smith explained in detail the engineering factors, also matters of finance, health and fire protection in regard to the proposed district.

Supervisor Smith asked those who wished to oppose the formation of the district to state their views first.

Supervisor Smith asked those who were in favor of the district to state their views.

Supervisor Smith called for a standing vote, those opposed to stand first and those in favor to stand last.

The result was a unanimous vote in favor of the district.

Letter received from the N.Y.C. Railroad Co. in protest against the proposed water district

over.

10-
Certification of assessment within and outside
of the proposed water district received from the Board
of Assessors.

Mr. Kemp asked that the district be extended
to cover his property and also that of Mr.
Harrbach.

The Determination and order was received
and upon resolution which was carried it was
approved and ordered filed with the Town Clerk.

Upon resolution which was carried J. Wilbur
Irish and Bradford Kloss were appointed
to take care of the engineering and legal matters
pertaining to the water district.

Upon motion which was carried the Town
Board voted to establish the water district as
soon as possible.

Resolution advertising for bids was passed
by the Town Board.

Resolution accepting Government offer of aid
was also passed by the Board.

Upon motion, the meeting adjourned

Harry M. Bennett, Clerk.

EXTRACTS FROM THE MINUTES OF A (REGULAR) (SPECIAL) MEETING OF THE Town Board
of Town of Carmel HELD ON THE 31st DAY OF December, 1935

A special meeting of the Town Board of the Town of Carmel held pursuant to the preceding call of the Town Board, was held on the 31st day of December, 1935.

A regular meeting of the Town Board of Town of Carmel was held on the 31st day of December, 1935.

Fred H. Smith, Supervisor of Town of Carmel and
 The meeting was called to order by the Chairman of the Town Board of Town of Carmel and on roll call the following answered present: Oswald H. Lyers, William A. Mead, Clayton C. Wixson, Jonette C. Ganong, Fred H. Smith

The following were absent: None

After discussion of the offer of the United States of America to aid by way of loan and grant in financing the construction of a waterworks system and the purchase of land therefor the following Resolution, numbered Two, and entitled "A Resolution Accepting the Offer of the United States to Aid by Way of Loan and Grant in Financing the Construction of a waterworks system and the purchase of land therefor" was proposed by Oswald H. Lyers, and read in full:

RESOLUTION NO. Two

A RESOLUTION ACCEPTING THE OFFER OF THE UNITED STATES TO THE Town of Carmel TO AID BY WAY OF LOAN AND GRANT IN FINANCING THE CONSTRUCTION OF a waterworks system and the purchase of land therefor.

Be it resolved by the Town Board of Town of Carmel

SECTION 1. That the offer of the United States of America to the Town of Carmel to aid by way of loan and grant in financing the construction of a waterworks system and the purchase of land therefor,

a copy of which offer reads as follows:

[Large handwritten scribble covering the text of the offer]

APPENDIX A.2

Town of Carmel Town Board
Resolution for the Extension of Carmel Water District 2

30 DECEMBER 1998
TOWN BOARD MEETING

Cont.

PART III—DETERMINATION OF SIGNIFICANCE (To be completed by Agency)

INSTRUCTIONS: For each adverse effect identified above, determine whether it is substantial, large, important or otherwise significant. Each effect should be assessed in connection with its (a) setting (i.e. urban or rural); (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude. If necessary, add attachments or reference supporting materials. Ensure that explanations contain sufficient detail to show that all relevant adverse impacts have been identified and adequately addressed.

- ☐ Check this box if you have identified one or more potentially large or significant adverse impacts which MAY occur. Then proceed directly to the FULL EAF and/or prepare a positive declaration.
- ☒ Check this box if you have determined, based on the information and analysis above and any supporting documentation, that the proposed action WILL NOT result in any significant adverse environmental impacts AND provide on attachments as necessary, the reasons supporting this determination:

CARMEL TOWN BOARD <small>Name of Lead Agency</small>	
FRANK J. DELCAMPO <small>Print or Type Name of Responsible Officer in Lead Agency</small>	<i>Frank J. DelCampa</i> <small>Signature of Responsible Officer</small>
<small>Signature of Responsible Officer in Lead Agency</small>	
12/29/98 <small>Date</small>	

2

C.W.D. #2 - APPROVE EXTENSION #1 (STONEBLEIGH AVE., HOSPITAL, VISTA ON LAKE, ETC.)

In the Matter of Extension #1 to Carmel Water District #2
In the Town of Carmel, Putnam County, New York

WHEREAS, the Town Board of the Town of Carmel has previously expressed its intention to expand a water district in said town, known as Carmel Water District #2, pursuant to Article 12-A of the Town Law, and

WHEREAS, the Town Board of the Town of Carmel, Putnam County, New York duly caused a map, plan and report in relation to the expansion of said Water District to be prepared and did cause said map, plan and report to be filed in the Office of the Town Clerk, and

WHEREAS, an order was duly adopted by the Town Board on December 2, 1998, reciting the intention of the Board to expand the district, the improvements proposed, the boundaries of the proposed extension to the district, and the estimated expense thereof, and specifying December 23, 1998 at 7:30 p.m. as the time and the Town Hall, 60 Mc Alpin Avenue, Mahopac, NY in the said Town of Carmel as the place when the said Board would meet to consider the proposed extension to the water district and to hear all persons interested in the subject thereof concerning the same, and

WHEREAS, such order was duly posted and published as required by law, and

WHEREAS, the Water District is to be extended by the addition of fourteen properties; and

WHEREAS, the water main to service said properties currently exists and any properties not currently connected to the system will connect to the existing water distribution system of Carmel Water District #2 at their sole cost and expense; and

WHEREAS, a hearing in the matter was duly held by the Board on the 23rd day of December, 1998 commencing at 7:30 p.m. at the Town Hall, 60 Mc Alpin Avenue, Mahopac, NY in the said Town and discussion upon the matter having been had and all persons desiring to be heard having been duly heard:

NOW THEREFORE, BE IT RESOLVED AND DETERMINED that (a) the Notice of Hearing was published and posted as required by law and is otherwise sufficient; (b) all the property and property owners within the proposed extension to the district are benefitted thereby; (c) all the property and property owners benefitted are included within

30 DECEMBER 1998
TOWN BOARD MEETING

Cont.

the limits of the proposed extension to the district; and (d) it is in the public interest to approve Extension #1 to Carmel Water District #2, with its boundaries as defined on the map duly filed in the Town Clerk's Office; and it is further

RESOLVED AND DETERMINED that the expansion of the water district as proposed be approved; that the improvements therein mentioned be acquired and the service therein mentioned be provided for upon the required funds being made available or provided for; and that such Extension #1 to Carmel Water District #2 shall be bounded and described as follows:

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York, more particularly bounded and described as follows:

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown on a certain map entitled "Survey Map of Vista on the Lake Condominium," dated December 30, 1974, made by Richard H. Gorr, Licensed Surveyor, of Mahopac, New York, and filed in Office of the Clerk of the County of Putnam on March 17, 1975 as map No. 1434 (TM#66-2-1)

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

All that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a the southwesterly corner of what is known as Hopkins Corners; thence southerly along Stoneleigh Avenue to lands formerly of John Peterson; thence westerly along lands formerly of said Peterson to lands of Burton White; thence northerly along lands of said White to the highway leading westerly from Stoneleigh Avenue; thence easterly along the last mentioned highway to the place of the BEGINNING. (TM#66-2-2)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the Easterly side of the Improved county highway known as Stoneleigh Avenue leading from Carmel to Croton Falls, which point is in the intersection of two stone walls, one stone wall running North and South along the Easterly side of said Stoneleigh Avenue and the Northerly side of another stone wall running East and West separating the premises herein described from lands now or formerly of SHAW. Said point being further described as 145.05 feet on a course South-08-07-05W from the Southwesterly corner of Parcel "A" as shown on a map entitled "Subdivision Plat prepared for Merritt L. Ryder" dated December 9, 1961 and filed in the office of the Clerk of Putnam County on May 23, 1969 as Map No. 1144.

THENCE,

Along the Easterly side of Stoneleigh Avenue S-09-58-25W, 415.19'

THENCE,

S-10-14-25W 603.15' continuing along the Easterly side of Stoneleigh Avenue.

THENCE,

S-10-20-15W, 360.56 continuing along the Easterly side of Stoneleigh Avenue.

THENCE,

S-16-56-55W, 551.13 continuing along the Easterly side of Stoneleigh Avenue.

THENCE,

S-17-38-00W 44.16' to a point on the Easterly side of Stoneleigh Avenue.

THENCE, along lands now or formerly RUBIN. S-88-40-20E, 1109.56'

THENCE, along the Westerly base of the stone wall and lands now or formerly City of New York, N8-13-00W, 800.00'.

Cont.

THENCE, continuing along lands now or formerly City of New York. N00-18-15W, 1228.24'.

THENCE, along lands now or formerly YON and lands now or formerly SHAW S80-15-10W, 451.70' to a City monument.

THENCE, N86-03-00W, 125.42 to the point and place of BEGINNING. (TM#66-2-57)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at the southeasterly corner of the premises herein conveyed, said corner being distant along the westerly side of Stoneleigh Avenue from the lands now or formerly of Casey North 9° 36' 40" East 127.05 feet and North 10° 28' 50" East 86.87 feet; thence northwesterly along the lands of American Fund for Israel Institution, Inc. North 76° 19' 40" West 225 feet; thence northeasterly parallel to Stoneleigh Avenue North 10° 28' 50" East 175 feet; thence southeasterly South 76° 19' 40" East 225 feet to the westerly side of Stoneleigh Avenue; thence along the westerly side of Stoneleigh Avenue, South 10° 28' 50" West 175 feet to the point and place of beginning. (TM#66.15-1-2)

ALL that certain plot, piece of parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown and designated as Lots #1, #2 and #3 on a certain map entitled "Subdivision Map Prepared for American Fund For Israel Institutions, Inc. and Dr. John Simmons," dated December 22, 1972 and amended December 29, 1972, made by D. Walcott, Licensed Surveyor, of Lake Carmel, New York, and filed in the Office of the Clerk of the County of Putnam on January 12, 1973 as Map. No. 1288, (TM#66.15-1-1, 66.15-1-3, 66.15-1-7)

TOGETHER WITH any and all rights of way as shown on said map;

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the northeasterly corner of the premises herein described said point being on the westerly side of Stoneleigh Avenue, south of the intersection of the southwesterly corner of Stoneleigh Avenue and Drewville Road, and being distant South 8° 53' 30" West 53.12 feet and South 9° 27' 20" West 415.04 feet from the lands now or formerly of Miller, as measured along the Westerly side of Stoneleigh Avenue; thence along the Westerly side of Stoneleigh Avenue South 9° 27' 20" West 5.51 feet and South 10° 28' 50" West 134.49 feet; thence along lands now or formerly of American Fund for Israel Institutions, Inc. North 79° 31' 10" West 155.60 feet, North 10° 28' 50" East 140.01 feet and South 79° 31' 10" East 155.49 feet to the point and place of beginning, containing one-half acre of land. (TM#66.15-1-6)

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point marked by an iron pin on the westerly side of Stoneleigh Avenue at the northeast corner of lands now or formerly of Holt; RUNNING THENCE along said lands North 84° 49' 36" West 82.08 feet; THENCE along said lands and a stone wall North 85° 40' 46" West 265.33 feet to a point in the stone wall marked by a drill hole; RUNNING THENCE along a stone wall North 7° 05' 24" East 149.92 feet to an iron pin and Drewville Road; RUNNING THENCE along Drewville Road and a stone wall North 68° 48' 22" East 20.70 feet to an iron pin at the southwest corner of lands now or formerly of Padovani;

30 DECEMBER 1998
TOWN BOARD MEETING

Cont.

RUNNING THENCE along said lands of Padovani and a stone wall South 82° 59' 54" East 130.05 feet;

RUNNING THENCE along same South 82° 25' 22" East 197.25 feet to an iron pin and Stoneleigh Avenue;

RUNNING THENCE along the westerly side of Stoneleigh Avenue South 6° 28' 21" West 142.70 feet to the point of BEGINNING. (TM#66.15-1-8)

ALL that certain plot, piece or parcel of land with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam and State of New York shown and designated as Lots #1, #2, and #3 on a certain map entitled "Subdivision Plat Prepared for Merritt L. Ryder," dated January 12, 1971, made by Richard H. Gorr, Licensed Surveyor, of Mahopac, New York, and filed in the Office of the Clerk of the County of Putnam on June 17, 1971 as Map No. 1232, (TM#66.15-1-16&17, TM#66-2-56)

TOGETHER WITH all roads which abut the premises herein above regardless of whether they were ever improved or dedicated to the Town of Carmel, County of Putnam or any other municipal corporation.

ALL that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point in the easterly side of the public highway known as Stoneleigh Avenue in the northwesterly corner of a parcel of land which was conveyed by Merritt L. Ryder to David Shaw and Esther Shaw by deed dated December 19, 1961, and recorded in the Putnam County Clerk's Office in Book 565 of deeds at page 181 on December 20, 1961, and running from said point of beginning along the northerly line of said Shaw lands South 87° 36' 45" East 311.05 feet and South 8° 45' 00" East 102.50 feet to a point in the wall in the northerly line of lands of Putnam Community Hospital, Inc. formerly Samuel Rubin, and running thence along the said wall and the line of said hospital lands North 80° 15' 00" East 227.70 feet to a point in the westerly edge of a wall and the line of lands of the City of New York, and thence along the westerly edge of said wall and said City of New York lands, North 18° 29' 00" West 207 feet, thence leaving said wall and along the line of other lands of Merritt L. Ryder South 79° 36' 12" West 153.858 feet; South 53° 16' 13" West 88.955 feet; North 86° 44' 42" West 194.500 feet and North 47° 29' 05" West 70.695 feet to a point in the road face of the wall and the easterly side line of said Stoneleigh Avenue; thence along the road face of the wall and the easterly side line of said Stoneleigh Avenue, South 10° 28' 10" West 51.43 feet and still running along the road face of the wall and said highway South 8° 07' 05" West 48.57 feet to the point of the beginning. Containing 60204 square feet of land, be the same more or less.

Said parcel also being further described as follows:

ALL that plot or parcel of land situate, lying and being in the Town of Carmel, County of Putnam and State of New York, shown and designated as Parcel "A" on "Subdivision Plat prepared for Merritt L. Ryder..." by Charles W. Carpenter dated December 9, 1961 and filed in the office of the Clerk of the County of Putnam on May 23, 1969 as Map No. 1144. (TM#66.15-1-18)

All that certain plot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the Town of Carmel, County of Putnam, State of New York bounded and described as follows:

BEGINNING at a point on the easterly side of the improved county highway known as Stoneleigh Avenue leading from Carmel to Croton Falls, which point is in the intersection of two stone walls, one stone wall running north and south along the easterly side of said Stoneleigh Avenue and the northerly side of another stone wall, and the other stone wall running east and west separating the premises herein described from lands now or formerly of Samuel Rubin, which point is in the most southwesterly corner of the parcel of land herein described; thence from said point of beginning along the approximate northerly edge of said last mentioned stone wall and along lands now or formerly of Samuel Rubin, South 86° 03' 00" East 125.40 feet to a point; and North 80° 15' 00" East 225.00 feet; thence leaving said stone wall and along other lands of Merritt L. Ryder, North 8° 45' 00" West 102.50 feet

30 DECEMBER 1998
TOWN BOARD MEETING

Cont.

to a point; thence still along other lands of Merritt L. Ryder, North 87° 38' 45" West 311.05 feet to a point in the roadface of the stone wall on the easterly side of Stoneleigh Avenue; thence along the roadface of said stone wall along the easterly side of Stoneleigh Avenue; South 8° 07' 05" West 145.00 feet to the point or place of beginning. CONTAINING 1.000 acre of land.(TMM#66.15-1-19)

The foregoing property description identifies the following parcels as shown on the Tax Maps of the Town of Carmel as they existed on June 1, 1998:

Tax Map 66., Block 2 Parcels 1 and 2 inclusive.
Tax Map 66., Block 2 Parcels 56 and 57 inclusive.
Tax Map 66.15, Block 1 Lots 1 through 3 inclusive.
Tax Map 66.15, Block 1 Lots 6 through 8 inclusive.
Tax Map 66.15, Block 1 Lots 16 through 19 inclusive.

BE IT FURTHER RESOLVED that the costs of expanding the water district including the required water system capital improvements are \$0 and will not be financed by the Water District either by bonds or tax; and

BE IT FURTHER RESOLVED that should any unforeseen costs to expand the Water District be incurred or if the Town Comptroller determines that a contribution towards past capital costs incurred by the District are required to be paid by law, they shall be assessed only to property owners in the extension area on an ad valorem basis; and

BE IT FURTHER RESOLVED, that this resolution shall be subject to a permissive referendum in the manner provided in Article 7 and 12-A of the Town Law.

Resolution

Offered by: Councilman Ravallo

Seconded by: Councilman Marino

<u>Roll Call Vote</u>	<u>YES</u>	<u>NO</u>
Timothy Wilson	<u>X</u>	___
James McDonough	<u>X</u>	___
Norman Marino	<u>X</u>	___
Robert Ravallo	<u>X</u>	___
Frank DelCampo	<u>X</u>	___

C.W.D.#2 IMPROVEMENTS TO DISTRIBUTION SYSTEM AND FACILITIES.
\$200,000 - SEQRA REVIEW AND DETERMINATION

Supervisor DelCampo reviewed the Short Environmental Assessment Form with the Town Board.

RESOLVED, that the Town Board of the Town of Carmel hereby determines after appropriate SEQRA review, environmental assessment form attached hereto and made a part hereof, that the proposed C.W.D.#2 facility improvements will not result in any significant adverse environmental impacts.

Resolution

Offered by: Councilman Marino

Seconded by: Councilmen Ravallo and McDonough



NOTES

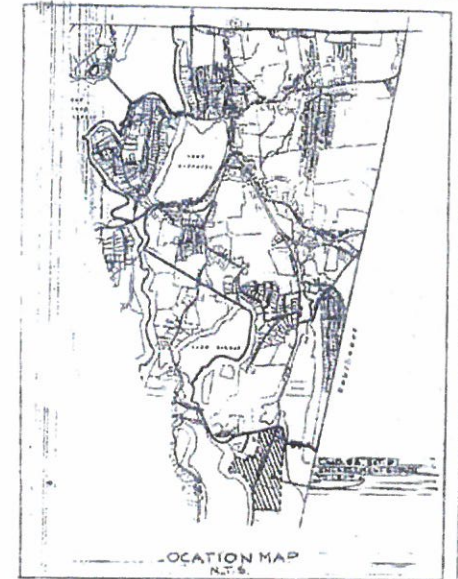
1. THIS MAP IS BASED ON CAMEL TOWN MAP RECORDS AS OF 1970.
2. THIS MAP WAS PREPARED BY THE TOWN OF CAMEL, NEW HAMPSHIRE.
3. THIS MAP REPLACES THE LIMITS OF JURISDICTION OF AN UP TO DATE OF THE REGULATION FURNISHING THE DISTRICT EXTENSION APPROVED BY THE CAMEL TOWN BOARD.

LEGEND

STREET/LOT/BLK/TRACT	_____
TAX MAP FINDER	_____
TAX MAP NUMBER	_____

CWD#2 DISTRICT EXTENSION #1 BOUNDARY MAP

OCTOBER 20, 1971
SCALE 1"=200'



REVISION BLOCK			
NO.	DATE	DESCRIPTION	SIGN.
1	10/20/71	1st issue of CWD-2	_____

ORDERLY APPROVED BY RESOLUTION OF THE TOWN BOARD OF THE TOWN OF CAMEL, NEW HAMPSHIRE, ON THE _____ DAY OF _____, 1971.

TOWN OF CAMEL,
TOWN CLERK
CONCURS

DEPT. OF CAMEL TOWN
CWD#2 EXTENSION

APPENDIX B

Sampling Results

APPENDIX B.1

Pre-Flushing Sample Results



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
09/08/17	8:30
09/08/17	16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98100

Project ID:

Client ID: 21 GLENVUE DR.

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	2.05	0.20	1	NTU			5	09/08/17 21:58	X	SM2130B-01
Iron	0.817	0.010	1	mg/L			0.3	09/12/17	EK	E200.7
*** Iron exceeds Secondary Goal of 0.3 ***										
Manganese	0.006	0.001	1	mg/L			0.05	09/12/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/12/17	EK	E200.5
Total Metal Digestion	Completed							09/11/17	CB/RVM	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date	Time
09/08/17	9:30
09/08/17	16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98104

Project ID:
Client ID: 27 GLENVUE DR.

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.72	0.20	1	NTU			5	09/08/17 22:07	X	SM2130B-01
Iron	0.378	0.010	1	mg/L			0.3	09/13/17	MA	E200.7
*** Iron exceeds Secondary Goal of 0.3 ***										
Manganese	0.006	0.001	1	mg/L			0.05	09/13/17	MA	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	MA	E200.5
Total Metal Digestion	Completed							09/12/17	CB/CB	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date	Time
09/08/17	8:45
09/08/17	16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98101

Project ID:

Client ID: 63 GLENVUE DR.

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.63	0.20	1	NTU			5	09/08/17 22:01	X	SM2130B-01
Iron	0.207	0.010	1	mg/L			0.3	09/12/17	EK	E200.7
Manganese	0.008	0.001	1	mg/L			0.05	09/12/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/12/17	EK	E200.5
Total Metal Digestion	Completed							09/11/17	CB/RVM	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
09/08/17	9:00
09/08/17	16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98102

Project ID:
Client ID: 63 GLENEIDA RIDGE

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.51	0.20	1	NTU			5	09/08/17 22:03	X	SM2130B-01
Iron	0.250	0.010	1	mg/L			0.3	09/12/17	EK	E200.7
Manganese	0.005	0.001	1	mg/L			0.05	09/12/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/12/17	EK	E200.5
Total Metal Digestion	Completed							09/11/17	CB/RVM	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
09/08/17	9:15
09/08/17	16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98103

Project ID:

Client ID: 161 GLENEIDA RIDGE

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.43	0.20	1	NTU			5	09/08/17 22:04	X	SM2130B-01
Iron	0.036	0.010	1	mg/L			0.3	09/12/17	EK	E200.7
Manganese	0.004	0.001	1	mg/L			0.05	09/12/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/12/17	EK	E200.5
Total Metal Digestion	Completed							09/11/17	CB/RVM	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date Time
09/08/17 9:45
09/08/17 16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98105

Project ID:
Client ID: 10 RIDGE CT

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.51	0.20	1	NTU			5	09/08/17 22:10	X	SM2130B-01
Iron	0.143	0.010	1	mg/L			0.3	09/14/17	EK	E200.7
Manganese	0.005	0.001	1	mg/L			0.05	09/13/17	MA	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	MA	E200.5
Total Metal Digestion	Completed							09/12/17	CB/CB	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date Time
09/08/17 10:00
09/08/17 16:30

Laboratory Data

SDG ID: GBY98100
Phoenix ID: BY98106

Project ID:
Client ID: CWD #2 FIN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/08/17 17:55	CB/KDB	SM9223B-04
Turbidity	0.48	0.20	1	NTU			5	09/08/17 22:12	X	SM2130B-01
Iron	0.029	0.010	1	mg/L			0.3	09/14/17	EK	E200.7
Manganese	0.004	0.001	1	mg/L			0.05	09/13/17	MA	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	MA	E200.5
Total Metal Digestion	Completed							09/12/17	CB/CB	E200.5/E200.7

APPENDIX B.2

Post-Flushing Sample Results



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 19, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by:
Received by: LB
Analyzed by: see "By" below

Date	Time
09/15/17	9:00
09/15/17	16:40

Laboratory Data

SDG ID: GBZ02441
Phoenix ID: BZ02441

Project ID:
Client ID: 21 GLENVUE

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/15/17 18:15	CB/RM	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/15/17 18:15	CB/RM	SM9223B-04
Turbidity	< 0.200	0.200	1	NTU			5	09/15/17 23:47	RWR/KDBSM	2130B-01
Iron	0.265	0.010	1	mg/L			0.3	09/18/17	EK	E200.7
Manganese	0.004	0.001	1	mg/L			0.05	09/18/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/18/17	EK	E200.5
Total Metal Digestion	Completed							09/15/17	AG/BF	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date	Time
09/11/17	8:30
09/11/17	16:12

Laboratory Data

SDG ID: GBY98662
Phoenix ID: BY98662

Project ID:
Client ID: 27 GLENVUE DR.

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:20	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:20	CB/CB	SM9223B-04
Turbidity	0.75	0.20	1	NTU			5	09/11/17 17:23	RWR	SM2130B-01
Iron	0.479	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
*** Iron exceeds Secondary Goal of 0.3 ***										
Manganese	0.008	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date	Time
09/11/17	10:15
09/11/17	16:12

Laboratory Data

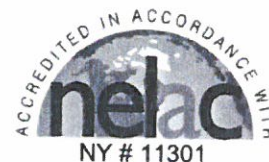
SDG ID: GBY98662
Phoenix ID: BY98666

Project ID:
Client ID: 63 GLENVUE DR.

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-04
Turbidity	0.55	0.20	1	NTU			5	09/11/17 17:26	RWR	SM2130B-01
Iron	0.148	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
Manganese	0.007	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date Time
09/11/17 8:50
09/11/17 16:12

Laboratory Data

SDG ID: GBY98662
Phoenix ID: BY98663

Project ID:
Client ID: 63 GLENEIDA RIDGE

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:20	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:20	CB/CB	SM9223B-04
Turbidity	0.59	0.20	1	NTU			5	09/11/17 17:24	RWR	SM2130B-01
Iron	0.309	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
*** Iron exceeds Secondary Goal of 0.3 ***										
Manganese	0.006	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date	Time
09/11/17	9:15
09/11/17	16:12

Laboratory Data

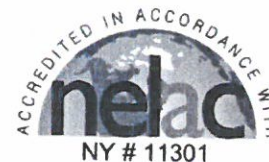
SDG ID: GBY98662
Phoenix ID: BY98664

Project ID:
Client ID: 161 GLENEIDA RIDGE

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-04
Turbidity	0.38	0.20	1	NTU			5	09/11/17 17:25	RWR	SM2130B-01
Iron	0.029	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
Manganese	0.003	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

<u>Date</u>	<u>Time</u>
09/11/17	10:30
09/11/17	16:12

Laboratory Data

SDG ID: GBY98662
Phoenix ID: BY98667

Project ID:
Client ID: 10 RIDGE CT

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-04
Turbidity	0.51	0.20	1	NTU			5	09/11/17 17:26	RWR	SM2130B-01
Iron	0.151	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
Manganese	0.006	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823



Analysis Report

September 14, 2017

FOR: Attn:
Putnam County Health Dept.
Drinking and Recreational Water
1 Geneva Road
Brewster, NY 10509

Sample Information

Matrix: DRINKING WATER
Location Code: PUTNAMWQ
Rush Request: Standard
P.O.#:

Custody Information

Collected by: LAP
Received by: LB
Analyzed by: see "By" below

Date Time
09/11/17 9:45
09/11/17 16:12

Laboratory Data

SDG ID: GBY98662
Phoenix ID: BY98665

Project ID:
Client ID: CWD #2

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		09/11/17 18:25	CB/CB	SM9223B-04
Turbidity	0.51	0.20	1	NTU			5	09/11/17 17:26	RWR	SM2130B-01
Iron	0.043	0.010	1	mg/L			0.3	09/13/17	EK	E200.7
Manganese	0.003	0.001	1	mg/L			0.05	09/13/17	EK	E200.7
Lead	< 0.0010	0.0010	1	mg/L	0.015			09/13/17	EK	E200.5
Total Metal Digestion	Completed							09/12/17	AG	E200.5/E200.7