TOWN OF QUEENSBURY
742 Bay Road, Queensbury, NY. 12804-5902

Town of Queensbury
Jenkinsville Community Update, August 2022

The Overview

The Queensbury Town Board has received the draft recommendations of engineering firm C.T. Male Associates regarding the possible expansion of public water service in the Jenkinsville area of the Town of Queensbury. The Town Board is reviewing the C.T. Male study and simultaneously making it available to property owners and residents in Jenkinsville and throughout the community to invite community comment and input.

The Background

The Queensbury Town Board engaged C.T. Male Associates to evaluate public water service options in the Jenkinsville area, much of which is not served by the existing municipal water system, after the presence of the chemical 1,4-Dioxane was detected at low levels in several private residential drinking water wells. The New York State Department of Environmental Conservation is seeking to identify the source of the 1,4-Dioxane. Nearby landfills, including the former Queensbury Town Landfill and other commercial and industrial landfills, have been identified as potential sources, although no conclusive determination as to the source or sources has been made at this time. DEC has said 1,4-dioxane was detected in some private wells at levels above the New York State public drinking water standard. The Department of Health said the highest levels detected to date do not pose a significant health risk. However, the agency recommends actions to reduce exposure when drinking water standards are not met.

To ensure that a reliable, long-term source of high-quality drinking water is available to the Jenkinsville community, the Town Board engaged C.T. Male to conduct a study of public drinking water options. C.T. Male had been engaged in the late 1990s to study the same question and provided recommendations to the town. At the time, residents who were surveyed did not support the project because of its potential cost.

The Draft Study

In the 2022 study, C.T. Male reviewed two options:

1. Extending the Town's existing water system from the connection point nearest Jenkinsville on Haviland Road north and east to Jenkinsville;
2. Constructing a new potable drinking water supply well north of Route 149 between Bay Road and Ridge Road to serve the Jenkinsville area. This would require installation of a new

six-inch water transmission main for an approximate length of 20,000 linear feet along with associated wells, treatment, and pumping equipment.

As part of its work, C.T. Male analyzed fire flow capacity and water age in the municipal water lines that, if this project were approved, would be added to serve Jenkinsville. C.T. Male found that it was possible to ensure appropriate pressure for fire protection and determined that water age in the lines extending to the Jenkinsville area would not be excessive due to the way that water is distributed within the distribution system and from the storage tanks. C.T. Male also recommended that the Town consider whether the existing Queensbury municipal water treatment plant and other supporting equipment and facilities would be adequate to serve both new town water consumers and current consumers. To that end, the Town will seek proposals from engineering firms for a comprehensive review of the plant and associated treatment facilities and equipment.

Recommendations

Based on the information it collected and analyzed, C.T. Male said that, should the Queensbury Town Board elect to pursue establishment of a public water supply in the Jenkinsville area, an extension of the Town's water distribution system from Haviland Road north and east to Jenkinsville is the option that appears to meet the community's goals most comprehensively and efficiently. About 170 properties that are not now on the municipal water system would be served.

C.T. Male estimated the cost of the extension and related system upgrades, with fire-flow capability, at $4.6 million. The cost of the extension and related upgrades, without fire flow capability, was estimated at $4.1 million. The cost of establishment of a new potable water supply well north of Route 149, with the necessary water line extensions, was estimated at $5.2 million.

Cost to Property Owners

If the town extends public water service in the Jenkinsville area, property owners would likely be required to accept the new town water service and discontinue the use of private wells for drinking water. The Town Board has asked C.T. Male to explore grant opportunities that could help the town reduce the capital costs of public water service to the residents of Queensbury and, specifically, to defray the costs for Jenkinsville residents to connect their homes to the expanded town water service. Property owners in Jenkinsville, as in all other parts of the town, would be responsible for water consumption charges.

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Likely Timetable

C.T. Male has estimated that the construction time for new public water service for the Jenkinsville area would be about two years from the time that the project is approved for bid. Jenkinsville area property owners whose private drinking water wells had detections of 1,4-Dioxane are now receiving bottled drinking water from New York State. The Town will work with New York State to ensure that these property owners continue to have access to alternative drinking water.

Next Steps

The full draft C.T. Male study is appended to this update. The Queensbury Town Board invites residents of Jenkinsville and all other parts of the community to a public informational meeting at the Town Hall on Monday, August 22, 2022. C.T. Male engineers will be available beginning at 6:30 p.m. to answer residents' questions informally. The public informational meeting and formal presentation will begin at 7 p.m. The meeting will be available for viewing on Zoom. For those unable to attend, a recording of the meeting will posted to the town website. Comments and questions about the draft C.T. Male study can be sent to Town Supervisor John Strough at qbysupervisor@queensbury.net. The draft study will be finalized after public comment is received and considered.

July 19, 2022

Water Distribution System Analysis
Proposed Jenkinsville Service Area
Town of Queensbury
Warren County, New York

Prepared for:

Town of Queensbury
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Prepared by:

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C.T. Male Associates Project No: 21.1201

WATER DISTRIBUTION SYSTEM ANALYSIS
PROPOSED JENKINSVILLE SERVICE AREA

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1.0 EXECUTIVE SUMMARY

The Town of Queensbury retained C.T. Male Associates to evaluate potable water supply options available to serve residents of the Jenkinsville area as several private wells have been identified by New York State as containing 1,4-Dioxane. Two options were reviewed:

1. Extension of the Town's existing water distribution system from Haviland Road north and east to Jenkinsville;
2. Establishment of a new potable water well located along New York State Route 149 between Bay Road and Ridge Road. This would also require installation of a new 6" water transmission main for an approximate length of 20,000 feet (lf) along with associated wells, treatment, and pumping equipment.

The Jenkinsville service area is several miles from the Town's water treatment plant on Corinth Road. Our review of the extension of water distribution piping from Haviland Road included an analysis of the town's existing water infrastructure to determine whether it is fully capable of serving additional properties, and an analysis of fire flow capacity and water age in the water lines that would be added to serve Jenkinsville. The analysis included updating a hydraulic water model originally completed in 1999 by C.T. Male which explored several distribution system extension options in the northern section of the Town.

With respect to fire protection, a fire-flow capable and a non-fire flow option were identified with budget level opinions of probable costs offered for each. Based on the updated water modeling evaluation, it was determined that water age in the Jenkinsville area would not be excessive due to the way that water is distributed within the piping and from the storage tanks. An opinion of probable cost was prepared for this approximate 16,000 LF water distribution extension option and is described in the report.

The second option evaluated was the installation of a new potable water well, treatment, pumping and distribution system. Based on a hydrogeological review of potential groundwater sources in the vicinity of Jenkinsville, excluding the landfills and park properties located to the north, it was determined that the aquifer north of Route 149 as described above would be capable of providing the required domestic demand. The potential drawback associated with this option is the cost to convey the treated water

approximately four miles to Jenkinsville. A budget level opinion of probable cost is offered for this well water option as well.

In addition to identifying water supply options to serve the Jenkinsville area, long-term water treatment plant, water storage and transmission main improvements were considered as water demands increase within the Town and from outside users.

Based on the information collected and analyzed, should the Queensbury Town Board elect to pursue establishment of a public water supply in the Jenkinsville area, C.T. Male Associates believes the extension of the Town's water distribution system from Haviland Road north and east to Jenkinsville is the option that appears to meet the town's goals most comprehensively and efficiently. C.T. Male estimates the cost of the extension and related system upgrades, with fire-flow capability, at $4.6 million. The cost of the extension and related upgrades, without fire flow capability, is estimated at $4.1 million. The cost of establishment of a new potable water supply well north of Route 149 is estimated at $5.2 million.

2.0 PROJECT BACKGROUND AND HISTORY

Some privately owned wells in the Jenkinsville area have been found to potentially contain 1, 4-Dioxane in the water above the maximum contaminant level (MCL). Studies are underway to determine the source of the possible contamination, but alternatives are being evaluated to provide potable drinking water to the potentially affected properties. In 1999, C.T. Male completed an engineering study to evaluate the costs to extend the Town's existing distribution system to create three separate water districts (WD): Glen Lake WD, Sunnyside Lake WD, and the Jenkinsville WD. It was found that project costs were too great to proceed with any of the proposed water districts. A copy of this report is included as Appendix A.

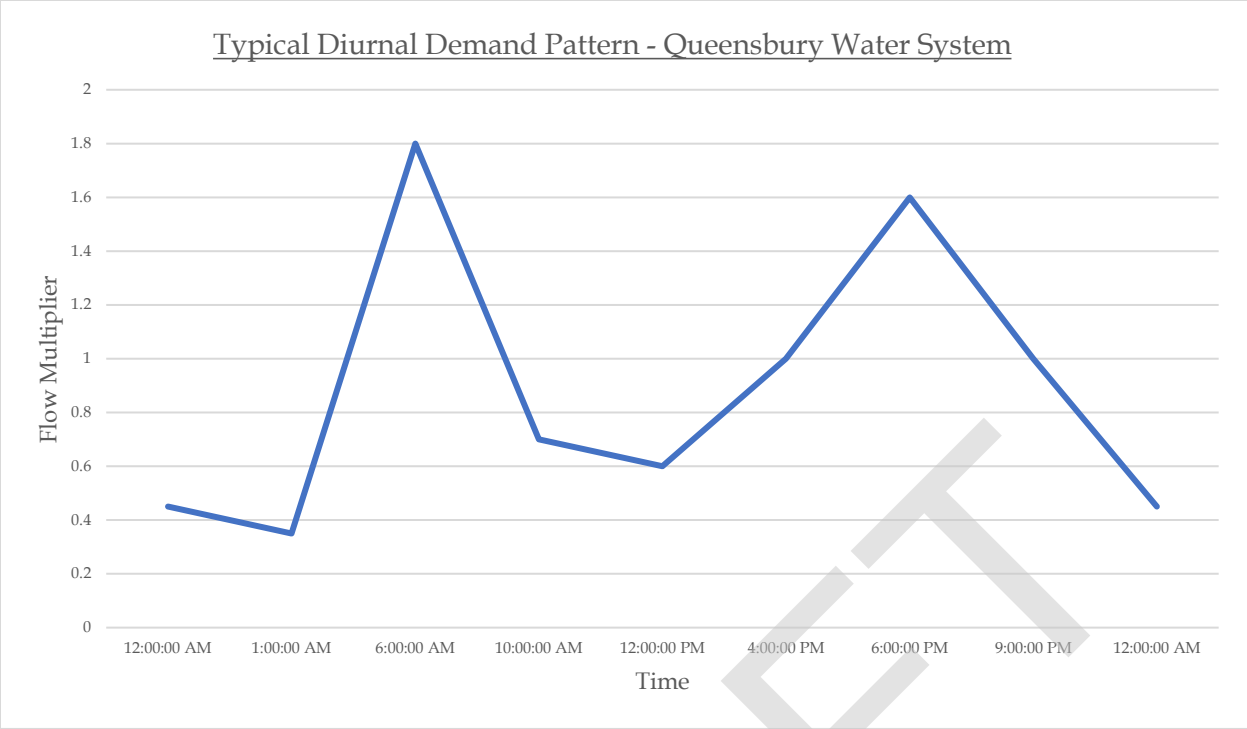
Since the issuance of the 1999 report, additional water quality monitoring requirements have been implemented by New York State. The proposed Jenkinsville WD outlined in the 1999 report remained a viable option, but Town became concerned with potential water quality issues related to high water age resulting from extending water distribution systems over long distances to serve a relatively small number of customers. High water age is often associated with lower chlorine residuals and higher levels of disinfection by-products, like trihalomethanes (THMs) and haloacetic acids (HAAs) among others. In the past, two (2) areas in the Town were found to have elevated levels of disinfection by-

products (DBPs). The levels were elevated but below the maximum contaminant levels (MCL) defined by the NYSDOH. One location is on Gurney Road near the Gurney Tank and the other location near the intersection of Lower Warren Street and State Route 32, near the Airport Tank. There are no known areas in the northeastern area of the distribution system with elevated levels of DBPs. While high water age is a factor in the levels of DBP's, there are other factors associated with DBP's including the concentration of disinfectant in the water and the temperature of the water. It is more likely that DBP levels are higher in the summer than the winter. It should be noted that the Town has had no violations related to DBPs.

3.0 WATER MODELING - EXISTING CONDITIONS

In 1998, C.T. Male Associates developed a model of the Town water distribution system using the hydraulic modeling software, Water CAD. This model was updated for this study to include significant infrastructure upgrades/improvements made since the model was developed and to include flows from intermunicipal connections with Hudson Falls, Moreau, and Kingsbury. Future service areas which were investigated in the 1998 report but never connected into Queensbury's water distribution system were removed from the model. The model consists of the finished water high-lift pumps, water storage tanks and watermains in the distribution system which are 8-inches in diameter or greater.

To calculate the worst-case scenario for water age, the average winter day demand of 3 million gallons per day (MGD) was modeled. Each demand point (junction) was assigned an estimated demand and pattern, with the total daily demand of the system equaling 3 MGD. A diurnal hydraulic pattern was applied to the demand at each junction to consider periods of low and peak hourly demands over a 24-hour period. After 24 hours, the pattern repeats itself. The diurnal pattern applied across the distribution system is shown in the graph on the following page.



The model was run over a 100-day period to compare the model output to the actual conditions observed in the distribution system. The daily demand, output of the Water Treatment Plant (WTP) and the water levels in the storage tanks were the three known data points which were used to calibrate the model to real operations of the water system. During the winter, the WTP pumps a relatively constant 3 MGD into the distribution system.

The Queensbury water distribution system contains five (5) water storage tanks; the West Mountain Tank, two (2) Gurney Tanks, the Luzerne Tank, and the Airport Tank. In the models, the volume of the two Gurney Tanks are combined into one (1) tank. The Gurney, West Mountain and Luzerne tanks are generally located on the west side of the distribution system. The Airport Tank is located on the east side of the distribution system. Model output suggests that the tanks operate in a similar manner to the real-world conditions as recorded in the Town's SCADA system. The SCADA system shows a +/- 15% change in tank volume per day in the average winter day. A map showing the water distribution system from the model is included as Figure 1.

Historically, the highest levels of THMs are found in areas closer to water storage tanks. The highest water age found in the model is also adjacent to tanks and junctions nearest the tanks, further reinforcing that the model is functioning like real world conditions. The

peak water age during the average winter day demand was calculated to be approximately 20 days at the Gurney Tank(s). Conversely, at the intersection of Rockwell Road and Haviland Rd (County Road 17), the maximum water age is calculated to be approximately 4 days during an average winter day demand, which is generally considered acceptable.

While the model shows +/-15% turnover in the tanks each day, it does not necessarily translate to a water age of +/- 6.5 days. This is generally true for the Luzerne tank, located closest to the WTP, but the subsequent water storage tanks to the north of the Luzerne Tank will have higher water ages because they may be filled by older water from the previous tank(s) to the south. For example, the West Mountain tank could be filled by water which is +/- 6.5 days old from the Luzerne Tank. Once in the West Mountain Tank the water ages another +/- 4 days. The ten-day old water from the West Mountain Tank could then fill the Gurney Tank(s) where it may age another +/- 10 days for a maximum water age of 20 days.

4.0 WATER MODELING – PROPOSED WATER MAIN EXTENSION TO JENKINSVILLE

Upon calibration of the existing conditions model, the proposed Jenkinsville service area was incorporated into the model. The proposed improvements include approximately 16,000 feet of transmission main. The proposed alignment begins at the intersection of Haviland Road and Ridge Road and extends north along Ridge Road, east to the southern end of Stonehurst Drive, north and east along Sunnyside Road, then north along Jenkinsville Road to Mud Pond Road. It should be noted that this routing differs from the 1999 report and includes fewer connections. A map showing the proposed service area and proposed transmission line is included in this report as Figure 2.

The purpose of this report is to investigate alternatives to provide potable water to these potentially affected properties. Only potentially affected properties in the Jenkinsville area and only properties with frontage along the proposed watermain extension were included in the study. This results in a total of 171 parcels with an average daily water demand of 56,430 GPD (330 GPD/household). The 171 parcels included in the study are shown in Figure 2. The path of the proposed main was selected to minimize length only and not to front or serve as many properties as possible. To determine the recommended pipe size, three analyses were performed: a fire flow analysis, a pressure analysis, and a water age analysis.

4.1 Fire Flow Analysis

The first analysis performed was for fire flow. The available fire flow is the maximum flow at any location that results in the pressure at any service connection in the distribution system to fall below 20 psi, the minimum pressure required by the Ten State Standards. In a residential location, the minimum fire flow required for residences with an effective area between 536 and 1,050 square feet is 750 GPM according to the Insurance Services Office (ISO). The effective area is calculated as the largest footprint of any part of the structure plus 50% of the square footage of additional floors.

To evaluate the available fire flow, a peak demand of 11.0 MGD was distributed across the distribution system. This is the typical present-day peak demand the Town experiences in the summer. Three proposed pipeline alternatives were studied for fire flow including all new 8-inch piping, all new 12-inch piping, and a combination of 8-inch and 12-inch piping along the alignment described earlier in this section and as shown in Figure 2. The table below summarizes the available fire flow for three alternatives along the proposed path to the Jenkinsville Service Area.

WATERMAIN SIZE	FIRE FLOW AVAILABLE
8-inch	467 GPM
12-inch	1,000 GPM
8 & 12-inch	754 GPM

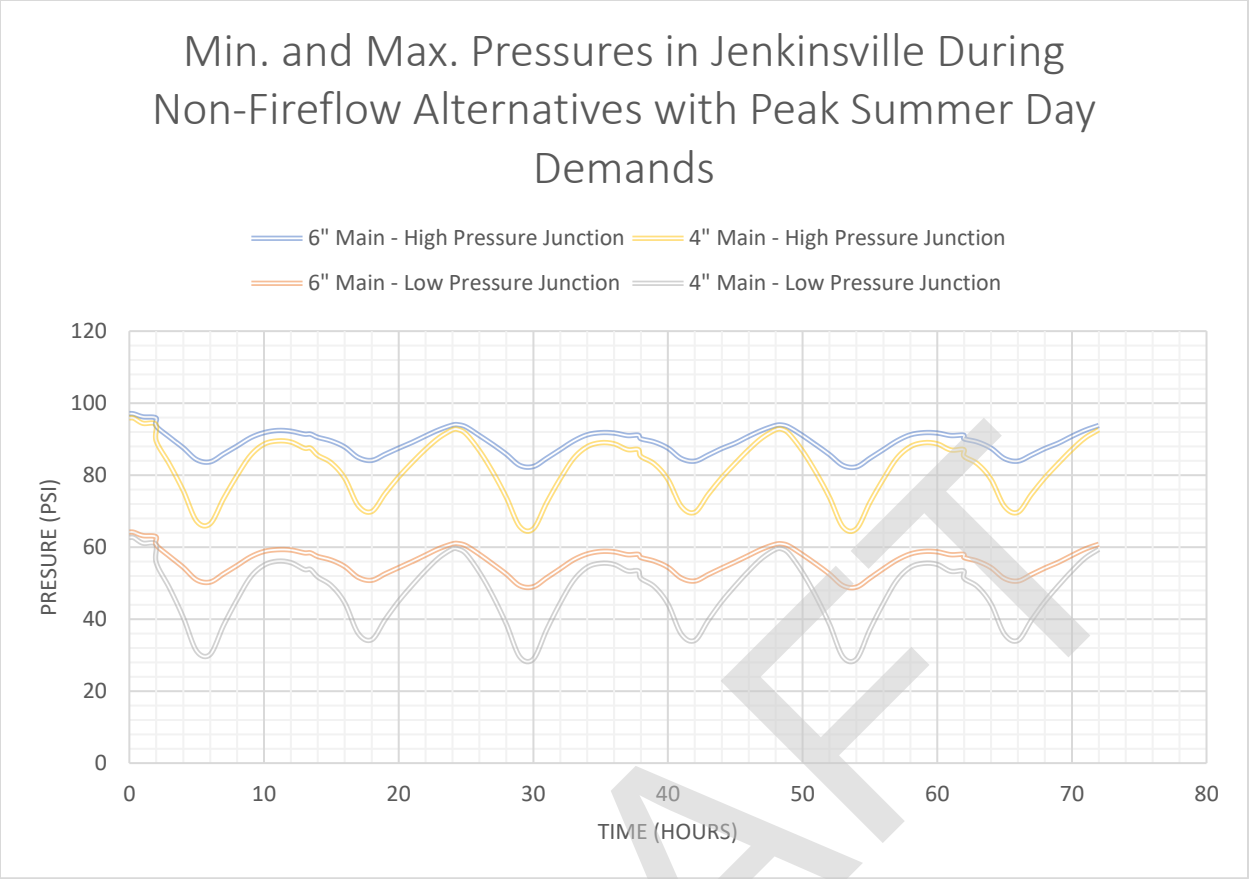
In each of these scenarios, the limiting junction is the junction is at the intersection of Azure Drive and Mud Pond which, which is the highest point in elevation (386 ft) along the proposed watermain extension. This is also the junction immediately before the test junction.

4.2 Pressure Analysis

The second analysis performed was for pressure. The scenario with a combination was evaluated as the scenario which can provide minimum fire flow. To evaluate the expected minimum pressures along the proposed transmission main, the peak demand of 11.0

MGD was distributed across the distribution system as described in Section 3.1. The same diurnal pattern noted in Section 2.0 of this report was applied to all demand points. The intersection of Azure Drive and Mud Pond Road was selected to determine the minimum service pressures expected during the peak summer day since, as described in Section 3.1, this is the highest point in elevation along the proposed extension. The minimum pressure expected is 52 psi, but the pressures fluctuate between 52 psi and 61 psi at this location depending on the total demand in the whole system and the tank levels at any given time. These pressures are well above the minimum 35 psi required by the NYSDOH. The ideal pressures according to the Ten State Standards are between 60 and 80 psi.

A fourth scenario was evaluated during the pressure analysis to determine the minimum pipe size along the proposed path which can adequately provide minimum pressure according to the Ten State Standards (35 psi) during the peak summer day scenario, but not provide fire flow protection. A 4-inch and 6-inch pipe were evaluated. The graph on the following page shows the pressure fluctuations during a 72-hour analysis of the high-pressure junction and the low-pressure junction along the proposed extension during both non-fire flow alternatives.



During the 4-inch water main scenario, the minimum pressure drops below 35 psi, making this alternative unacceptable. During the 6-inch water main scenario, the minimum pressure remains above 35 psi.

4.3 Water Age Analysis

The third analysis performed was for water age. Similar to the existing conditions model, the proposed conditions model was run over a 360-hour period. The total demand in the system was also reduced to the present-day, average winter-day demand of 3.0 MGD. The intersection of Mud Pond Road and Azure Drive, the end of the proposed Jenkinsville service area, was used to compare water age with varying sizes of watermain. The following table summarizes the results of the calculations.

WATERMAIN SIZE	PEAK WATER AGE AT END OF JENKINSVILLE SERVICE AREA (AVG WINTER DAY)
8-inch	57 Hours (2.4 Days)
12-inch	93 Hours (3.8 Days)
8 & 12-inch	72 Hours (3 Days)

The table below summarized the water age at the same junction, but during the peak summer day scenario described previously in this report.

WATERMAIN SIZE	PEAK WATER AGE AT END OF JENKINSVILLE SERVICE AREA (AVG SUMMER DAY)
8-inch	33 Hours (1.4 Days)
12-inch	70 Hours (2.9 Days)
8 & 12-inch	50 Hours (2.08 Days)

This proposed main extension simulates a "dead-end" at the termination of the system. Typically, it is undesirable to install a dead-end line because of the increased chance of stagnant water. In this case, however, the model does not predict high water age at the end of the proposed main. The Town can increase the total demand and further reduce predicted age by flowing a hydrant at the end of the proposed extension for a select duration at a regularly scheduled interval.

It should be noted that the water age predicted in the tables above assume that all properties with frontage along on the path of the proposed main will connect into the water main. As fewer users/properties connect to the main, there will be less use resulting in higher ages.

5.0 ALTERNATIVE WATER WELL SUPPLY

The alternative to extending the Consolidated Water District to the affected area is to develop a new water supply. The alternative water supply would involve the drilling of a new water supply production well from which finished water would be pumped through new water mains to the affected residences. This option would allow for expansion of the water district, or development of a new district, to serve homes and businesses beyond those where 1,4-Dioxane has been detected.

A desktop evaluation was performed to identify a possible new drinking water source from groundwater beyond, but in the vicinity of the Jenkinsville Road Area. The study focused on identifying a groundwater-derived drinking water supply source at and long-term safe yield of approximately 50 gallons per minute (gpm) and development of preliminary budgets for the development and permitting a new well source, treatment and storage facilities, and distribution and connection to the Jenkinsville Road Area.

5.1 Identification of Proposed Target Area for Water Supply Exploration

Based on known conditions (e.g., groundwater flow patterns and recent water quality test results) areas south of State Route 149, east of Patten Mills Road, and north of Sunnyside Road were identified but excluded from consideration as potential target areas for high yielding (e.g., greater than 50 gpm) unconsolidated or consolidated aquifer systems because of 1,4-Dioxane detections in the area.

Favorable groundwater occurrence, circulation and storage properties of the study area are determined greatly by the type of geology, geological contacts, and geomorphology. The main unconsolidated aquifer systems in the area consists of either mapped kame or glaciolacustrine sand deposits at or near surface or a buried bedrock channel deposit east of Glen Lake and south of the wetlands east of French Mountain. High to moderate productivities have also been reported within the limestones and dolostones from the upper Cambrian age Beekmantown Group with the greatest yields being reported along the main fault planes or at locations with multiple intersections of photolineaments. Based on CT Male's review of NYSDEC Well Records in the local surrounding area, experience on previous hydrogeological work, and the mapped presence of principal unconsolidated aquifers or favorable bedrock yielding from the Beekmantown Group, the area along Bay Road north of State Route 149). This area is shown in Figure 3.

5.2 Water Treatment and Distribution

Well water will be pumped from the well through a new water treatment building into a hydro-pneumatic tank (tank) and ultimately into a new distribution main to the Jenkinsville area. It was assumed that the treatment building would be constructed at the site of the new wells. It is also assumed that water quality from the well will be good enough where only disinfection is needed to meet NYSDOH requirements. The treatment building would consist of a chemical storage room, a chlorine feed skid/pumps, chlorine analyzers, control panel and PLC, and metering equipment.

The well pumps would be programmed to maintain a pre-set pressure range in the tank. The volume of the tank would be sized to provide chlorine contact time and adequately handle the peak demands of end users.

The distribution system would consist of 6-inch piping which would be installed between the treatment building/tank and the end users. The path of the new watermain was assumed to follow existing roadways to minimize land acquisition costs. It is also assumed that only approximately 90 homes along Jenkinsville Road, Azure Drive, Mud Pond Road and Rainbow Trail would be served by the new system. Should the new well have the capacity and other homes with road frontage along the path of the new water main have the option to be connected, additional consideration will need to be given to the water main size, pressure setting of the tank and/or the use of a pressure reducing valve near Jenkinsville Road to reduce pressures to acceptable levels.

6.0 SUMMARY AND RECOMMENDATIONS

Results of the updated water system modeling suggest that water age does not appear to be a major concern when evaluating the proposed extension to Jenkinsville. There are some known areas in the water distribution system, nearest the water storage tanks, with elevated levels of THMs. This issue may be mitigated by utilizing a greater range of the water storage tank capacities and allowing the tank levels to drop further than they currently do. This will decrease tank turnover time and decrease water age. It is important to note that this report provides recommendations based on current DOH and EPA standards related to DBPs concentrations and chlorine residuals. These levels are subject to change based on changes in regulations which are likely to become more stringent.

With respect to supplying water to the Jenkinsville area from the Town's existing distribution system during the current average daily and peak demands in the distribution system, there is adequate capacity at the water treatment plant and adequate capacity within the distribution system. The recommended alternative includes the installation of a combination of 8-inch and 12-inch mains as this alternative provides both fire flow and pressure.

6.1 Opinions of Probable Cost

6.1.1 Recommended Alternative

				ESTIMATE	
ITEM NO.	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL PRICE
1	Mobilization & Demobilization	1	LS	50,000.00	$ 50,000.00
2	Maintenance & Protection of Traffic	1	LS	25,000.00	$ 25,000.00
3	Site Preparation	1	LS	15,000.00	$ 15,000.00
4	8" DIP, CL 52 POJ, CML	5,500	LF	95.00	$ 522,500.00
5	12" DIP, CL 52 POJ, CML	10,500	LF	110.00	$1,155,000.00
6	8" RW Gate Valve and Box, MJ, Restrained	18	EA	1,500.00	$ 27,000.00
7	12" RW Gate Valve and Box, MJ, Restrained	9	EA	2,500.00	$ 22,500.00
8	Fire Hydrant Assembly	32	EA	6,000.00	$ 192,000.00
9	Water Service Installation and Meter – ¾"	171	EA	4,250.00	$ 726,750.00
10	Restoration	1	LS	75,000.00	$ 75,000.00
11	Sawcutting Existing Pavement	3,200	LF	1.00	$ 3,200.00
12	Disinfection of Water Distribution System	1	LS	5,000.00	$ 5,000.00
13	Easement and Construction Stakeout	1	LS	3,000.00	$ 3,000.00
14	Erosion and Sediment Control	1	LS	10,000.00	$ 10,000.00
15	Polyethylene Encasement for DIP, All Diameters	15,944	LF	-	$ -
16	Booster Pump Station and Treatment Building	1	LS	500,000.00	$ 500,000.00
Construction Subtotal:					$3,331,950.00
Engineering					$ 499,792.50
Contingency (20%)					$ 766,349.00
Total Project (Rounded)					**$ 4,600,000.00**

6.1.2 Non-Fire Flow Alternative

				ESTIMATE	
ITEM NO.	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL PRICE
1	Mobilization & Demobilization	1	LS	50,000.00	$ 50,000.00
2	Maintenance & Protection of Traffic	1	LS	25,000.00	$ 25,000.00
3	Site Preparation	1	LS	15,000.00	$ 15,000.00
4	6" DIP, CL 52 POJ, CML	16,000	LF	90.00	$1,440,000.00
5	6" RW Gate Valve and Box, MJ, Restrained	27	EA	1,250.00	$ 33,750.00
7	Fire Hydrant Assembly*	16	EA	6,000.00	$ 96,000.00
8	Water Service Installation and Meter – ¾"	171	EA	4,250.00	$ 726,750.00
9	Restoration	1	LS	75,000.00	$ 75,000.00
10	Sawcutting Existing Pavement	3,200	LF	1.00	$ 3,200.00
11	Disinfection of Water Distribution System	1	LS	5,000.00	$ 5,000.00
12	Easement and Construction Stakeout	1	LS	3,000.00	$ 3,000.00
13	Erosion and Sediment Control	1	LS	10,000.00	$ 10,000.00
14	Polyethylene Encasement for DIP, All Diameters	15,944	LF	-	$ -
15	Booster Pump Station and Treatment Building	1	LS	500,000.00	$ 500,000.00
Construction Subtotal:					$2,982,700.00
Engineering					$ 447,405.00
Contingency (20%)					$ 686,021.00
Total Project (Rounded)					**$ 4,120,000.00**

6.1.3 New Water Well Supply

				ESTIMATE	
ITEM NO.	**DESCRIPTION**	**QUANTITY**	**UNITS**	**UNIT PRICE**	**TOTAL PRICE**
1	Initial Hyrogeologic Investigation	1	LS	50,000.00	$ 50,000.00
2	Drill Test Well constructed to production well	1	LS	75,000.00	$ 75,000.00
3	New Well Pumping Test	1	LS	50,000.00	$ 50,000.00
4	Hyrdogeologic Report	1	LS	50,000.00	$ 50,000.00
5	New District Formation	1	LS		$ -
6	Land Aquisition - Easements	1	EA	100,000.00	$ 100,000.00
7	Engineering Design & Report	1	EA	50,000.00	$ 50,000.00
8	Mechanical Backup Well	1	EA	75,000.00	$ 75,000.00
9	Electrical Service	1	EA	25,000.00	$ 25,000.00
10	Emergency Power	1	LS	75,000.00	$ 75,000.00
11	Hydro-pneumatic Tank	1	LS	200,000.00	$ 200,000.00
12	Treatment and Control Building	1	LS	500,000.00	$ 500,000.00
13	6" DIP	20000	LF	95.00	$1,900,000.00
14	6" Valves	20	EA	1,250.00	$ 25,000.00
15	Fire Hydrant Assembly	15	EA	6,000.00	$ 90,000.00
16	Service Connections and Meters	90	LS	4,250.00	$ 382,500.00
17	Long Term O&M and WTP Operator	1	Annually	150,000.00	$ 150,000.00
Construction Subtotal:					$3,797,500.00
Engineering					$ 569,625.00
Contingency (20%)					$ 873,425.00
Total Project					**$ 5,240,550.00**

* For Flushing Only

6.1.4 Jenkinsville Water District Alternative (1999 vs 2022)

JENKINSVILLE WATER DISTRICT	Unit	Quantity	2000 Dollars*		2022 Dollars	
			Unit Cost	Total Cost	Unit Cost	Total Cost
Mobilization/Demobilization	LS	1	$35,000.00	$35,000.00	$67,060.00	$67,060.00
Clearing & Grubbing	LS	1	$7,500.00	$7,500.00	$14,370.00	$14,370.00
Maintenance & Protection of Traffic	LS	1	$12,000.00	$12,000.00	$22,992.00	$22,992.00
Construction Photos	LS	1	$4,000.00	$4,000.00	$7,664.00	$7,664.00
Site Preparation	LS	1	$70,000.00	$70,000.00	$134,120.00	$134,120.00
Environmental Protection	LS	1	$24,000.00	$24,000.00	$45,984.00	$45,984.00
Construction Stakeout	LS	1	$26,000.00	$26,000.00	$49,816.00	$49,816.00
Rock Excavation	CY	350	$75.00	$26,250.00	$143.70	$50,295.00
Test Pits	EA	300	$20.00	$6,000.00	$38.32	$11,496.00
8" DI pipe	LF	17,250	$35.00	$603,750.00	$67.06	$1,156,785.00
12" DI pipe	LF	19,780	$45.00	$890,100.00	$86.22	$1,705,431.60
Connections	EA	1	$1,000.00	$1,000.00	$1,916.00	$1,916.00
8" Valve	EA	14	$800.00	$11,200.00	$1,532.80	$21,459.20
12" Valve	EA	22	$1,050.00	$23,100.00	$2,011.80	$44,259.60
Fire Hydrants	EA	62	$2,000.00	$124,000.00	$3,832.00	$237,584.00
3/4-inch corporation stops	EA	220	$50.00	$11,000.00	$95.80	$21,076.00
3/4-inch curb stop and box	EA	220	$50.00	$11,000.00	$95.80	$21,076.00
3/4-inch Type K copper water services	LF	6,600	$18.00	$118,800.00	$34.49	$227,620.80
Pipe zone bedding	CY	1,949	$20.00	$38,980.00	$38.32	$74,685.68
Pipe zone backfill	CY	10,241	$15.00	$153,615.00	$28.74	$294,326.34
Special Trench backfill	CY	12,935	$18.00	$232,830.00	$34.49	$446,102.28
Subbase	CY	7,186	$20.00	$143,720.00	$38.32	$275,367.52
Asphalt concrete paving	TON	7,763	$45.00	$349,335.00	$86.22	$669,325.86
Soil preparation	MSF	353	$200.00	$70,600.00	$383.20	$135,269.60
Hydroseeding	MSF	353	$200.00	$70,600.00	$383.20	$135,269.60
General restoration	LS	1	$60,000.00	$60,000.00	$114,960.00	$114,960.00
Estimated Construction Cost				$3,124,380.00		$5,986,312.08
Soil Borings	EA	31	$750.00	$23,250.00	$1,437.00	$44,547.00
Survey	LS	1	$26,200.00	$26,200.00	$50,199.20	$50,199.20
Inspection	LS	1	$66,000.00	$66,000.00	$126,456.00	$126,456.00
Engineering	LS	1	$175,000.00	$175,000.00	$335,300.00	$335,300.00
Contingency (10% of Construction)			$312,438.00	$312,438.00	$598,631.21	$598,631.21
Easements: Preparation	LS	1	$11,000.00	$11,000.00	$21,076.00	$21,076.00
Estimated Total Project Cost				**$3,738,268.00**		**$7,162,521.49**

*Cost Estimate in 1999 Report used Year 2000 Dollar Values

The format of this opinion of probable cost table is consistent with that presented in the 1999 report for ease of comparison with the original document. The unit prices presented

in 1999 were increased by factor of 3% compounded annually to account for 22 years of cost escalation. It should be noted that this project includes more pipe and water service connections that the project which is presented in this report.

7.0 ADDITIONAL CONSIDERATIONS

The following sections describe potential water infrastructure operating issues and needs, should the distribution system be expanded in the short term or long term or should new users with high daily water demands be added. Expansions would include creating new water districts and providing more flow to neighboring communities which already have agreements in place to purchase water from the Town.

7.1 Summer Demand and Pressure

While the analysis suggests that water age is not a concern in the Jenkinsville area, the existing conditions and capacity of the WTP should be carefully considered when adding significant new users to the system. The WTP is located at one of the lowest points in elevation in the entire distribution system. The static head (pressure) at the WTP when the tanks are full is approximately 270 feet (117 psi). Static head is the difference in hydraulic grades between the high-water level of the tanks and the elevation of the WTP. Static head does not include additional pressure produced from water flowing through a pipeline. When the high-lift pumps are on and actively pumping water into the distribution system, friction head, or dynamic head, is produced. Friction head increases exponentially as the flowrate increases. The total dynamic head (TDH) is the sum of the static head and the friction head at any given flowrate.

The Town produces and pumps significantly more water during the summer months resulting in peak daily flows of around 11 MGD and a TDH of approximately 331 feet (140 psi). At 15 MGD, the maximum rated capacity of the WTP, the expected TDH is approximately 390 feet (170 psi). An evaluation of all piping, fittings, valves, and other appurtenances at the WTP should be conducted to determine the rated pressure to ensure that the increased pressure, considering surge pressure and a factor of safety, will not exceed the pressure rating of the piping and equipment at the WTP.

7.2 Pressure Spikes Related to Full Water Storage Tanks

During periods when the output of the water treatment plant exceeds the demand, the water storage tanks in the system will begin to fill. The closest tank to the water treatment plant is the Luzerne Tank. Once this tank reaches its maximum elevation, an altitude valve automatically closes which changes the fluid dynamics in the distribution system. Flow is then forced north to the West Mountain Tank. The increased length between the WTP and the next nearest tank with available capacity results in increased friction loss resulting in abrupt pressure spikes at the WTP. When this occurs while the WTP is pumping 11 MGD, the resulting pressure is approximately 165 psi. As the demand in the system grows, and the output of the WTP increases, it would be expected that these pressure spikes would also increase. To address this conditions, two alternatives can be considered.

7.2.1 Infrastructure Improvement Alternate 1 – Construct Additional Water Storage Tank

To help alleviate surges and better balance system pressures, Alternative 1 includes the construction of an additional water storage tank at the Luzerne Tank site with an overflow elevation which is higher than the maximum elevation of the existing tank. The second, new tank would be designed to have enough capacity to store water to balance out pressures during times when the existing Luzerne Tank altitude valve closes, and the output of the plant is greater than the demand. Preliminary study of this alternative indicated that a one-million-gallon tank with an overflow elevation of 670.00 will act to mitigate pressure spikes.

The Queensbury Water System has 5-million gallons of finished water storage within the distribution system. This includes the Luzerne Tank, the West Mountain Tank, the (2) Gurney Tanks, and the Airport Tank. Generally, the NYSDOH recommends that water systems provide (1) one average day's-worth of water in storage within the distribution system in the event of an emergency at the WTP where no water can be produced. A balance must be created in the case of Queensbury needing to provide the storage and ensure high water quality. Providing adequate storage and good water quality can be difficult to achieve in some water systems. The Town's distribution system is one of those systems because of the drastic changes in water demand between the winter and summer months. During the winter months when the demand is low (3 MGD), the Town's water storage capacity exceeds an average day's demand. During the summer, the storage is approximately half of the peak demands. By constructing a new tank, the total storage in the distribution system will increase and move toward a benchmark of providing enough

storage in the system to serve customers for at least 24-hours in the event of an emergency.

The budget level opinion of probable cost for a new one million-gallon, pre-stressed concrete water storage tank at the Luzerne Tank site is $2,000,000.00.

7.2.2 Infrastructure Improvement Alternate 2 – Modify Existing Luzerne Tank

This alternative includes raising the effective level of the Luzerne Storage Tank by approximately 16 feet to an elevation of approximately 670.00. This could be accomplished by maintaining the existing tank and adding sections as needed to the desired finished elevation. From a permitting, design and approval standpoint, this option could prove desirable compared to that for a new tank.

The budget level opinion of probable cost to modify the existing tank at the Luzerne Tank site is $1,250,000.00.

7.2.3 Infrastructure Improvement Alternate 3 – Modify Existing West Mountain Tank

Another alternative considered included the effective level of the West Mountain Storage Tank by approximately 16 feet to an elevation of approximately 666.00. During the peak summer day scenarios, the maximum elevations of the West Mountain Tank does not reach the maximum elevation of 650.00 so raising the elevation and the total volume of this tank does not act to relieve pressure spikes at the WTP. Operational changes at the WTP and the addition of automated valves could allow the full capacity of the tank to be used, with the main benefit being additional storage volume only and not pressure relief.

The addition of a new pump station at this location would provide additional head pressure needed to further fill up the West Mountain Tank and utilize the full storage capacity of the tank. Similar to the West Mountain Tank, the Gurney storage tanks also do not reach their respective full capacities. Adding additional head to the West Mountain Tank will also act to further fill the Gurney Tanks.

This alternative was investigated, but it was found to provide no benefit related to the pressures at the WTP, therefore no cost analysis was performed.

7.3 Water Treatment Plant Design Capacity

As noted previously in this report, the water treatment plant has a design capacity of 15 MGD. During the development of this report, it was noted that the WTP can treat this capacity of water for short periods of time, but likely could not sustain 15 MGD for extended periods of time. Additional study of the ultimate capacity would be appropriate that this stage to determine the maximum capacity of the plant and if necessary, determine the upgrades required to increase the capacity of the plant.

According to the operators and the Water Superintendent, the vertical turbine pumps can supply 15 MGD of raw water to the WTP but there are no redundant pumps available should any of these pumps fail, meaning that should the maximum demand of 15 MGD be required in the system, one equipment failure could result in an inability to adequately supply users with water. Consideration should be given to adding one or more raw water supply pumps to achieve a level of redundancy required to operate the WTP at full capacity. Additionally, two new 700 HP finished water pumps should be budgeted as the WTP capacity is increased.

As additional users are added to the system and the Town continues to add users, consideration must be given to providing increased treatment capacity including additional clarification, filtration and sludge handling facilties.

7.4 Storage Tank Capacities

During this investigation, it was noted that the West Mountain Tank and the Gurney Tanks do not reach their maximum capacities during the typical summer day. The demand in the system result in normal hydraulic grades which are below the maximum capacities of the tanks.

The installation of a pump station at the West Mountain or Gurney Road storage tanks will enable the tanks to reach maximum capacities, providing increased storage capacity and marginally increasing the working pressure of the system. Providing metering on the outlets of the tanks will allow the Town to monitor flows and monitor overall water age and make adjustments if necessary.

The opinion of probable cost for installing a new pump station at either tank is $850,000.00.

7.5 Water Rate Structure Review

Another consideration is for the Town to explore ways to reduce demand during the summer months to ease stress on the WTP. According to the water department staff, one cause of the increased demand in the summer is customers using Town water for lawn irrigation. To put this in perspective, the average day winter demand of 3 MGD is over tripled in that an average summer day use often exceeds 10 MGD. Consideration could be given to revising the water rate structure so customers who desire to irrigate lawns with Town water pay a premium to do so. This may cause some customers to reduce frequency and duration of lawn watering and others to eliminate the practice altogether. Should the Town explore this, it should be noted that if this strategy is successful in reducing demands significantly, it could result in revenue loss to the Queensbury Consolidated Water District.

7.6 Dead End Water Mains

As noted previously in this report, it is normally undesirable to install a dead-end water main due to concerns with water quality. In this case, there is a significant amount of extra pipe needed to create a loop and connect back into the distribution system and the extra pipe would pass in front of properties where the wells, as of the writing of this report, have not been shown to contain 1,4-Dioxane. While the water age analysis does not show elevated water ages, it is reasonable to assume that not all properties included in the analysis will connect. Less users create higher water age potentially resulting in lower chlorine residuals and elevated DBPs. One solution to mitigate the risk of this is to regularly flush a hydrant at the end of the dead end main to ensure fresh water is available to the customers. Automated hydrant flushing devices are readily available and are used for this purpose at many municipalities in New York State. An automated flusher should not be used during the winter months due to freezing temperatures, but colder water temperatures alone can slow the generation of DBPs. Automated flushers will significantly reduce personnel and vehicles hours needed for regular flushing programs, though periodically they will need to be checked to ensure they are functioning as intended.

Appendix A

1999 Engineering Report

APRIL 1999

Engineer's Report for Proposed Glen Lake, Sunnyside Lake, & Jenkinsville Water District Extensions

Town of Queensbury
Warren County, New York

Prepared for:

TOWN OF QUEENSBURY
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Prepared by:

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Queensbury Water District
Proposed Water District Extensions

Table of Contents

I. EXECUTIVE SUMMARY

The proposed Town of Queensbury Water District extensions to serve the Glen Lake area, the Sunnyside Lake area, and the Jenkinsville area are feasible without the need for the construction of a water tank to serve the medium pressure zone. However, the annual user costs are higher than is likely to be acceptable to the residents.

If there is interest on the part of the residents to the concept of municipal water service, additional funding sources should be investigated in order to reduce costs.

II. INTRODUCTION

The Town of Queensbury Water Department has contracted with C.T. Males Associates, P.C. to determine the infrastructure needs and costs associated with the development of three new water district extensions within the Town of Queensbury. The water district areas that were studied were the Glen Lake area, Sunnyside Lake area, and the Jenkinsville area. The results of the study are presented in this report.

III. LOCATION

A map showing the proposed water district extension locations and lists of tax parcel numbers and assessed values are included in Appendices A and B of this report.

Glen Lake Water District

The Glen Lake water district extension area includes year round and seasonal homes around the lake, a couple of restaurants, Glens Falls Country Club, plus subdivisions off Glen Lake Road and Tee Hill Road for a total of 374 service connections. About 118 (approximately 32%) of the existing service connections are considered "camps" or seasonal residences. Service to residents in both the northern and southern areas of the lake was studied, however, it was determined that due to population density and topography, it was more economically feasible to serve primarily the northern sections.

A 12 inch water main is proposed to be connected to the existing 8 inch water main that extends from Route 9, east along Glen Lake Road. The 12 inch main would follow Glen Lake Road to Tee Hill Road, then Tee Hill Road South to Bay Road. Residents along the lake and four major subdivisions would be served via 8 inch water mains. A second connection would be made to the existing 12 inch main on Round Pond Road. The new 12 inch is proposed to follow Round Pond Road then Blind Rock Road to connect with an existing 12 inch main at Hunter Brook Lane and Blind Rock Road. The second connection would serve a dual purpose. It would provide an additional feed for the Glen Lake Water District and it would strengthen the northern part of the existing Queensbury system by adding flexibility and redundancy as recommended by the

November 1998 engineer's report titled "Queensbury Hydraulic Model" prepared by C.T. Male Associates, P.C.

Sunnyside Lake Water District

Sunnyside Lake water district extension area is proposed to include residents and camps around the lake, plus subdivisions off Bay Road and Sunnyside Road. A total of 177 service connections would be included of which about 28 residences, or about 21%, are considered seasonal. A 12 inch main would connect to the existing 12 inch main on Bay Road at Cedar Court and extend north to Sunnyside Road and east along Sunnyside Road to Rockwell Road. An 8 inch main is proposed to serve the north side of the lake along Sunnyside North Road.

Jenkinsville Water District

The Jenkinsville water district extension area would include 220 service connections including residential parcels, Sunnyside Par 3 Golf Course, and Ridge Jenkinsville Park. A 12 inch main is proposed to connect to the existing 8 inch main on Rockwell Road. The 12 inch main would follow Rockwell Road north to Sunnyside Road, east on Sunnyside, and North on Jenkinsville Road to service homes on Old Cronin Road, Mud Pond Road, Asure Drive, and Rainbow trail. Subdivisions on Stonehurst Drive and Brookfield Run would be served by 8 inch water mains.

IV. NEED FOR THE PROJECT

Water users is the area are currently dependent on individual ground water wells. Some of the homes take water directly from Glen Lake. The lots, especially in the lake shore areas, are small. Many of the homes were built before modern standards were used for separation distances between septic and wells. Many of the systems may not meet current standards. In addition, homes off Rockwell Road in the Brookwood Drive area have experienced bacteriological water quality problems and residents in the area of Sunnyside and Ridge Roads have experienced aesthetic water quality problems including sulfur and iron problems. In the Jenkinsville area residents are concerned about the existing Town landfill, existing private construction and demolition landfill (C&D), and the proposed Town C&D landfill and would like the opportunity to hook to public water.

V. SOURCE OF WATER SUPPLY

The source of supply would be the Town of Queensbury Water District. It is proposed that the new water district extensions be fed by up to four connections to the existing system via 8 inch and 12 inch ductile iron water mains as shown on the maps included in Appendix C. The Town of Queensbury Water District is permitted to supply 15

MGD. The Town's water treatment plant currently supplies 3.5 MGD average daily flow, 9.1 peak daily flow, and 20 MGD maximum hourly flow. The Queenbury Water District has the capacity to supply the present 0.2 MGD average, or 0.5 MGD peak day demand which would be required by these district extensions.

VI. HYDRAULIC ANALYSIS

In November 1998 a hydraulic model of the Queensbury water distribution system was developed. To determine the feasibility of serving water to the new water district extensions, the piping needed to serve these areas was added to the existing model. Several analyses were performed to determine the pressures and flows in the new areas and the impact on the existing system during current peak, future build-out peak, and fire flow scenarios. The results are summarized below. Tables showing the model results are included in Appendix D of this report.

It was determined that the existing Queensbury system has the capacity and operates at a sufficient hydraulic grade to serve the new water district areas without the addition of a new storage tank or booster pumping station. The elevations within the proposed district areas range from 308 to 500 feet which is within the range that can be served by the current Queensbury system.

A tank would be helpful to provide prolonged fire flows in the northern areas. It would also add storage to the middle pressure zone of the Queensbury system which currently does not exist. However, the pressure reducing valves (PRVs) required for the new water district extensions in the Glen Lake area and two of the existing pressure reducing valves (Route 9 at Aviation Road and Quaker Road at the Bank) would need to be upgraded to include a delayed opening function and a SCADA system to ensure turnover in the tank. If, in the future, the Town plans to add a new tank in the middle pressure zone, the Town may want to plan for upgrading appropriate mains, based on tank location, to bring water to and from the tank more efficiently.

Current Peak Demands

The model was run with the existing system set at current peak demands, all proposed purchase district peak demands on line, and peak demands within the new water districts. It was estimated that 771 service connections would be included in the new water districts. A daily demand of 250 gallons per service connection was used. This yielded 192,750 gallons per day average demand. A peaking factor of 2.6, typical for Queensbury, was applied to yield a peak day demand of 501,150 gallons per day. This was distributed to nodes based on parcel density in each area. The model was run with an 8 inch main on Glen Lake Road to Tee Hill Road and on Jenkinsville Road. The 8 inch mains were upgraded to 12 inch mains on the model only after the results of the fire flow analyses indicated the need for 12 inch mains in those areas. Therefore, the

results of run 1 (current peak demands) reflects conditions with the 8 inch main in place.

Based on a first run of the model and elevations in the Glen Lake area, it was determined that the best locations for the PRV's between the high and medium pressure zones would be Round Pond Road just before the intersection with Birdsall Road and Tee Hill Road just before the intersection with Bay Road. This results in sections on the north side of Glen Lake being included in the high pressure zone. The PRV on Round Pond Road was set at 69 psi and a hydraulic grade of 562 feet. The PRV on Tee Hill Road was set at 65 psi and a hydraulic grade of 552 feet.

High velocities occurred in the pipes exiting the water treatment plant, as would be expected, and between Round Pond Road and Glen Lake Road where the new demands were being met via flows from the Gurney Lane Tank area. The following is a summary of flows to the new water district areas.

Connection Location	Pipe Diameter	Flow gpm
Glen Lake Road	8"	410
Round Pond Road	12"	977
Bay Road	12"	-65
Rockwell Road	8"-12"	-15

In general, the flow is supplied to the area via Glen Lake Road and Round Pond Road and is actually flowing back into the existing system at Bay Road and Rockwell Road. This boosts the pressure slightly (less than 10 psi) in the Haviland Road area of the existing system.

The pressures in the existing system are not impacted by more than a few psi. The pressure range in the new district areas is estimated to be 51-105 psi. The low pressure of 51 psi occurred at J-62 which is located at Bay Road and Stone Gate Drive. The highest pressure of 105 psi occurred at J-85, at Sunnyside East Road and Brookfield Run. The highest velocity in the new district areas is estimated to be 2.6 fps in pipe P-46 on Glen Lake Road. The velocity on Route 9 to the Glen Lake and Round Lake Road connections was 3.84 fps which is acceptable at peak flow rates.

Future Peak Demands

To estimate future peak demands in the new water district areas at buildout, estimated current peak flow was multiplied by a factor of three. This resulted in a future peak day demand of 1,503,450 gpd. This was distributed to the nodes throughout the new water district areas with additional flow being added to nodes adjacent to vacant land or subdivisions which are currently under construction.

The pressures in the existing system were not impacted by more than a few psi except on Round Pond Road at the point of connection to the new water districts. The pressure at node J-1061 dropped 33 psi from the current peak day pressure of 102 psi to 69 psi. This pressure is still very acceptable.

The pressures in the new system ranged from 39-99 psi. The low pressures occurred at J-33 on Glen Lake Road (Moon Hill Road) just west of Dineen Road and J-40 on Tee Hill Road at Hall Road. The high pressure again occurred at J-85, at Sunnyside East Road and Brookfield Run.

The flows for both an 8 inch on Glen Lake Road and a 12 inch are shown. The flow distribution changes, however, the pressures in general are consistent with either an 8 inch or a 12 inch main in place. The 12 inch makes a difference primarily during fire flows. The flows into the system were as follows:

Connection Location	Pipe Diameter	8"Glen Lake Rd Flow gpm	8"-12" Glen Lake Rd Flow gpm
Glen Lake Road	8"-12"	542	815
Round Pond Road	12"	1,404	1,348
Bay Road	12"	441	177
Rockwell Road	8"-12"	-63	-95

In addition to the Glen Lake Road and Round Pond Road mains, Bay Road contributes flow to the new water district areas in this future peak scenario.

Main Break Scenarios

Scenarios were run at current peak day demand with breaks on Rockwell Road, Bay Road (just south of Sunnyside Road), and worse case scenario, simultaneously on Round Pond Road and Glen Lake Road. Since Rockwell and Bay Roads do not contribute flow to the area during current peak day demands, there were no impacts to the system pressures when they were removed from service. When the connections at both Round Pond Road and Glen Lake Road were removed, the pressures in the new water districts ranged from 31-96 psi, at J-33 and J-85 respectively. During future peak flows the pressure range dropped to 23-95 psi at J-33 and J-85 respectively. This is a worse case scenario and acceptable pressures are maintained throughout the distribution system during this emergency situation.

Jenkinsville Water District Only

Formation of only the Jenkinsville Water District was looked at because of the concern with the existing and proposed landfills. The only connection to the existing system

would be via Rockwell Road. At future peak day demands, the pressures in the proposed Jenkinsville water district area are estimated to range from 55 psi at junctions J-68 (Sunnyside Road and East Road) and J-89 (Mud Pond Road at Asure Drive) to 87 psi at J-85 (Sunnyside East Road at Brookfield Run). No tank or booster pump station would be required.

Fire Flows

Fire flow scenarios were run at 1000 gpm for three different locations. The flows in the system were set for current peak day demand, and therefore, conservative. The locations were as follows:

Node	Location
J-27	Glen Lake Road at Elm Drive
J-44	Sunnyside Road at Bay Road
J-89	Mud Pond Road

Glen Lake Water District Fire Flows

With the fire flow imposed on J-27 on Glen Lake Road, and an 8 inch main serving the Glen Lake and Tee Hill Road areas, negative pressures occurred throughout the proposed Glen Lake Water District area. The fire flow was run again with a 12 inch main installed along Glen Lake Road. The existing 8 inch leg from Route 9 remained in service. This resulted in all pressures exceeding the 20 psi minimum pressure requirement except at J-33 which was 16 psi. The fire flow scenario had been run at current peak day demand. Fire flow requirements for pressures are to be met under average day flow conditions. Therefore, a check was run with current average day flow conditions which yielded acceptable pressures throughout the district. The current average day flow scenario was also run to confirm that the 12 inch main was not oversized. It was confirmed that the 12 inch main is necessary to meet fire flow pressure requirements even at current average day demands. The potential for growth in that area is such that it should not exceed the capacity supplied by the 12 inch connected to the existing 8 inch. If in the future, growth exceeds the expected rate, the 8 inch section from Route 9 can be upgraded to a 12 inch main at that time.

Sunnyside Lake Water District Fire Flows

The results of a fire flow scenario at J-44 in the Sunnyside Lake water district area indicated that all system pressures were acceptable.

Jenkinsville Water District Fire Flows

A 1000 gpm fire flow imposed on J-89 yielded acceptable pressures throughout except at J-88 and J-89 at the site of the fire flow on Mud Pond Road. The pressures were

estimated to be 14 and -2 psi respectively. If Jenkinsville Road and Mud Pond Road were served by a 12 inch main instead of an 8 inch main, all the pressures would be acceptable under the 1,000 gpm fire flow scenario. Therefore, a 12 inch main is recommended.

VII. PROJECT COSTS

The cost to construct the infrastructure required to serve each of the proposed water districts is included in Appendix E. Each water district cost was calculated separately. The total project costs include a 10% contingency, engineering, bonding, legal, administrative, and advertising costs. Fifty percent of the cost of the 12 inch connector main along Round Pond and Blind Rock Roads is assumed to be paid for by the Town of Queensbury Water District as this main also benefits the existing system and users. The cost to the Town is estimated to be $330,777. The cost estimates assume construction in 2000. A summary of the costs is as follows:

Water District	Total Estimated Project Cost
Glen Lake	$5,072,367
Sunnyside Lake	$1,942,324
Jenkinsville	$3,738,268

VIII. FINANCING

At prevailing market conditions, municipal bond market project financing is projected to be available over a 20 year term at an annual interest rate of 5.5%. If the project were financed at these rates, total bond repayment each year would be as follows:

Water District	Total Annual Bond Repayment
Glen Lake	$424,452
Sunnyside Lake	$162,532
Jenkinsville	$312,816

Bond repayment may be made with moneys rasied from a special assessment on property within the project area. The total property tax ratable base per water district, an estimated property tax per $1,000 of assessed value, and the annual cost per average home including minimum water rates is summarized below. The water rate structure for the Town of Queensbury is $20.00 for the first 8,000 gallons then $1.52 per each additional 1,000 gallons. Users are billed quarterly. The minimum annual bill is $80.00. The estimated costs to the users are as follows:

Water District	Total District Assessed Value*	Tax per $1000 Assessed Value	Average Residential Assessment Within District**	Annual Cost Per Average Home Value	Annual Cost Per Average Home Value Including $80.00 Water Fee
Glen Lake	$52,459,195	$ 8.09	$132,512	$1,072	$1,152
Sunnyside Lake	$15,662,450	$10.38	$ 89,677	$ 931	$1,011
Jenkinsville	$27,887,690	$11.22	$ 128,315	$1,440	$1,522

IX. RECOMMENDATIONS

The annual costs for the users for all three of the proposed district extensions is higher than is generally acceptable to property owners. This is the case even though the assumed interest rate for bond repayment is low due to the favorable bond market which is expected to prevail for the new few years.

Due to the water quality and quantity which has been available in the area from individual wells, public water would probably be a welcome improvement for existing residents. This together with the favorable bond market suggests that ways to lower the annual user cost should be pursued so that implementation could proceed.

We recommend that the district extension concepts and costs be presented to the residents knowing that the annual costs will generate an adverse reaction. Through the public information process, determine the level of interest if the annual costs were more reasonable. Generally, agencies which provide assistance for projects, such as water district extensions, consider an annual cost of $450-$550 per year as reasonable costs. Costs above this range can lead to assistance depending on the availability of funds and need.

If the interest on the part of the property owners and residents exists, preapplications should be made to funding agencies to determine the availability of funds to reduce the annual costs.

Respectfully submitted,

C.T. MALE ASSOCIATES, P.C.

Gary R. Male, P.E.
Project Engineer

*Includes all taxable properties.
**Based on existing residential buildings only.

APPENDIX A

TAX PARCEL NUMBERS
&
ASSESSED VALUES

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed v	%
36.-1-12		STATE ROUTE 149	MERC.	2481400	248140	10
36.-1-16		201 GLEN LAKE RD.	RES.	75000	22500	30
36.-1-17		15-C ASH DR.	2 RES.	191800	191800	
36.-1-18		177 GLEN LAKE RD.	RES.	85000	85000	
36.-1-4	x	GLEN LAKE RD.	VAC.	22200	22200	
36.-1-6.1	x	GLEN LAKE RD.	SHED	54000	54000	
36.-1-6.2		382 GLEN LAKE RD.	RES.	70000	70000	
36.-2-1	x	GLEN LAKE RD.	VAC.	25400	25400	
36.-2-21		27 ASH DR.	3 FAMILY	130000	130000	
36.-2-22		169 GLEN LAKE RD.	RES.	75200	75200	
36.-2-23		15 ASH DR.	RES. UNFIN.	173400	173400	--
36.-3-2		GLEN LAKE RD.,OFF	RES.	58000	58000	
36.-3-3		211 GLEN LAKE RD.	RES.	97700	97700	
38.-1-1.1	x	GLEN LAKE RD.	FOREST	48600	14580	30
38.-1-11	x	33 SULLIVAN RD.	VAC.	5500	5500	
38.-1-12		SULLIVAN RD.	RES.	81000	81000	
38.-1-13		31 SULLIVAN RD.	RES.	24800	24800	
38.-1-14		29 SULLIVAN RD.	RES.	38800	38800	
38.-1-15		370 SULLIVAN RD.	RES.	65600	65600	
38.-1-16	x	SULLIVAN RD.	VAC.	5500	5500	
38.-1-17	x	SULLIVAN RD.	VAC.	6200	6200	
38.-1-18	x	SULLIVAN RD.	VAC.	6800	6800	
38.-1-19		11 SULLIVAN RD.	RES.	93100	93100	
38.-1-2		357 GLEN LAKE RD.	RES.	77800	77800	
38.-1-20	x	SULLIVAN RD.	VAC.	7300	7300	
38.-1-21		3 SULLIVAN RD.	CAMP	96400	96400	
38.-1-3	x	SULLIVAN PLACE	VAC.	3300	3300	
38.-1-4		57 SULLIVAN PL.	RES.	30900	30900	
38.-1-5	x	SULLIVAN RD.	VAC.	3400	3400	
38.-1-6	x	1725 SULLIVAN RD.	GAR.	13700	13700	
38.-1-7		49 SULLIVAN PLACE	CAMP	74300	74300	
38.-1-8	x	SULLIVAN RD.,OFF	VAC.	600	600	
38.-1-9	x	SULLIVAN RD.,OFF	VAC.	200	200	
38.-2-1		SULLIVAN PLACE	CAMP	24300	24300	
38.-2-10	x	SULLIVAN DR.	VAC.	3400	3400	
38.-2-11	x	SULLIVAN DR.	VAC.	3400	3400	
38.-2-12		12 SULLIVAN DR.	RES.	58800	58800	
38.-2-13		SULLIVAN DR.	CAMP	37800	37800	
38.-2-14		27 SULLIVAN DR.	RES.	69400	69400	
38.-2-17	x	SULLIVAN DR.	VAC.	8000	8000	
38.-2-18		17 SULLIVAN DR.	RES.	124700	124700	
38.-2-19		SULLIVAN DR.	CAMP	36400	36400	
38.-2-2	x	SULLIVAN PLACE	VAC.	2500	2500	
38.-2-20		345 GLEN LAKE RD.	RES.	85900	85900	
38.-2-23	x	GLEN LAKE RD.	VAC.	5900	5900	
38.-2-24	x	GLEN LAKE RD.	VAC.	5700	5700	
38.-2-25		317 GLEN LAKE RD.	CAMP	78000	78000	
38.-2-27		311 GLEN LAKE RD.	CAMP	62200	62200	
38.-2-28		GLEN LAKE RD.	RES.	57500	57500	
38.-2-3		32 SULLIVAN DR.	RES.	118400	118400	
38.-2-4	x	34 SULLIVAN PLACE	VAC.	15900	15900	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
38.-2-5	x	SULLIVAN PLACE	VAC.	3400	3400	
38.-2-6		42 SULLIVAN PLACE	RES.	97000	97000	
38.-2-7		46 SULLIVAN PLACE	RES	82300	82300	
38.-2-9		SULLIVAN DR.	CAMP	52800	52800	
38.-3-1.1	x	SULLIVAN RD.	VAC.	500	500	
38.-3-1.2		16 SULLIVAN RD.	RES.	108200	108200	
38.-3-10		12 SULLIVAN RD.	CAMP	69600	69600	
38.-3-2		26 SULLIVAN RD.	RES.,BTY.SAL	97200	97200	
38.-3-3		30 SULLIVAN RD.	RES.	60200	60200	
38.-3-4		13 SULLIVAN RD.	RES.	53800	53800	
38.-3-5	x	SULLIVAN RD.	VAC.	4500	4500	
38.-3-6		261 GLEN LAKE RD.	RES.	83900	83900	
38.-3-7		3 GLEN LAKE RD.	RES.	55100	55100	
38.-3-8	x	GLEN LAKE RD.	VAC.	12200	12200	
38.-3-9		4 SULLIVAN RD.	CAMP	79200	79200	
38.-4-1	x	GLEN LAKE RD.	VAC.	28200	28200	
38.-4-10.1		330 GLEN LAKE RD.		257700	257700	
38.-4-12		GLEN LAKE RD.	CAMP	139000	139000	
38.-4-13		GLEN LAKE RD.	CAMP	110000	110000	
38.-4-14		336 GLEN LAKE RD.	RES.	190500	190500	
38.-4-16		GLEN LAKE RD.	RES.	153000	153000	
38.-4-17	x	GLEN LAKE RD.	VAC.	30000	30000	
38.-4-19		340 GLEN LAKE RD.	CAMP	179100	179100	
38.-4-2		298 GLEN LAKE RD.	MERC.	277900	277900	
38.-4-20		344 GLEN LAKE RD.	CAMP	139400	139400	
38.-4-21		346 GLEN LAKE RD.	CAMP	106900	106900	
38.-4-22		348 GLEN LAKE RD.	CAMP	142200	142200	
38.-4-23		352 GLEN LAKE RD.	2 RES.	267400	267400	
38.-4-24		1718 GLEN LAKE RD.	CAMP	174900	174900	
38.-4-25	x	1801 GLEN LAKE RD.	VAC.	27000	27000	
38.-4-26	x	GLEN LAKE RD.	VAC.	54000	54000	
38.-4-3		GLEN LAKE RD.	CAMP	98000	98000	
38.-4-4		308 GLEN LAKE RD.	CAMP	160000	160000	
38.-4-6		312 GLEN LAKE RD.	CAMP	198400	198400	
38.-4-7		316 GLEN LAKE RD.	CAMP	163800	163800	
38.-4-8	x	SULLIVAN RD.	VAC.	27300	27300	
38.-4-9		GLEN LAKE RD.	CAMP	150000	150000	
39.-1-1		290 GLEN LAKE RD.	RES.	128300	128300	
39.-1-10		5 CHESTNUT RD.	CAMP	102600	102600	
39.-1-11		CHESTNUT RD.	CAMP	94000	94000	
39.-1-12		CHESTNUT RD.	CAMP	97000	97000	
39.-1-13		CHESTNUT RD.	CAMP	79900	79900	
39.-1-14		13 CHESTNUT RD.	RES.	119600	119600	
39.-1-15		15 CHESTNUT RD.	RES.	181600	181600	
39.-1-16		17 CHESTNUT RD.	CAMP	166300	166300	
39.-1-17		19 CHESTNUT RD.	CAMP	100500	100500	
39.-1-18		7 GARRETT LANE	CAMP	108800	108800	
39.-1-19		8 GARRETT LANE	RES.	135000	135000	
39.-1-20		1762 BIRCH RD.	CAMP	152800	152800	
39.-1-21		29 BIRCH RD.	CAMP	96400	96400	
39.-1-22		BIRCH RD.	RES.	149900	149900	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed 1	%
39.-1-24		BIRCH RD.,OFF	2 CAMPS	91900	91900	
39.-1-25		BIRCH RD.,OFF	CAMP	100000	100000	
39.-1-26		41 BIRCH RD.	CAMP UNFIN.	190000	190000	
39.-1-27		43 BIRCH RD.	RES.	251000	251000	
39.-1-28		47 BIRCH RD.	CAMP	173900	173900	
39.-1-3		274 GLEN LAKE RD.	RES.	188700	188700	
39.-1-30	x	BIRCH RD.	VAC.	45000	45000	
39.-1-31		49 BIRCH RD.	RES.	425000	425000	
39.-1-32	x	BIRCH RD.,OFF	VAC.	22000	22000	
39.-1-33		BIRCH RD.	CAMP	131200	131200	
39.-1-34		53 BIRCH RD.	CAMP	139800	139800	
39.-1-35		BIRCH RD.,OFF	CAMP	135100	135100	
39.-1-36		63 BIRCH RD.	CAMP	117400	117400	
39.-1-37		65 BIRCH RD.	CAMP	139500	139500	
39.-1-38	x	ASH DR., OFF	VAC.	12000	12000	
39.-1-39		ASH DR., OFF	APTS.	144900	144900	
39.-1-4		272 GLEN LAKE RD.	CAMP	106600	106600	
39.-1-40		10 BENMOST BUR LAN	RES.	269900	269900	
39.-1-41		102 ASH DR.	CAMP	153800	153800	
39.-1-43		6 NEVER REST LANE	CAMP	188500	188500	
39.-1-44		ASH DR.	CAMP	176000	176000	
39.-1-45.1		ASH DR.	APTS.	400000	400000	
39.-1-46	x	ASH DR.	VAC.	30100	30100	
39.-1-47		ASH DR.	APT. UNFIN.	308700	308700	
39.-1-49		86 ASH DR.	2 FAM.RES.	160000	160000	
39.-1-5		270 GLEN LAKE RD.	RES.	176000	176000	
39.-1-51		84 ASH DR.	CAMP	249900	249900	
39.-1-52		82 ASH DR.	CAMP	84200	84200	
39.-1-53		80 ASH DR.		100000	100000	
39.-1-54		76 ASH DR.	CAMP	122800	122800	
39.-1-55		74 ASH DR.	CAMP	107000	107000	
39.-1-56		1712 ASH DR.	CAMP	50000	50000	
39.-1-57	x	GLEN LAKE RD.	BIKE TRAIL	40900	40900	
39.-1-58.1		48 BIRCH RD.	RES.	281000	281000	
39.-1-58.2		20 BIRCH RD.	CAMP	137000	137000	
39.-1-58.3		3 BENMOST BUR LAN	RES.	146900	146900	
39.-1-58.4	x	ASH DR.	VAC.	14400	14400	
39.-1-58.51	x	ASH DR.	ROADWAY (P	1800	1800	
39.-1-58.52		79 ASH DR.	RES.	120400	120400	
39.-1-58.53	x	ASH DR.	VAC.	21500	21500	
39.-1-58.54		ASH DR.	RES.	112600	112600	
39.-1-58.6	x	BIRCH RD.	VAC	44000	44000	
39.-1-59	x	GLEN LAKE RD.	VAC.	10100	10100	
39.-1-60	x	25 BIRCH RD.	VAC.	28500	28500	
39.-1-61.1		GLEN LAKE RD.	RES.	141700	141700	
39.-1-61.2	x	GLEN LAKE RD.	VAC.	20200	20200	
39.-1-61.3		1780 CHESTNUT RD.	RES.	158000	158000	
39.-1-62	x	22 CHESTNUT RD.	GARAGE	62600	62600	
39.-1-63	x	CHESTNUT RD.	VAC.	8600	8600	
39.-1-64	x	GLEN LAKE RD.	VAC.	14500	14500	
39.-1-65		4 BIRCH RD.	RES.	150500	150500	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
39.-1-66		14 BIRCH RD.	RES.	100900	100900	
39.-1-7		268 GLEN LAKE RD.	CAMP	152900	152900	
39.-1-8		1 CHESTNUT	CAMP	95300	95300	
39.-1-9		3 CHESTNUT RD.	RES.	133300	133300	
42.-1-10		101 FITZGERALD RD.	CAMP	77500	77500	
43.-1-1		20 JAY RD.WEST	RES	220000	220000	
43.-1-11		GLEN LAKE RD.,OFF	CAMP	200000	200000	
43.-1-13		23 JAY RD.	RES	219400	219400	
43.-1-14		21 JAY RD.	CAMP	107200	107200	
43.-1-15		19 JAY RD.	RES.	102400	102400	
43.-1-16		2 JAY RD.	CAMP	118200	118200	
43.-1-18		4 JAY RD.	RES.	307000	307000	
43.-1-19		10 JAY RD.	RES.	196600	196600	
43.-1-2		JAY RD.	RES.	80000	80000	
43.-1-20		14 JAY RD. EAST	RES.	196000	196000	
43.-1-21		16 JAY RD. EAST	CAMP	154300	154300	
43.-1-22		JAY RD.	2 CAMPS	166200	166200	
43.-1-23		GLEN LAKE RD.	MOBILE HOME	124900	124900	
43.-1-24.1		1676 NACY RD.	RES.&CAMPS	1015600	1015600	
43.-1-24.3		GLEN LAKE RD.	RES.	75100	75100	
43.-1-24.4		24 LOUISE LANE	RES.	175000	175000	
43.-1-24.5		11 GEORGE ST.	RES.	64500	64500	
43.-1-24.6		19 GEORGE ST.	RES.	158800	158800	
43.-1-24.7		21 GEORGE ST.	RES.	94100	94100	
43.-1-4		GLEN LAKE RD.,OFF	RES.	265400	265400	
43.-1-6		25 JAY RD.	RES.	210200	210200	
43.-1-7		24 JAY RD. WEST	CAMP	76000	76000	
43.-1-8		19 JAY RD. WEST	CAMP	122000	122000	
43.-1-9		24 JAY RD.	RES.	292000	292000	
43.-2-1.1		366 GLEN LAKE RD.	CAMP	193900	193900	
43.-2-1.21		GLEN LAKE RD.	2 FAM.	177600	177600	
43.-2-1.3	x	GLEN LAKE RD.	VAC.	37200	37200	
43.-2-1.4		374 GLEN LAKE RD.	RES.	188800	188800	
43.-2-10		FERNWOOD RD.	BLDG.	57400	57400	
43.-2-11		17 FERNWOOD RD.	CAMP	148000	148000	
43.-2-12		GINESTA LANE	CAMP	106600	106600	
43.-2-13		GLEN LAKE RD.,OFF	CAMP	134400	134400	
43.-2-14		GLEN LAKE RD.,OFF	CAMP	78000	78000	
43.-2-15		GLEN LAKE RD.,OFF	CAMP	99500	99500	
43.-2-16		GLEN LAKE RD.,OFF	CAMP	124400	124400	
43.-2-18		GLEN LAKE RD.,OFF	RES.	200000	200000	
43.-2-19		9 HEMLOCK RD.	CAMP	90000	90000	
43.-2-2		GLEN LAKE RD.,OFF	RES.	181000	181000	
43.-2-20		9 MARY LANE	RES.	130200	130200	
43.-2-21		GLEN LAKE RD.,OFF	CAMP	108000	108000	
43.-2-22		11 IVY LOOP RD.	RES. & APT.	192800	192800	
43.-2-23		14 JAY RD. WEST	CAMP&GAR.	125000	125000	
43.-2-24	x	GLEN LAKE RD.	VAC.	54800	54800	
43.-2-25	x	MARY LANE	VAC.	36800	36800	
43.-2-26		GLEN LAKE RD.	2 CAMPS	63100	63100	
43.-2-27		15 FERNWOOD RD.	RES.	152500	152500	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
43.-2-28	x	GLEN LAKE RD.	VAC.	20300	20300	
43.-2-29	x	GLEN LAKE RD.,OFF	VAC.	1000	1000	
43.-2-3		12 ELM DR.	RES.	241500	241500	
43.-2-4		14 ELM DR.	RES.	188600	188600	
43.-2-5		16 ELM DR.	RES.	98200	98200	
43.-2-6		8 ELM DR.	RES.	106300	106300	
43.-2-7		20 ELM DR.	RES.	229900	229900	
43.-2-9		16 FERNWOOD RD.	RES.	163900	163900	
44.-1-1.21	x	GLEN LAKE RD.	VAC.	89500	89500	
44.-1-10		178A NACY RD.	RES.	92000	92000	
44.-1-11.1		46 DINEEN RD.	CAMP	110100	110100	
44.-1-11.2		NACY RD.	RES.	146100	146100	
44.-1-12		NACY RD.	MERC.	122900	122900	
44.-1-13		46 NACY RD.	RES.	158200	158200	
44.-1-15		307 NACY RD.	RES.	169500	169500	
44.-1-16		40 NACY RD.	CAMP	120000	120000	
44.-1-18		34 NACY RD.	RES.	146400	146400	
44.-1-19		32 NACY RD.	CAMP	96700	96700	
44.-1-2		11 NACY RD.	CAMP	65000	65000	
44.-1-20		28 NACY RD.	CAMP	61200	61200	
44.-1-21		24 NACY RD.	CAMP	110000	110000	
44.-1-22		22 NACY RD.	RES.	156000	156000	
44.-1-3		1656 NACY RD.	CAMP	34900	34900	
44.-1-5.1	x	GLEN LAKE RD.	VAC.	46800	46800	
44.-1-5.2		1649 NACY RD.	RES.	185000	185000	
44.-1-6	x	GLEN LAKE RD.	VAC.	6900	6900	
44.-1-7		538 GLEN LAKE RD.	RES.	90000	90000	
44.-1-8		NACY RD.	RES.	32900	32900	
44.-1-9		NACY RD.	RES.	231500	231500	
44.-2-1		564 MOON HILL RD.	RES.	65000	65000	
44.-2-10		13 DINEEN RD.	RES.	146900	146900	
44.-2-11	x	MOON HILL RD.,OFF	VAC.	28000	28000	
44.-2-12		29 REARDON RD.	RES.	156800	156800	
44.-2-13		27 REARDON RD.	RES.	122200	122200	
44.-2-14		176 REARDON RD.	RES.	173900	173900	
44.-2-15		REARDON RD.	BLDG.	74200	74200	
44.-2-16		19 REARDON RD.	CAMP	141300	141300	
44.-2-17		15 REARDON RD.	RES.	188000	188000	
44.-2-18		179 REARDON RD.	CAMP	159600	159600	
44.-2-19	x		DOCK	78700	78700	
44.-2-2		NACY RD.	RES.	62000	62000	
44.-2-20		180 REARDON RD.	CAMP	107400	107400	
44.-2-22		20 REARDON RD. EXT.	RES.&GAR.	118200	118200	
44.-2-23		16 REARDON RD. EXT.	CAMP	98000	98000	
44.-2-24	x	12 REARDON RD.	VAC.	27900	27900	
44.-2-25		8 REARDON RD.	CAMP	45000	45000	
44.-2-26		6 REARDON RD.	RES.	125000	125000	
44.-2-27		12 REARDON RD.	RES.	111000	111000	
44.-2-28		127 TEE HILL RD.	RES.	136800	136800	
44.-2-29		167 TEE HILL RD.	RES.	159100	159100	
44.-2-3	x	NACY RD.	VAC.	8800	8800	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
44.-2-30		166 TEE HILL RD.	RES.	126400	126400	
44.-2-32	x	TEE HILL RD.	VAC.	25200	25200	
44.-2-33		MOON HILL RD.,OFF	WATER	37000	37000	
44.-2-34	x	MOON HILL RD.	VAC.	9800	9800	
44.-2-35.1		580 MOON HILL RD.	RES.	149500	149500	
44.-2-35.2		582 MOON HILL RD.	RES.	68000	68000	
44.-2-36		576 MOON HILL RD.	RES.	167300	167300	
44.-2-37.1		570 MOON HILL RD.	RES.	94700	94700	
44.-2-37.2		572 MOON HILL RD.	RES.	151300	151300	
44.-2-4	x	31 DINEEN RD.	VAC.	65000	65000	
44.-2-7		21 DINEEN RD.	RES.	172700	172700	
44.-2-9		17 DINEEN RD.	CAMP	144400	144400	
45.-1-1.1		213 REARDON RD.	RES.	95000	95000	
45.-1-1.2	x	REARDON RD.	VAC.	8000	8000	
45.-1-2		17 REARDON RD.	RES.	216100	216100	
45.-1-3	x	REARDON RD.	SHED	15300	15300	
45.-1-4		35 REARDON RD.	RES.	107900	107900	
45.-1-6	x	REARDON RD.	VAC.	11400	11400	
45.-1-7		47 REARDON RD.	RES.	134400	134400	
45.-2-1.2	x	HALL RD.	VAC.	21200	21200	
45.-2-10		HALL RD.	CAMP	132500	132500	
45.-2-11		59 BARBER RD.	RES.	122000	122000	
45.-2-12		57 BARBER RD.	CAMP	92300	92300	
45.-2-13		53 BARBER RD.	CAMP	109900	109900	
45.-2-14		HALL RD.	CAMP	102500	102500	
45.-2-15	x	HALL RD.	VAC.	45000	45000	
45.-2-2		HALL RD.	BLDGS.	83600	83600	
45.-2-2/9903		HALL RD.		67400	67400	
45.-2-3		HALL RD.,OFF	CAMP	113700	113700	
45.-2-4		154 HALL RD.	RES.	209600	209600	
45.-2-6	x	HALL RD.	VAC.	19800	19800	
45.-2-7		HALL RD.	CAMP	108400	108400	
45.-2-8		62 HALL RD.	CAMP	108400	108400	
45.-2-9		110 HALL RD.	RES.	275500	275500	
45.-3-1	x	REARDON RD.	DOCK	85400	85400	
45.-3-10		54 REARDON RD.	CAMP	99300	99300	
45.-3-11		52 REARDON RD.	CAMP	98900	98900	
45.-3-12		191 REARDON RD.	CAMP	70800	70800	
45.-3-13		56 REARDON RD.	2 CAMPS	126800	126800	
45.-3-14		58 REARDON RD.	CAMP	111700	111700	
45.-3-15		60 REARDON RD.	RES.	144000	144000	
45.-3-16		62 REARDON RD.	CAMP	122000	122000	
45.-3-17		66 REARDON RD.	RES.	246000	246000	
45.-3-19		REARDON RD.,OFF	CAMP	81100	81100	
45.-3-2		26 REARDON RD.	2 CAMPS	142100	142100	
45.-3-20		REARDON RD.,OFF	CAMP	107000	107000	
45.-3-21		76 REARDON RD.	CAMP	96900	96900	
45.-3-22		REARDON RD.,OFF	CAMP	86000	86000	
45.-3-23		REARDON RD.,OFF	RES.	102500	102500	
45.-3-24		7 GLEN HALL DR.	CAMP	108000	108000	
45.-3-25		REARDON RD.,OFF	CAMP	89000	89000	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
45.-3-26		HALL RD.	CAMP	85600	85600	
45.-3-27		90 HALL RD.	RES.	110000	110000	
45.-3-28		92 HALL RD.	RES.	231500	231500	
45.-3-29		4 HALL RD.	CAMP	112000	112000	
45.-3-3.2	x	REARDON RD.	VAC.	15300	15300	
45.-3-30		REARDON RD.,OFF	CAMP	111100	111100	
45.-3-31		REARDON RD.,OFF	CAMP	140000	140000	
45.-3-33		4 HALL RD. EXT.	CAMP	91100	91100	
45.-3-34		4 HALL RD. EXT.	RES.	225000	225000	
45.-3-35		8 HALL RD. EXT.	RES.&CAMP	160700	160700	
45.-3-37		HALL RD. EXT.	CAMP	64200	64200	
45.-3-38		12 HALL RD. EXT.	CAMP	82500	82500	
45.-3-39		20 HALL RD. EXT.	CAMP	132600	132600	
45.-3-4		28 REARDON RD.	RES.	267200	267200	
45.-3-5		34 REARDON RD.		145000	145000	
45.-3-6		186 REARDON RD.	CAMP	124100	124100	
45.-3-7		40 REARDON RD.	RES. & CAMP	184000	184000	
45.-3-8		44 REARDON RD.	CAMP	50300	50300	
45.-3-9.1		46 REARDON RD.	RES.	118600	118600	
45.-3-9.2		50 REARDON RD.	CAMP	77000	77000	
47.-1-1.1	x	COUNTRY COLONY D	VAC.	15000	15000	
47.-1-1.2		52 COUNTRY COLONY	RES.	114600	114600	
47.-1-1.31		31 COUNTRY COLONY		118000	118000	
47.-1-1.32		41 COUNTRY COLONY		124000	124000	
47.-1-2		55 COUNTRY COLONY	RES.	96300	96300	
47.-1-3.1	x	65 COUNTRY COLONY	VAC.	15000	15000	
47.-1-3.2		61 COUNTRY COLONY	RES.	100200	100200	
47.-1-3.3	x	45 COUNTRY COLONY	VAC.	15000	15000	
47.-1-4		75 COUNTRY COLONY	RES.	119200	119200	
47.-2-1.1		36 COUNTRY COLONY	RES.	96300	96300	
47.-2-1.2		30 COUNTRY COLONY	RES.	89900	89900	
47.-2-1.3	x	6 TEE DR.	VAC.	15000	15000	
47.-2-1.4		58 COUNTRY COLONY	RES.	104600	104600	
47.-2-1.5	x	TEE DR.	VAC.	16400	16400	
47.-2-1.6		10 TEE DR.	RES.	120200	120200	
47.-2-1.7		44 COUNTRY COLONY	RES.	123200	123200	
47.-2-2		124 COUNTRY COLON	RES.	108300	108300	
47.-2-3		20 COUNTRY COLONY	RES.	77000	77000	
47.-3-1		72 COUNTRY COLONY	RES. UNFIN.	81900	81900	
47.-3-2		80 COUNTRY COLONY	RES.	96100	96100	
47.-3-3	x	TEE HILL RD.	VAC.	15000	15000	
47.-3-4.1	x	TEE HILL RD.	VAC.	30000	30000	
47.-3-4.2	x	TEE DR.	VAC.	15000	15000	
47.-3-4.3	x	TEE DR.	VAC.	7500	7500	
47.-3-4.4		21 TEE HILL RD.		75000	75000	
47.-3-5		4 COUNTRY COLONY	RES.	87000	87000	
47.-3-6		12 COUNTRY COLONY	RES.	84700	84700	
47.-4-1		29 COUNTRY COLONY	RES.	96100	96100	
47.-4-2		27 COUNTRY COLONY	RES.	91000	91000	
47.-4-3		23 COUNTRY COLONY	RES.	113400	113400	
47.-4-4		19 COUNTRY COLONY	RES.	79300	79300	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
47.-4-5		15 COUNTRY COLONY	RES.	83000	83000	
47.-4-6		39 COUNTRY COLONY	RES.	65000	65000	
47.-4-7		3 COUNTRY COLONY	RES.	80000	80000	
47.-4-8		5 TEE HILL RD.	RES.	77600	77600	
48.-1-7.1		625 MOON HILL RD.	RES.	70100	70100	
48.-1-7.2		4 MARTINDALE RD.	RES.&GAR.	106400	106400	
48.-2-12		575 MOON HILL RD.	RES.	81800	81800	
48.-2-2		11 MARINTDALE RD.	RES.	137400	137400	
48.-2-4	x	MOON HILL RD.	VAC.	7100	7100	
48.-2-5		MOON HILL RD.	WOODWORK	16600	16600	
48.-2-6		593 MOON HILL RD.	RES./SHOP	137500	137500	
48.-2-7		583 MOON HILL RD.	RES.	65000	65000	
48.-2-8		MOON HILL RD.	RES.	45000	45000	
48.-3-18		140 TEE HILL RD.	RES.	130200	130200	
48.-3-19		TEE HILL RD.	RES.	95300	95300	
48.-3-20	x	TEE HILL RD.	VAC.	23600	23600	
48.-3-22.1	x	TEE HILL RD.	VAC.	62000	62000	
48.-3-22.21		TEE HILL RD.	RES.	99000	99000	
48.-3-22.22	x	REARDON RD.	VAC	1000	1000	
48.-3-22.3		73 TEE HILL RD.	RES.	68900	68900	
48.-3-22.4	x	TEE HILL RD.	VAC.	30100	30100	
48.-3-23.1		71 TEE HILL RD.	RES.	99900	99900	
48.-3-23.2		67 TEE HILL RD.	RES.	83600	83600	
48.-3-24.1	x	14 HALL RD.	GAR.	87000	87000	
48.-3-24.2	x	TEE HILL RD.	VAC.	33400	33400	
48.-3-24.3		69 TEE HILL RD.	RES.	108400	108400	
48.-3-26		18 HALL RD.	RES.	90600	90600	
48.-3-27.1	x	HALL RD.,OFF	VAC.	22200	22200	
48.-3-27.21	x	REARDON RD.	VAC.	30600	30600	
48.-3-27.221	x	HALL RD.	VAC.	71700	71700	
48.-3-27.222		103 HALL RD.	RES.	115800	115800	
48.-3-27.223		HALL RD.	RES.	93500	93500	
48.-3-27.224		HALL RD.	RES.	95300	95300	
48.-3-27.225	x	51 HALL RD.	VAC.	5100	5100	
48.-3-27.226		29 HALL RD.	RES.	126300	126300	
48.-3-27.227		70 HALL RD.	RES.	168000	168000	
48.-3-27.228		21 HALL RD.	RES.	90400	90400	
48.-3-27.23		16 BRITTA LYNN DR.	RES.	123100	123100	
48.-3-27.24		62 HALL RD.	RES.	99100	99100	
48.-3-27.25		30 BRITTA LYNN DR.	RES.	127600	127600	
48.-3-27.26	x	HALL RD.	VAC.	8600	8600	
48.-3-27.3	x	TEE HILL RD.	VAC.	700	700	
48.-3-27.4	x	REARDON RD.	VAC.	13500	13500	
48.-3-34.1	x	HUNTER BROOK LANE	VAC.	142000	142000	
48.-3-46.1		833 BAY RD.	RES.	89700	89700	
48.-3-46.2		1 SUSAN PLACE	RES.	178900	178900	
48.-3-46.3	x	SUSAN PLACE	VAC.	29800	29800	
48.-3-46.4		6 SUSAN PLACE	RES	118800	118800	
48.-3-46.5		16 SUSAN PLACE	RES.	117600	117600	
48.-3-46.6		8 SUSAN PLACE	RES	147700	147700	
48.-3-46.7	x	SUSAN PLACE	VAC	15800	15800	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
48.-3-49.52		24 TEE HILL RD.	RES.	112700	112700	
48.-3-49.53		34 TEE HILL RD.	RES.	126400	126400	
48.-3-50.1		119 NOTTINGHAM DR.	RES.	527600	527600	
48.-3-50.10		NOTTINGHAM DR.	RES.	117300	117300	
48.-3-50.11		12 KINGS PLACE	RES.	146400	146400	
48.-3-50.12		4 YORKSHIRE DR.	RES.	116100	116100	
48.-3-50.13		20 KINGS PLACE	RES.	121800	121800	
48.-3-50.14		31 YORKSHIRE DR.	RES.	118500	118500	
48.-3-50.15		22 NOTTINGHAM DR.	RES.	118300	118300	
48.-3-50.16		25 NOTTINGHAM DR.	RES.	131300	131300	
48.-3-50.18		4 KINGS PLACE	RES.	132500	132500	
48.-3-50.19		19 KINGS PLACE	RES.	124700	124700	
48.-3-50.2		92 TEE HILL RD.	RES.	181200	181200	
48.-3-50.20		11 YORKSHIRE DR.	RES.	116700	116700	
48.-3-50.21		42 NOTTINGHAM DR.	RES.	114200	114200	
48.-3-50.221	x	NOTTINGHAM DR.	VAC.	5600	5600	
48.-3-50.222		45 NOTTINGHAM DR.	RES.	130300	130300	
48.-3-50.231		18 YORKSHIRE DR.	RES.	143400	143400	
48.-3-50.232		17 YORKSHIRE DR.	RES.	140000	140000	
48.-3-50.25		7 KINGS PLACE	RES.	126800	126800	
48.-3-50.26		55 YORKSHIRE DR.	RES.	117100	117100	
48.-3-50.27		114 NOTTINGHAM DR.	RES.	148500	148500	
48.-3-50.28		10 YORKSHIRE DR.	RES.	138700	138700	
48.-3-50.29		27 YORKSHIRE DR.	RES.	170900	170900	
48.-3-50.3		159 TEE HILL RD.	RES.	74800	74800	
48.-3-50.30		13 KINGS PLACE	RES.	134900	134900	
48.-3-50.31		147 YORKSHIRE DR.	RES.	193000	193000	
48.-3-50.32		23 YORKSHIRE DR.	RES.	159300	159300	
48.-3-50.33		64 YORKSHIRE DR.	RES.	136300	136300	
48.-3-50.34		56 NOTTINGHAM DR.	RES.	138300	138300	
48.-3-50.36		77-A YORKSHIRE DR.	RES.	126500	126500	
48.-3-50.37		49 YORKSHIRE DR.	RES.	185300	185300	
48.-3-50.38		58 YORKSHIRE DR.	RES.	154700	154700	
48.-3-50.4		58 TEE HILL RD.	RES.	114300	114300	
48.-3-50.40		18 NOTTINGHAM DR.	RES.	124200	124200	
48.-3-50.41		NOTTINGHAM DR.		123000	123000	
48.-3-50.5		4 NOTTINGHAM DR.	RES.	120000	120000	
48.-3-50.6		3 NOTTINGHAM DR.	RES.	131300	131300	
48.-3-50.7	x	TEE HILL RD.	VAC.	34300	34300	
48.-3-50.8		11 NOTTINGHAM DR.	RES.	152400	152400	
48.-3-50.9		112 NOTTINGHAM DR.	RES.	126000	126000	
48.-3-51.2		977 BAY RD.	RES.	173600	173600	
48.-5-6		40 TEE HILL RD.		88400	88400	
48.-5-7		TEE HILL RD.		28600	28600	
60.-5-1.1		3 BLACKBERRY LANE	RES.	218700	218700	
60.-5-1.2		2 BLACKBERRY LANE	RES.	159000	159000	
60.-5-1.3		1 BLACKBERRY LANE	RES.	139000	139000	
60.-5-1.4		4 BLACKBERRY LANE	RES.	170000	170000	
60.-5-1.5		8 BLACKBERRY LANE	RES.	214300	214300	
60.-5-1.6	x	BLACKBERRY LANE	VAC.	500	500	
60.-5-1.7	x	BLACKBERRY LANE	VAC.	500	500	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
60.-6-1		55 BLIND ROCK RD.	RES.	175000	175000	
60.-6-2		57 BLIND ROCK RD.	RES.	150000	150000	
60.-6-3		59 BLIND ROCK RD.	RES.	190000	190000	
60.-6-4		61 BLIND ROCK RD.	RES.	152000	152000	
60.-7-1.21	x	BLIND ROCK RD.	VAC	83900	83900	
60.-7-1.22		BLIND ROCK RD.	RES.	167800	167800	
60.-7-1.23	x	BLIND ROCK RD.	VAC.	30300	30300	
60.-7-1.24	x	BLIND ROCK RD.	VAC.	30600	30600	
60.-7-1.3	x	BLIND ROCK RD.	VAC	40000	40000	
60.-7-1.4	x	BLIND ROCK RD.	VAC	45000	45000	
60.-7-1.5	x	BLIND ROCK RD.	VAC	50000	50000	
60.-7-17		111 COUNTRY CLUB R	RES.	217000	217000	
60.-7-19.1	x	BLIND ROCK RD.	VAC.	50700	50700	
60.-7-20		56 BLIND ROCK RD.	RES.	168000	168000	
60.-7-22		25 BLIND ROCK RD.	RES.	142900	142900	
60.-7-3.4	x	BLIND ROCK RD.	VAC.	86500	86500	
60.-7-6.32		107 COUNTRY CLUB R	RES.	395400	395400	
67.-1-1		ROUND POND RD.	MERC.	1459500	364875	25
67.-2-10	x	ROUND POND RD.	VAC.	13400	13400	
67.-2-8.1		144 ROUND POND RD.	RES	180000	180000	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL_	%assessed	%
46.-1-3		18 SUNNYSIDE RD.	FOE;D CRP[S	181000	45250	25
46.-3-1		21 LAKEVIEW DR.	RES.	148400	148400	
46.-3-11		6 LAKEVIEW DR.	RES.	136700	136700	
46.-3-13	x	LAKEVIEW DR.	VAC.	30000	30000	
46.-3-14		19 LAKEVIEW DR.	RES.	161400	161400	
46.-3-15	x	LAKEVIEW DR.	VAC	35200	35200	
46.-3-16		15 LAKEVIEW DR.	RES	111600	111600	
46.-3-17		13 LAKEVIEW DR.	RES.	166400	166400	
46.-3-18		18 LAKEVIEW DR.	RES.	162200	162200	
46.-3-19	x	9 LAKEVIEW DR.	VAC.	35900	35900	
46.-3-2		12 LAKEVIEW DR.	RES.	46400	46400	
46.-3-20		7 LAKEVIEW DR.	RES.	201400	201400	
46.-3-21		5 LAKEVIEW DR.	RES.	181400	181400	
46.-3-22		3 LAKEVIEW DR.	RES.	179400	179400	
46.-3-23		SUNNYSIDE RD.		186000	46500	25
46.-3-24	x	LAKEVIEW DR.	VAC.	100	100	
46.-3-25	x	SUNNYSIDE RD.	CEMETARY	23600	23600	
46.-3-3		255B SUNNYSIDE RD.	RES.	114800	114800	
46.-3-4.1	x	2 LAKEVIEW DR.	VAC.	29400	29400	
46.-3-4.2	x	4 LAKEVIEW DR.	VAC.	28400	28400	
46.-3-6	x	SUNNYSIDE RD.	VAC.	28900	28900	
46.-3-7		61 SUNNYSIDE RD.	RES.	137400	137400	
46.-3-8	x	54 SUNNYSIDE RD.	VAC.	35900	35900	
46.-3-9		65 SUNNYSIDE RD.	RES.	139100	139100	
47.-4-10		853 BAY RD.	RES.	77000	77000	
47.-4-11		849 BAY RD.	RES.	70000	70000	
47.-4-12		574 BAY RD.	RES.	70000	70000	
47.-4-13		841 BAY RD.	RES.	78500	78500	
47.-4-9	x	857 BAY RD.	VAC.	7000	7000	
48.-1-13.21	x	BAY RD.	VAC.	61200	61200	
48.-1-13.22		1029 BAY RD.	RES.	110000	110000	
48.-3-1.1	x	BAY RD.	VAC.	6200	6200	
48.-3-1.2		650 BAY RD.	RES.	78000	78000	
48.-3-2		997 BAY RD.	RES.	64600	64600	
48.-3-37		BAY RD.	RES.	117500	117500	
48.-3-38		BAY RD.	RES.	27000	27000	
48.-3-40		807 BAY RD.	RES.	78800	78800	
48.-3-41.1		809 BAY RD.	RES.	143400	143400	
48.-3-41.2		813 BAY RD.	RES.	87000	87000	
48.-3-42		817 BAY RD.	RES.	85600	85600	
48.-3-45		823 BAY RD.	RES.	84400	84400	
48.-3-46.1		833 BAY RD.	RES.	89700	89700	
48.-3-47		829 BAY RD.	RES.	92000	92000	
48.-3-48.1	x	840 BAY RD.	VAC.	50400	50400	
48.-3-48.2		571 BAY RD.	RES.	136500	136500	
48.-3-49.1	x	BAY RD.	BARN	133000	66500	50
48.-3-49.2		BAY RD.	CEMETERY	20000	20000	
48.-3-49.3	x	BAY RD.	VAC.	13900	13900	
48.-3-49.4	x	BAY RD.	VAC.	22000	22000	
48.-3-49.51		889 BAY RD.	RES.	171700	171700	
48.-3-49.541		BAY RD.		140300	140300	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
48.-3-49.542		BAY RD.		143000	143000	
48.-3-49.543		BAY RD.		139300	139300	
48.-3-49.544		BAY RD.		139300	139300	
48.-3-50.35		BAY RD.	RES.	125000	125000	
48.-3-51.2/990	x	BAY RD.	VAC.	7400	7400	
48.-3-51.31		119 BAY RD.	RES.	119000	119000	
48.-3-51.32		983 BAY RD.	RES.	85000	85000	
48.-3-51.33		116 BAY RD.	RES.	96100	96100	
48.-3-51.34	x	BAY RD.	VAC.	5000	5000	
48.-3-51.4		936 BAY RD.	RES.	135400	135400	
48.-3-51.5	x	936 BAY RD.	VAC	65300	65300	?
48.-3-52	x	636 BAY RD.	FOUNDATION	27900	27900	
48.-3-53		962 BAY RD.	RES.	159000	159000	
48.-3-54		988 BAY RD.	RES.	81600	81600	
48.-3-55		992 BAY RD.	RES.	94200	94200	
48.-4-1		4 STONEGATE DR.	RES.	112000	112000	
48.-4-10		7 FIELDVIEW RD.	RES.	102100	102100	
48.-4-11		1 FIELDVIEW RD.	RES.	110000	110000	
48.-4-12		2 FIELDVIEW RD.	RES.	91600	91600	
48.-4-13		4 FIELDVIEW RD.	RES	145800	145800	
48.-4-14		8 FIELDVIEW RD.	RES.	125000	125000	
48.-4-15.1		20 FIELDVIEW RD.	RES.	183800	183800	
48.-4-15.2		16 FIELDVIEW RD.	RES	139000	139000	
48.-4-18		26 FIELDVIEW RD.	RES.	118600	118600	
48.-4-19		27 FIELDVIEW RD.	RES.	125900	125900	
48.-4-20		25 FIELDVIEW RD.	RES.	131000	131000	
48.-4-3		9 STONEGATE DR.	RES.	94100	94100	
48.-4-4		15 STONEGATE DR.	RES.	100600	100600	
48.-4-5		19 FIELDVIEW RD.	RES.	120400	120400	
48.-4-6		15 FIELDVIEW RD.	RES.	98500	98500	
48.-4-7		14 STONEGATE DR.	RES.	96100	96100	
48.-4-8		18 STONEGATE DR.	RES.	85300	85300	
48.-5-1		MAID MARION WAY		30400	30400	
48.-5-10		MAID MARION WAY		28300	28300	
48.-5-2		19 MAID MARION WAY		186700	186700	
48.-5-3		MAID MARION WAY		30200	30200	
48.-5-4		MAID MARION WAY		32200	32200	
48.-5-5		MAID MARION WAY		28300	28300	
48.-5-8		MAID MARION WAY		28400	28400	
48.-5-9		MAID MARION WAY		28600	28600	
48.-7-1		3 FIELDVIEW SOUTH		147600	147600	
48.-7-17		28 FIELDVIEW SOUTH		17100	17100	
48.-7-18		22 FIELDVIEW SOUTH		17000	17000	
48.-7-19		16 FIELDVIEW SOUTH		17800	17800	
48.-7-2		FIELDVIEW SOUTH		21100	21100	
48.-7-20		FIELDVIEW SOUTH		19200	19200	
48.-7-21		37 BERRY DR.		129700	129700	
48.-7-22		BERRY DR.		16800	16800	
48.-7-23		BERRY DR.		20200	20200	
48.-7-24		BERRY DR.		16800	16800	
48.-7-25		15 BERRY DR.		121900	121900	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL_	%assessed	%
48.-7-26		26 BERRY DR.		20800	20800	
48.-7-27		BERRY DR.		28600	28600	
48.-7-3		FIELDVIEW SOUTH		20400	20400	
48.-7-4		FIELDVIEW SOUTH		20600	20600	
48.-7-5		27 FIELDVIEW SOUTH		138000	138000	
48.-7-999		BAY RD.		104400	104400	
49.-1-10		21 JUNIPER DR.	RES.	118600	118600	
49.-1-11		17 SUNNYSIDE RD.	RES.	83000	83000	
49.-1-2	x	JUNIPER DR.	VAC.	21600	21600	
49.-1-3	x	JUNIPER DR.	VAC.	22800	22800	
49.-1-4.1	x	11 SUNNYSIDE RD. NOR	VAC	23900	23900	
49.-1-4.2		37 SUNNYSIDE RD. NOR	RES.	110000	110000	
49.-1-4.3		31 SUNNYSIDE RD. NOR	RES	134000	134000	
49.-1-5	x	BAY RD.	VAC.	28000	28000	
49.-1-6		1 JUNIPER DR.	RES.	93000	93000	
49.-1-7	x	BAY RD.	VAC.	5000	5000	
49.-1-9		13 JUNIPER DR.	RES.	97200	97200	
49.-2-1	x	SUNNYSIDE RD. NORTH	VAC.	80100	80100	
49.-2-10		SUNNYSIDE RD. NORTH	RES.	90000	90000	
49.-2-12		18 SUNNYSIDE RD. NOR	CAMP	50000	50000	
49.-2-13		127 SUNNYSIDE RD. NO	RES.	61000	61000	
49.-2-15		64 SUNNYSIDE RD. NOR	CAMP	59000	59000	
49.-2-16	x	SUNNYSIDE RD. NORTH	VAC.	8000	8000	
49.-2-17	x	SUNNYSIDE RD. NORTH	VAC.	10800	10800	
49.-2-18		SUNNYSIDE RD. NORTH	CAMP	60000	60000	
49.-2-19	x	SUNNYSIDE RD. NORTH	VAC.	8800	8800	
49.-2-2		85 SUNNYSIDE RD. NOR	RES.2 FAM	109000	109000	
49.-2-20		SUNNYSIDE RD. NORTH	CAMP	56000	56000	
49.-2-21		54 SUNNYSIDE RD. NOR	RES.	98000	98000	
49.-2-22		SUNNYSIDE RD. NORTH	RES.	67000	67000	
49.-2-23		SUNNYSIDE RD. NORTH	RES.	54300	54300	
49.-2-24		SUNNYSIDE RD. NORTH	RES.	64000	64000	
49.-2-25		SUNNYSIDE RD. NORTH	CAMP	28900	28900	
49.-2-27	x	SUNNYSIDE RD. NORTH	VAC.	34700	34700	
49.-2-29		28 SUNNYSIDE RD. NOR	RES.&CAMP	80000	80000	
49.-2-3		100 SUNNYSIDE RD. NO	CAMP	61000	61000	
49.-2-30		SUNNYSIDE RD. NORTH	CAMP	40000	40000	
49.-2-32		30 SUNNYSIDE RD. NOR	CAMP	40000	40000	
49.-2-6		SUNNYSIDE RD. NORTH	CAMP	36000	36000	
49.-2-7		92 SUNNYSIDE RD. NOR	RES.	95000	95000	
49.-2-8	x	SUNNYSIDE RD. NORTH	VAC.	8000	8000	
49.-2-9	x	SUNNYSIDE RD. NORTH	VAC.	9800	9800	
50.-1-16	x	HEWITT RD.	VAC.	5900	5900	
50.-1-17	x	SUNNYSIDE RD. NORTH	GAR.	10300	10300	
50.-1-19	x	144 SUNNYSIDE RD. NO	GARAGE	10400	10400	
50.-1-20	x	SUNNYSIDE RD. NORTH	VAC.	6800	6800	
50.-1-31		86 SUNNYSIDE RD. NOR	RES.	49900	49900	
50.-1-32	x	SUNNYSIDE RD. NORTH	VAC.	6700	6700	
50.-1-36		96 SUNNYSIDE RD. NOR	RES.	68200	68200	
50.-1-37	x	89 SUNNYSIDE NORTH	GAR.	12900	12900	
50.-1-38	x	SUNNYSIDE RD.,OFF	GAR.	10200	10200	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
50.-1-39	x	SUNNYSIDE RD. NORTH	VAC.	2800	2800	
50.-1-40		115 SUNNYSIDE RD. NO	CAMP	46000	46000	
50.-1-41		121 SUNNYSIDE NO.	2 RES.	112500	112500	
50.-1-42	x	SUNNYSIDE RD. NORTH	VAC.	2600	2600	
50.-1-43	x	SUNNYSIDE RD. NORTH	VAC.	2600	2600	
50.-1-44		127 SUNNYSIDE RD. NO	RES.	88000	88000	
50.-1-45	x	SUNNYSIDE RD. NORTH	VAC.	3200	3200	
50.-1-46		310 SUNNYSIDE RD. NO	RES. UNF.	84400	84400	
50.-1-47	x	308 SUNNYSIDE RD. NO	GAR.	6500	6500	
50.-1-48		125 SUNNYSIDE RD. NO	RES.	42000	42000	
50.-1-49	x	SUNNYSIDE RD. NORTH	VAC.	2800	2800	
50.-1-50	x	SUNNYSIDE RD. NORTH	VAC.	2800	2800	
50.-1-51	x	SUNNYSIDE RD. NORTH	VAC.	2800	2800	
50.-1-52		9 SNUG HARBOR LANE	RES.&7 CAMP	195100	195100	
50.-1-53		SUNNYSIDE RD. NORTH	RES.	37300	37300	
50.-1-54		SUNNYSIDE RD. NORTH	RES.	30000	30000	
50.-1-55		SNUG HARBOR LANE	RES.	33100	33100	
50.-1-56		301 SUNNYSIDE RD. NO	RES.	29900	29900	
50.-1-57		283 SNUG HARBOR LAN	RES.	33000	33000	
50.-1-58.1	x	SUNNYSIDE RD.,OFF	VAC.	2000	2000	
50.-1-58.2		SNUG HARBOR LANE	RES.	31000	31000	
50.-1-59		SUNNYSIDE RD.	CAMP	29900	29900	
50.-1-60	x	SUNNYSIDE RD.,OFF	VAC.	1800	1800	
50.-1-61		SUNNYSIDE RD.	RES.	34000	34000	
50.-1-63	x	SUNNYSIDE RD.,OFF	VAC.	1000	1000	
50.-1-65		9 SNUG HARBOR LANE	RES.	135000	135000	
50.-1-66	x	SUNNYSIDE RD. NORTH	VAC.	8600	8600	
50.-1-67		300 SUNNYSIDE RD. NO	RES.	148000	148000	
50.-1-68		SUNNYSIDE RD. NORTH	CAMP	34800	34800	
50.-1-69	x	SUNNYSIDE RD. NORTH	VAC.	4000	4000	
50.-1-70	x	SUNNYSIDE RD. NORTH	VAC.	8000	8000	
50.-1-71		SUNNYSIDE RD. NORTH	CAMP	25900	25900	
50.-1-72		SUNNYSIDE RD. NORTH	CAMP	28800	28800	
50.-1-73	x	SUNNYSIDE RD. NORTH	VAC.	8600	8600	
50.-1-74		150 SUNNYSIDE RD. NO	RES.	49000	49000	
50.-1-75		148 SUNNYSIDE RD. NO	RES.	59900	59900	
50.-1-76		304 SUNNYSIDE RD. NO	RES.	73500	73500	
50.-1-77		144 SUNNYSIDE NORTH	CAMP	61000	61000	
50.-1-78		142 SUNNYSIDE RD. NO	RES.	74000	74000	
50.-1-79		140 SUNNYSIDE RD. NO	CAMP	61000	61000	
50.-1-8.2	x	167 SUNNYSIDE RD.	VAC.	6200	6200	
50.-1-8.4		171 SUNNYSIDE RD. NO	RES.	73800	73800	
50.-1-80		104 SUNNYSIDE RD. NO	RES.	57000	57000	
50.-1-81		136 SUNNYSIDE RD. NO	RES.	58000	58000	
50.-1-82		311 SUNNYSIDE RD. NO	CAMP	66500	66500	
50.-1-83		128 SUNNYSIDE RD. NO	CAMP	68900	68900	
50.-1-84		39 SUNNYSIDE RD. NOR	RES.	59000	59000	
50.-1-85		122 SUNNYSIDE RD. NO	RES.	58800	58800	
50.-1-86	x	SUNNYSIDE RD. NORTH	VAC.	11400	11400	
50.-1-87		120 SUNNYSIDE RD. NO	MOB. HOME	20100	20100	
50.-1-88		318 SUNNYSIDE RD. NO	CAMP	59000	59000	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL_	%assessed	%
50.-1-89		116 SUNNYSIDE RD. NO	CAMP	61000	61000	
50.-1-90		SUNNYSIDE RD. NORTH	CAMP	43600	43600	
50.-1-91		112 SUNNYSIDE RD. NO	RES.	54900	54900	
50.-1-92		SUNNYSIDE RD. NORTH	CAMP	49000	49000	
50.-1-93		106 SUNNYSIDE NORTH	RES.	54000	54000	
50.-1-94		87 SUNNYSIDE RD. NOR	CAMP	47000	47000	
50.-1-95		SUNNYSIDE RD. NORTH	CAMP	44400	44400	
50.-1-96	x	SUNNYSIDE RD. NORTH	VAC.	6100	6100	
51.-1-27.1		348 SUNNYSIDE RD.	RES.	110000	27500	25
51.-1-28		347 SUNNYSIDE RD.	RES.(2) & SHO	272400	272400	
54.-3-22		25 SUNNYSIDE RD.	CAMP	35000	35000	
54.-6-10		240 ROCKWELL RD.	RES.	82000	82000	
54.-6-11		260 ROCKWELL RD.	CAMP	68000	68000	
54.-6-8	x	SUNNYSIDE RD.,OFF	VAC.	1000	1000	
60.-1-10		810 BAY RD.	RES.	110000	110000	
60.-1-11		820 BAY RD.	RES.	99000	99000	
60.-1-12.1		834 BAY RD.		96000	96000	
60.-1-12.2		826 BAY RD.		16500	16500	
60.-1-12.3		824 BAY RD.		16500	16500	
60.-1-7		784 BAY RD.	RES.	100000	100000	
60.-1-8		790 BAY RD.	RES.	135000	135000	
60.-1-9		804 BAY RD.	RES.	100200	100200	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
46.-1-4		67 HAVILAND RD.	CLUBHOUSE,RES	3438900	3438900	
51.-1-25		SUNNYSIDE RD.	GRANGE HALL	140200	140200	
51.-1-26		197 SUNNYSIDE RD.	CHURCH	120000	120000	
51.-4-1		165 SUNNYSIDE RD.	RES.	75000	75000	
51.-4-2		169 SUNNYSIDE RD.	RES.	43700	43700	
51.-4-3	x	SUNNYSIDE RD.	VAC.	8200	8200	
51.-4-4	x	SUNNYSIDE RD.	VAC.	3300	3300	
51.-4-5		SUNNYSIDE RD.	BLDG.	9600	9600	
51.-4-6		179 SUNNYSIDE RD.	RES.	110000	110000	
51.-4-7		185 SUNNYSIDE RD.	RES.	83500	83500	
51.-4-8		189 SUNNYSIDE RD.	RES.	87500	87500	
51.-4-9		195 SUNNYSIDE RD.	FIREHOUSE	304900	304900	
52.-1-10		140 JENKINSVILLE RD.	RES.	72200	72200	
52.-1-13		6 JENKINSVILLE RD.	RES.	128700	32175	25
52.-1-20	x	JENKINSVILLE RD.	BARN	18400	18400	
52.-1-21		42 JENKINSVILLE RD.	RES.&GAR.	89900	89900	
52.-1-22.1		52 JENKINSVILLE RD.	RES.	102100	102100	
52.-1-22.2	x	JENKINSVILLE RD.	VAC.	38000	38000	
52.-1-23		68 JENKINSVILLE RD.	RES.	72000	72000	
52.-1-24		74 JENKINSVILLE RD.	RES.	74000	74000	
52.-1-25		80 JENKINSVILLE RD.	RES.	70000	70000	
52.-1-26		84 JENKINSVILLE RD.	RES.&OFFICE	74000	74000	
52.-1-28	x	JENKINSVILLE RD.	BARNS	45500	45500	
52.-1-29		125 JENKINSVILLE RD.	RES.	120500	120500	
52.-1-3	x	RIDGE RD.	VAC.	100000	25000	25
52.-1-30		115 JENKINSVILLE RD.	RES.	90000	90000	
52.-1-31		97 JENKINSVILLE RD.	RES.	63000	63000	
52.-1-32.1		83 JENKINSVILLE RD.	RES.	96000	96000	
52.-1-32.2		75 JENKINSVILLE RD.	RES.	88000	88000	
52.-1-33		69 JENKINSVILLE RD.	RES.	55100	55100	
52.-1-34		65 JENKINSVILLE RD.	RES.	118000	118000	
52.-1-35		61 JENKINSVILLE RD.	RES.	103000	103000	
52.-1-36		55 JENKINSVILLE RD.	RES.	52000	52000	
52.-1-37.1		412 JENKINSVILLE RD.	RES.	68000	68000	
52.-1-37.2		28 JENKINSVILLE RD.	RES.	82000	82000	
52.-1-38.1		19 JENKINSVILLE RD.	RES.	84000	84000	
52.-1-38.2		9 JENKINSVILLE RD.	RES.	68900	68900	
52.-1-39		SUNNYSIDE RD.	RES.	103600	103600	
52.-1-4		38 OLD CRONIN RD.	MOBILE HOME	27700	27700	
52.-1-40		109 SUNNYSIDE RD.	RES.	90000	90000	
52.-1-41		103 SUNNYSIDE RD.	RES.	121000	121000	
52.-1-42.1		83 SUNNYSIDE EAST	FARM	128500	128500	
52.-1-43		95 SUNNYSIDE EAST	RES.	133000	133000	
52.-1-44.1		71 SUNNYSIDE EAST	RES.	116800	116800	
52.-1-44.2		63 SUNNYSIDE EAST	RES.	87400	87400	
52.-1-46.1	x	379 SUNNYSIDE EAST	VAC.	67100	16775	25
52.-1-46.2		47 SUNNYSIDE RD.	RES.	155000	155000	
52.-1-46.3	x	SUNNYSIDE EAST	VAC.	15800	15800	
52.-1-48		21 SUNNYSIDE EAST	RES.	116000	116000	
52.-1-49		RIDGE RD.	RES.	81400	81400	
52.-1-5	x	JENKINSVILLE RD.	VAC.	30200	30200	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
52.-1-50.1		11 SUNNYSIDE EAST	RES.	71300	71300	
52.-1-50.2		15 SUNNYSIDE EAST	RES.	83000	83000	
52.-1-6		185 JENKINSVILLE RD.	RES.	95000	95000	
52.-1-60.1		JENKINSVILLE RD.	PLAYGROUND	179300	4482525	
52.-1-7		177 JENKINSVILLE RD.	RES.	86700	86700	
52.-1-8		16 CRONIN RD.	RES.	91000	91000	
52.-1-9.1		152 JENKINSVILLE RD.	RES.	74000	74000	
52.-1-9.3		16 MUD POND RD.	RES.	77400	77400	
52.-1-9.4		158 JENKINSVILLE RD.	RES.	93000	93000	
52.-1-9.51		10 MUD POND RD.	RES.	84500	84500	
52.-1-9.52		164 JENKINSVILLE RD.	RES.	68000	68000	
52.-2-7		25 MUD POND RD.	RES. UNFIN.	55000	55000	
52.-2-8		19 MUD POND RD.	RES.	61000	61000	
52.-2-9		JENKINSVILLE RD.	DUMP	62500	1562525	
52.-3-1.1		130 JENKINSVILLE RD.	RES.	69800	69800	
52.-3-1.2		JENKINSVILLE RD.	RES.	96800	96800	
52.-3-10		35 RAINBOW TRAIL	RES.	82300	82300	
52.-3-11.2	x	RAINBOW TRAIL	VAC.	7500	7500	
52.-3-12		48 RAINBOW TRAIL	RES.	61300	61300	
52.-3-13.1		432 RAINBOW TRAIL	RES.	87800	87800	
52.-3-13.2		24 RAINBOW TRAIL	RES.	72000	72000	
52.-3-13.3	x	RAINBOW TRAIL	VAC.	8700	8700	
52.-3-15		30 RAINBOW TRAIL	RES.	63800	63800	
52.-3-16.1		18 RAINBOW TRAIL	RES.	65000	65000	
52.-3-16.2	x	RAINBOW TRAIL	VAC.	7500	7500	
52.-3-16.3		22 RAINBOW TRAIL	RES.	67700	67700	
52.-3-16.4		14 RAINBOW TRAIL	RES.	60000	60000	
52.-3-17		428 RAINBOW TRAIL	RES.	63300	63300	
52.-3-18		120 JENKINSVILLE RD.	RES.	80600	80600	
52.-3-2		444 JENKINSVILLE RD.	RES.	52000	52000	
52.-3-3		108 RAINBOW TRAIL	RES.	71800	71800	
52.-3-4.1		98 RAINBOW TRAIL	RES.	87000	87000	
52.-3-4.2		102 RAINBOW TRAIL	RES.	74900	74900	
52.-3-5.1		91 RAINBOW TRAIL	RES.	63400	63400	
52.-3-5.2		438 RAINBOW TRAIL	RES.	66000	66000	
52.-3-5.3		17 RAINBOW TRAIL	RES.	71900	71900	
52.-3-6		85 RAINBOW TRAIL	RES.	63200	63200	
52.-3-7		23 RAINBOW TRAIL	RES.	73900	73900	
52.-3-8	x	RAINBOW TRAIL	VAC.	5000	5000	
52.-3-9	x	RAINBOW TRAIL	VAC.	7500	7500	
52.-4-1		1 AZURE DR.	RES.	82300	82300	
52.-4-11		17 AZURE DR.	RES.	73400	73400	
52.-4-12		14 AZURE DR.	RES.	71600	71600	
52.-4-13		12 AZURE DR.	RES.	81200	81200	
52.-4-14		10 AZURE DR.	RES.	73000	73000	
52.-4-15		6 AZURE DR.	RES.	73900	73900	
52.-4-16		4 AZURE DR.	RES	79900	79900	
52.-4-17		3 AZURE DR.	RES.	73400	73400	
52.-4-18		7 AZURE DR.	RES.	72700	72700	
52.-4-19	x	8 AZURE DR.	VAC	14600	14600	
52.-4-2		2 AZURE DR.	RES	84000	84000	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
52.-4-3	x	MUD POND RD.	VAC	12700	12700	
52.-4-4		9 AZURE DR.	RES.	79900	79900	
52.-4-5		MUD POND RD.	RES.	73400	73400	
52.-4-6		62 MUD POND RD.	RES.	101600	101600	
52.-4-7	x	66 MUD POND RD.	VAC.	14300	14300	
52.-4-8		16 AZURE DR.	RES.	74900	74900	
52.-4-9		19 AZURE DR.	RES.	69900	69900	
52.-5-1	x	5 AZURE DR.	VAC.	17100	17100	
52.-5-10	x	RAINBOW TRAIL	VAC.	31300	31300	
52.-5-11	x	63 RAINBOW TRAIL	VAC.	17100	17100	
52.-5-12	x	71 RAINBOW TRAIL	VAC.	14300	14300	
52.-5-13	x	77 RAINBOW TRAIL	VAC.	14300	14300	
52.-5-2		94 RAINBOW TRAIL	RES.	82100	82100	
52.-5-3	x	RAINBOW TRAIL	VAC.	17100	17100	
52.-5-4	x	AZURE DR.	VAC.	17100	17100	
52.-5-5	x	68 RAINBOW TRAIL	VAC.	17100	17100	
52.-5-6	x	11 AZURE DR.	VAC.	17100	17100	
52.-5-7	x	15 AZURE DR.	VAC.	17100	17100	
52.-5-8	x	60 RAINBOW TRAIL	VAC.	17100	17100	
52.-5-9	x	54 RAINBOW TRAIL	VAC.	17100	17100	
53.-1-1.1	x	MUD POND RD.	VAC.	45700	4570	10
53.-1-1.2	x	MUD POND RD.	VACANT	3800	3800	
53.-1-10	x	MUD POND RD.	VAC.	20600	20600	
53.-1-2		MUD POND RD.	RES.	58600	58600	
53.-1-3		MUD POND RD.	RES.	35000	35000	
53.-1-4		MUD POND RD.	RES.	43000	43000	
53.-1-5	x	MUD POND RD.	VAC.	19000	19000	
53.-1-6		466 MUD POND RD.	RES.	39000	39000	
53.-1-7		73 MUD POND RD.	RES.	59000	59000	
53.-1-9	x	MUD POND RD.	VAC.	3800	3800	
54.-1-21		1094 RIDGE RD.	RES.	92100	92100	
54.-1-22		1104 RIDGE RD.	RES.	99500	99500	
54.-1-23		1114 RIDGE RD.	RES.	80000	80000	
54.-1-24		RIDGE RD.	2 RES.	133400	133400	
54.-1-25.1		1128 RIDGE RD.		175000	175000	
54.-1-25.2		RIDGE ROAD		35000	35000	
54.-1-27		36 SUNNYSIDE EAST	RES. UNFIN.	67600	67600	
54.-1-28		38 SUNNYSIDE RD.	RES.	92000	92000	
54.-1-29		72 SUNNYSIDE RD.	RES.	69900	69900	
54.-1-30	x	SUNNYSIDE RD.	VAC.	9200	9200	
54.-1-31.1	x	SUNNYSIDE EAST	BARN	25400	25400	
54.-1-31.2		80 SUNNYSIDE EAST	RES.	112600	112600	
54.-1-32.1	x	CRIMSON HILLS RD.	VAC.	126300	25260	20
54.-1-32.2		24 CRIMSON HILLS RD.	RES.	226300	45260	20
54.-1-33		118 SUNNYSIDE RD.	RES.	66500	66500	
54.-1-34		124 SUNNYSIDE EAST	RES.	109000	109000	
54.-1-35.1		130 SUNNYSIDE RD.	RES.	112700	112700	
54.-1-35.24	x	2 BROOKFIELD RUN	VAC.	36500	36500	
54.-1-37		SUNNYSIDE RD.	RES.	196000	29400	15
54.-1-7.1	x	SUNNYSIDE RD.	VAC.	34800	34800	
54.-1-8	x	1112 RIDGE RD.	VAC.	23400	23400	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
54.-3-1		24 RIDGE RD.	RES.	122800	122800	
54.-3-11.1		51 HILAND DR.	RES.	155400	155400	
54.-3-11.2		21 HILAND DR.	RES.	153200	153200	
54.-3-11.3		HILAND RD.	RES.	438700	438700	
54.-3-12.1		ROCKWELL RD.	RES.	225000	225000	
54.-3-12.2		168 ROCKWELL RD.	RES.	143000	143000	
54.-3-12.5		20 HOWE DR.		223900	223900	
54.-3-13		HOWE DR.	CEMETERY	500	500	
54.-3-14.2		131 ROCKWELL RD.	RES.	295000	73750	25
54.-3-15		169 ROCKWELL RD.	RES.	92600	92600	
54.-3-16	x	180 ROCKWELL RD.	VAC.	60300	60300	
54.-3-17.1		262B ROCKWELL RD.	RES.	538900	538900	
54.-3-17.2		200-202 ROCKWELL RD.	RES.	148000	148000	
54.-3-17.3		184 ROCKWELL RD.	RES.	155900	155900	
54.-3-18.1		2 BROOKWOOD DR.	RES.	125000	125000	
54.-3-18.10		6 BROOKWOOD DR.	RES.	110500	110500	
54.-3-18.11	x	10 BROOKWOOD DR.	VAC.	19700	19700	
54.-3-18.12		12 BROOKWOOD DR.	RES.	126000	126000	
54.-3-18.13		9 BROOKWOOD DR.	RES.	136000	136000	
54.-3-18.2		8 BROOKWOOD DR.	RES.	91600	91600	
54.-3-18.3		14 BROOKWOOD DR.	RES.	94700	94700	
54.-3-18.4		4 BROOKWOOD DR.	RES.	86700	86700	
54.-3-18.5		5 BROOKWOOD DR.	RES.	105900	105900	
54.-3-18.6		11 BROOKWOOD DR.	RES.	114900	114900	
54.-3-18.7		7 BROOKWOOD DR.	RES.	113900	113900	
54.-3-18.8		1 BROOKWOOD DR.	RES.	112000	112000	
54.-3-18.9		3 BROOKWOOD DR.	RES.	107500	107500	
54.-3-19		ROCKWELL RD.	RES.	50000	50000	
54.-3-2		1071 RIDGE RD.	FARM	259800	259800	
54.-3-20		SUNNYSIDE RD.	PAVILION	42000	42000	
54.-3-21		SUNNYSIDE RD.	FARM	147300	73650	50
54.-4-1		30 HILAND RD.	RES.	172000	172000	
54.-4-2		13 SUMMIT LANE	RES.	173100	173100	
54.-4-3		19 SUMMIT LANE	RES.	150500	150500	
54.-4-4		265 SUMMIT LANE	RES.	160000	160000	
54.-4-5		98 ROCKWELL RD.	RES.	144500	144500	
54.-4-6.1		14 SUMMIT LANE	RES.	172300	172300	
54.-4-6.2		269 ROCKWELL RD.	RES.	150000	150000	
54.-6-1		210 SUNNYSIDE RD.	RES.&MOBILE HO	62200	62200	
54.-6-12		120 SUNNYSIDE RD.	RES.&GAR.	130200	130200	
54.-6-13		285 SUNNYSIDE RD.	MOBILE HOME	17700	17700	
54.-6-14		SUNNYSIDE RD.	2 MOBILE HOMES	32200	32200	
54.-6-15		30B SUNNYSIDE RD.	RES.	99000	99000	
54.-6-16		156 SUNNYSIDE RD.	RES.	49000	49000	
54.-6-17		160 SUNNYSIDE RD.	RES.	60000	60000	
54.-6-18		168 SUNNYSIDE RD.	MERC.&APTS.	308000	308000	
54.-6-19		172 SUNNYSIDE RD.	RES.	91500	91500	
54.-6-2	x	RIDGE RD.	VAC.	4600	4600	
54.-6-20	x	SUNNYSIDE RD.	VAC.	10400	10400	
54.-6-21		178 SUNNYSIDE RD.	RES.	86900	86900	
54.-6-22		180 SUNNYSIDE RD.	RES.	73800	73800	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
54.-6-24		192 SUNNYSIDE RD.	RES.	89000	89000	
54.-6-25		SUNNYSIDE RD.	RES.	57300	57300	
54.-6-3		38 RIDGE RD.	RES.	57500	57500	
54.-6-4		1117 RIDGE RD.	RES.	94500	94500	
54.-6-5		1113 RIDGE RD.	RES.	50100	50100	
54.-6-6		1103 RIDGE RD.	RES.	250600	250600	
54.-7-1	x	THISTLEWOOD DR.	VAC	24200	24200	
54.-7-10		45 GLENMAR DR.	RES.	151200	151200	
54.-7-11		6 STONEHURST DR.	RES.	149300	149300	
54.-7-12	x	STONEHURST DR.	VAC	21800	21800	
54.-7-13	x	SUNNYSIDE RD.	VAC.	31100	31100	
54.-7-14	x	STONEHURST DR.	VAC	20200	20200	
54.-7-15		3 STONEHURST DR.	RES	128900	128900	
54.-7-16	x	STONEHURST DR.	VAC	36700	36700	
54.-7-17		7 STONEHURST DR.	RES.	168600	168600	
54.-7-18		9 STONEHURST DR.	RES.	191800	191800	
54.-7-19		11 STONEHURST DR.	RES.	191200	191200	
54.-7-2		4 THISTLEWOOD DR.	RES.	150000	150000	
54.-7-20		13 STONEHURST DR.	RES.	155000	155000	
54.-7-21		15 STONEHURST DR.	RES.	166500	166500	
54.-7-22		17 STONEHURST DR.	RES.	143000	143000	
54.-7-23	x	19 STONEHURST DR.	VAC	22500	22500	
54.-7-24		21 STONEHURST DR.	RES. UNF.	140100	140100	
54.-7-25	x	22 STONEHURST DR.	VAC	21800	21800	
54.-7-26		20 STONEHURST DR.	RES.	160000	160000	
54.-7-27		15 THISTLEWOOD DR.	RES.	180600	180600	
54.-7-28		13 THISTLEWOOD DR.	RES.	150000	150000	
54.-7-29		11 THISTLEWOOD DR.	RES.	179900	179900	
54.-7-3		2 PINECROFT DR.	RES.	130000	130000	
54.-7-30	x	9 THISTLEWOOD DR.	VAC	21700	21700	
54.-7-31		7 THISTLEWOOD DR.	RES	165000	165000	
54.-7-32		5 THISTLEWOOD DR.	RES	158600	158600	
54.-7-33		3 THISTLEWOOD DR.	RES.	130000	130000	
54.-7-34		1 THISTLEWOOD DR.	RES.	135200	135200	
54.-7-35		1 PINECROFT DR.	RES	142800	142800	
54.-7-36	x	3 PINECROFT DR.	VAC	22500	22500	
54.-7-37		5 PINECROFT DR.	RES.	151000	151000	
54.-7-38		4 GLENMAR DR.	RES	144400	144400	
54.-7-39		44 GLENMAR DR.	RES.	177700	177700	
54.-7-4		7 GLENMAR DR.	RES	140000	140000	
54.-7-40		16 GLENMAR DR.	RES	148100	148100	
54.-7-42	x	8 STONEHURST DR.	VAC	21800	21800	
54.-7-43		10 STONEHURST DR.	RES	147200	147200	
54.-7-44	x	7 PINECROFT DR.	VAC	22300	22300	
54.-7-45		14 STONEHURST DR.	RES.	169600	169600	
54.-7-46	x	THISTLEWOOD DR.	VAC	25800	25800	
54.-7-47		14 THISTLEWOOD DR.	RES	153000	153000	
54.-7-48	x	12 THISTLEWOOD DR.	VAC	32400	32400	
54.-7-49	x	THISTLEWOOD DR.	VAC.	35400	35400	
54.-7-5	x	19 GLENMAR DR.	VAC	33000	33000	
54.-7-50		STONEHURST DR.		16800	16800	

CURRENT_PR	vacant/no service	PARCELADDR	DESC1	CUR_TOTAL	%assessed	%
54.-7-51		STONEHURST DR.		17000	17000	
54.-7-52		STONEHURST DR.		17000	17000	
54.-7-53		STONEHURST DR.		17300	17300	
54.-7-54		STONEHURST DR.		16600	16600	
54.-7-55		STONEHURST DR.		16900	16900	
54.-7-56		28 STONEHURST DR.		150000	150000	
54.-7-57		STONEHURST DR.		22700	22700	
54.-7-58		STONEHURST DR.		16600	16600	
54.-7-59		STONEHURST DR.		22900	22900	
54.-7-6		23 GLENMAR DR.	RES.	145000	145000	
54.-7-60		STONEHURST DR.		16600	16600	
54.-7-61		STONEHURST DR.		24200	24200	
54.-7-62		STONEHURST DR.		17300	17300	
54.-7-63		STONEHURST DR.		73900	73900	
54.-7-65		STONEHURST DR.		24500	24500	
54.-7-7		27 GLENMAR DR.	RES.	150000	150000	
54.-7-8	x	31 GLENMAR DR.	VAC.	26400	26400	
54.-7-9		39 GLENMAR DR.	RES.	74800	74800	

APPENDIX B

WATER DISTRICT LOCATION MAP

PROPOSED WD EXTENSIONS

GLEN LAKE WD

JENKINSVILLE WD

SUNNYSIDE LAKE WD

APPENDIX C

WATER DISTRICT BOUNDARY MAPS

DRAFT

GLEN LAKE

12"

8"

12"

12"

12"

Queensbury Water District
Proposed Glen Lake Extension
April 1999
C.T. MALE ASSOCIATES, P.C.

1" = 500'

DRAFT

8"

12"

SUNNYSIDE LAKE

12"

12"

JENKINSVILLE

12"

8"

Queensbury Water District
Proposed Sunnyside & Jenkinsville Extensions
April 1999
C.T. MALE ASSOCIATES, P.C.

1" = 500'

APPENDIX D

WATERCAD MAP AND RESULTS

(LIST OF MODEL RUNS ONLY)

Queensbury Water District
Hydraulic Model Runs
Proposed New Water Districts
April 1999

Run	Description
1	Current Peak Day Demand with all future purchase peak day demands and estimated current peak day demands in the new water districts.
2	Current Peak Day Demand with all future purchase peak day demands and estimated current peak day demands in the new water districts. Main break scenario - no water supplied via Rockwell Road.
3	Current Peak Day Demand with all future purchase peak day demands and estimated current peak day demands in the new water districts. Main break scenario - no water supplied via Bay Road.
4	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts.
5	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Main break scenario - no water supplied via Rockwell Road.
6	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Main break scenario - no water supplied via Bay Road.
7	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in Jenkinsville Water District only. Jenkinsville Water District supplied via Rockwell Road.
8	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Fire flow scenario at J-27 Glen Lake Road.
9	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Fire flow scenario at J-44 Sunnyside Road.
10	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Fire flow scenario at J-89 Mud Pond Road.
11	Future Peak Day Demand with all future purchase peak day demands and estimated future peak day demands in the new water districts. Fire flow scenario at J-27 Glen Lake Road. Glen Lake Road main upgraded to a 12 inch main.

APPENDIX E

COST SUMMARY

Queensbury Water District
Proposed Water District Extensions

	#parcels	#services	Total Bond	Annual Payment	Total Assessed Value*	Average Assessed Value**	Annual Payment Per $1000 Assessed Value	Annual Payment per Average Home
Glen Lake***	485	374	$5,072,367	$424,452	$52,459,195	$132,512	$8.09	$1,072.17
Sunnyside	242	177	$1,942,324	$162,532	$15,662,450	$89,677	$10.38	$930.60
Jenkinsville	297	220	$3,738,268	$312,816	$27,887,690	$128,315	$11.22	$1,439.31

*Includes all taxable properties.
**Based on existing residential buildings only.
***50% of the cost of the 12" connector main along Round Pond Road and Blind Rock Road is assumed to be paid for by the Town Water District as this benefits the existing system and users as well. This cost is estimated to be $330,777.

C.T. MALE ASSOCIATES, P.C.

4/9/99

Queensbury Water District
Proposed District Extensions

	Units	# Units	Cost Per Unit	Subtotal		
GLEN LAKE WATER DISTRICT						
Mobilization/Demobilization	LS	1	$50,000.00	$50,000.00		
Clearing & Grubbing	LS	1	$10,000.00	$5,000.00		
Maintenance & Protection of Traffic	LS	1	$15,000.00	$15,000.00		
Construction Photos	LS	1	$5,700.00	$5,700.00		
Site Preparation	LS	1	$100,000.00	$100,000.00		
Environmental Protection	LS	1	$33,600.00	$33,600.00		
Construction Stakeout	LS	1	$15,000.00	$15,000.00		
Rock Excavation	CY	500	$75.00	$37,500.00		
Test Pits	EA	375	$20.00	$7,500.00		
8" DI pipe	LF	21,875	$35.00	$765,625.00		
12" DI pipe	LF	25,015	$45.00	$1,125,675.00		
Connections	EA	2	$1,000.00	$2,000.00		
PRV	EA	1	$40,000.00	$40,000.00		
8" Valve	EA	16	$800.00	$12,800.00		
12" Valve	EA	34	$1,050.00	$35,700.00		
Fire Hydrants	EA	78	$2,000.00	$156,000.00		
3/4 inch corporation stops	EA	374	$50.00	$18,700.00		
3/4 inch curb stop and box	EA	374	$50.00	$18,700.00		
3/4 inch Type K copper water services	LF	11,220	$18.00	$201,960.00		
Pipe zone bedding	CY	2,467	$20.00	$49,345.40		
Pipe zone backfill	CY	12,967	$15.00	$194,508.60		
Special Trench backfill	CY	23,273	$18.00	$418,919.94		
Subbase	CY	12,930	$20.00	$258,592.60		
Asphalt concrete paving	TON	12,226	$45.00	$550,188.90		
Soil preparation	MSF	240	$200.00	$48,000.00		
Hydroseeding	MSF	240	$200.00	$48,000.00		
General restoration	LS	1	$75,000.00	$75,000.00		
Estimated Construction Cost					$4,289,015.44	
Soil Borings	EA	39	$750.00	$29,250.00		
Survey	LS	1	$32,000.00	$32,000.00		
Inspection	LS	1	$82,200.00	$82,200.00		
Engineering	LS	1	$200,000.00	$200,000.00		
Contingency	10% of Construction		$428,901.54	$428,901.54		
Easements: Preparation	LS	1	$11,000.00	$11,000.00		
Estimated Total Project Cost					$5,072,366.98	cost per lf $108.18

C.T. MALE ASSOCIATES, P.C.

4/9/99

Queensbury Water District
Proposed District Extensions

	Units	# Units	Cost Per Unit	Subtotal		
SUNNYSIDE LAKE WATER DISTRICT						
Mobilization/Demobilization	LS	1	$25,000.00	$25,000.00		
Clearing & Grubbing	LS	1	$5,000.00	$5,000.00		
Maintenance & Protection of Traffic	LS	1	$10,000.00	$10,000.00		
Construction Photos	LS	1	$2,700.00	$2,700.00		
Site Preparation	LS	1	$60,000.00	$60,000.00		
Environmental Protection	LS	1	$16,000.00	$16,000.00		
Construction Stakeout	LS	1	$17,700.00	$17,700.00		
Rock Excavation	CY	250	$75.00	$18,750.00		
Test Pits	EA	160	$20.00	$3,200.00		
8" DI pipe	LF	11,760	$35.00	$411,600.00		
12" DI pipe	LF	7,910	$45.00	$355,950.00		
Connections	EA	1	$1,000.00	$1,000.00		
8" Valve	EA	15	$800.00	$12,000.00		
12" Valve	EA	16	$1,050.00	$16,800.00		
Fire Hydrants	EA	33	$2,000.00	$66,000.00		
3/4 inch corporation stops	EA	177	$50.00	$8,850.00		
3/4 inch curb stop and box	EA	177	$50.00	$8,850.00		
3/4 inch Type K copper water services	LF	5,310	$18.00	$95,580.00		
Pipe zone bedding	CY	1,019	$20.00	$20,380.00		
Pipe zone backfill	CY	5,392	$15.00	$80,880.00		
Special Trench backfill	CY	4,404	$18.00	$79,272.00		
Subbase	CY	2,447	$20.00	$48,940.00		
Asphalt concrete paving	TON	1,426	$45.00	$64,170.00		
Soil preparation	MSF	261	$200.00	$52,200.00		
Hydroseeding	MSF	261	$200.00	$52,200.00		
General restoration	LS	1	$50,000.00	$50,000.00		
Estimated Construction Cost					$1,583,022.00	
Soil Borings	EA	16	$750.00	$12,000.00		
Survey	LS	1	$16,000.00	$16,000.00		
Inspection	LS	1	$37,000.00	$37,000.00		
Engineering	LS	1	$125,000.00	$125,000.00		
Contingency	10% of Construction		$158,302.20	$158,302.20		
Easements: Preparation	LS	1	$11,000.00	$11,000.00		
Estimated Total Project Cost					$1,942,324.20	cost per lf $98.75

C.T. MALE ASSOCIATES, P.C.

4/9/99

Queensbury Water District
Proposed District Extensions

	Units	# Units	Cost Per Unit	Subtotal		
JENKINSVILLE WATER DISTRICT						
Mobilization/Demobilization	LS	1	$35,000.00	$35,000.00		
Clearing & Grubbing	LS	1	$7,500.00	$7,500.00		
Maintenance & Protection of Traffic	LS	1	$12,000.00	$12,000.00		
Construction Photos	LS	1	$4,000.00	$4,000.00		
Site Preparation	LS	1	$70,000.00	$70,000.00		
Environmental Protection	LS	1	$24,000.00	$24,000.00		
Construction Stakeout	LS	1	$26,000.00	$26,000.00		
Rock Excavation	CY	350	$75.00	$26,250.00		
Test Pits	EA	300	$20.00	$6,000.00		
8" DI pipe	LF	17,250	$35.00	$603,750.00		
12" DI pipe	LF	19,780	$45.00	$890,100.00		
Connections	EA	1	$1,000.00	$1,000.00		
8" Valve	EA	14	$800.00	$11,200.00		
12" Valve	EA	22	$1,050.00	$23,100.00		
Fire Hydrants	EA	62	$2,000.00	$124,000.00		
3/4 inch corporation stops	EA	220	$50.00	$11,000.00		
3/4 inch curb stop and box	EA	220	$50.00	$11,000.00		
3/4 inch Type K copper water services	LF	6,600	$18.00	$118,800.00		
Pipe zone bedding	CY	1,949	$20.00	$38,980.00		
Pipe zone backfill	CY	10,241	$15.00	$153,615.00		
Special Trench backfill	CY	12,935	$18.00	$232,830.00		
Subbase	CY	7,186	$20.00	$143,720.00		
Asphalt concrete paving	TON	7,763	$45.00	$349,335.00		
Soil preparation	MSF	353	$200.00	$70,600.00		
Hydroseeding	MSF	353	$200.00	$70,600.00		
General restoration	LS	1	$60,000.00	$60,000.00		
Estimated Construction Cost					$3,124,380.00	
Soil Borings	EA	31	$750.00	$23,250.00		
Survey	LS	1	$26,200.00	$26,200.00		
Inspection	LS	1	$66,000.00	$66,000.00		
Engineering	LS	1	$175,000.00	$175,000.00		
Contingency	10% of Construction		$312,438.00	$312,438.00		
Easements: Preparation	LS	1	$11,000.00	$11,000.00		
Estimated Total Project Cost					$3,738,268.00	cost per lf $100.95

Appendix B

Hydraulic Model Output

(Available Upon Request)

FIGURE 1

Water Distribution System Map

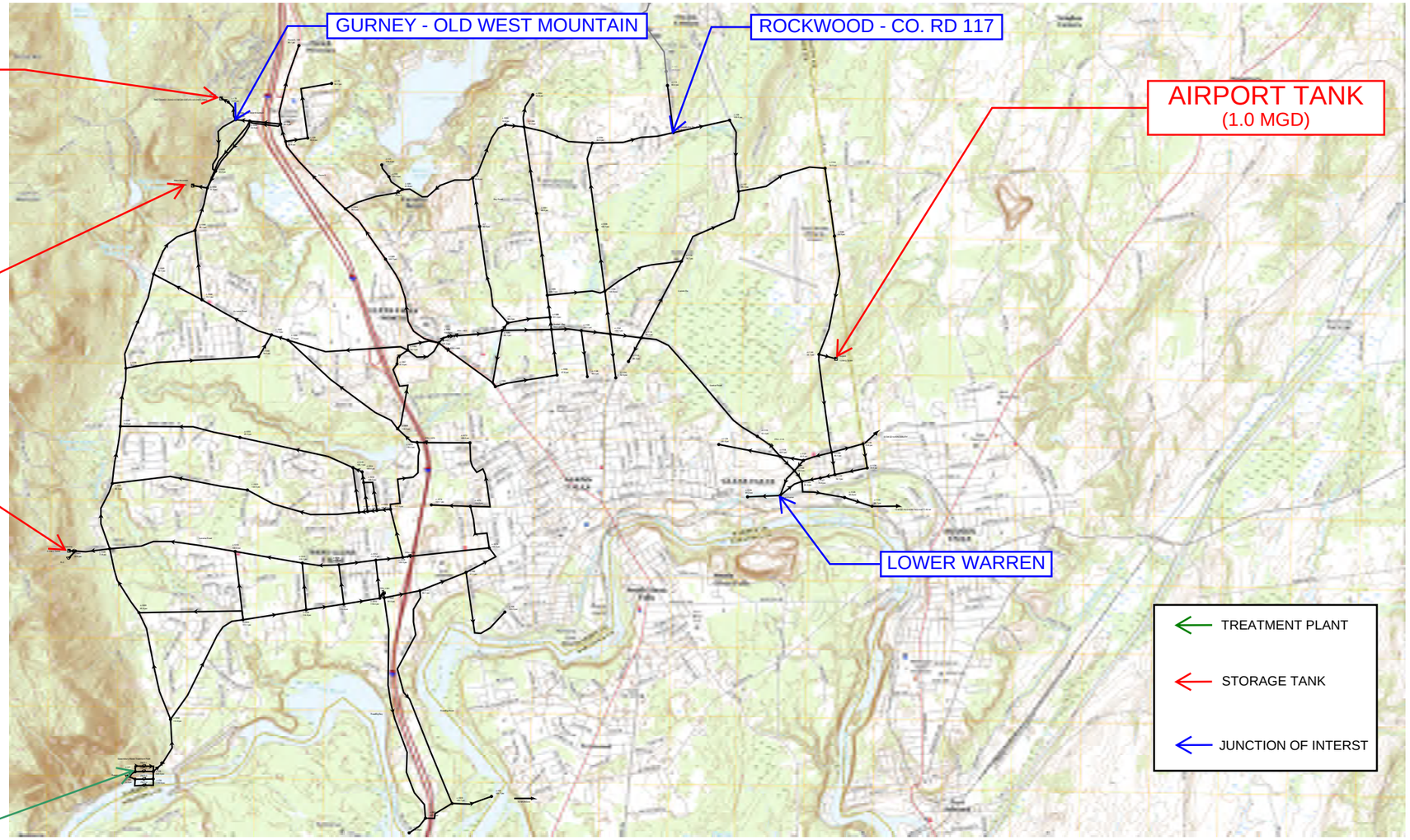
NONE : XREFS

GURNEY TANK
(2 TANKS, 1.0 AND 0.5 MGD, MODELED AS 1.5 MGD)

WEST MOUNTAIN TANK
(0.5 MGD)

LUZURNE TANK
(2.0 MGD)

TOWN OF QUEENSBURY
WATER TREATMENT PLANT



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CAD DWG. FILE NAME: FILENAME

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C.T. MALE ASSOCIATES
Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.
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COBLESKILL, NY • GLENS FALLS, NY • POUGHKEEPSIE, NY
JOHNSTOWN, NY • RED HOOK, NY • SYRACUSE, NY
www.ctmale.com

FIGURE 1 - WATER SERVICE AREA MAP

TOWN OF QUEENSBURY WATER AGE ANALYSIS

PROJ. NO.: 21.1201	DRAFTED: BFJ	SCALE: NONE	DATE: 7/20/2021	TOWN OF QUEENSBURY	WARREN COUNTY, NEW YORK

FIGURE 2

Jenkinsville Service Area Map

NONE :XREFS

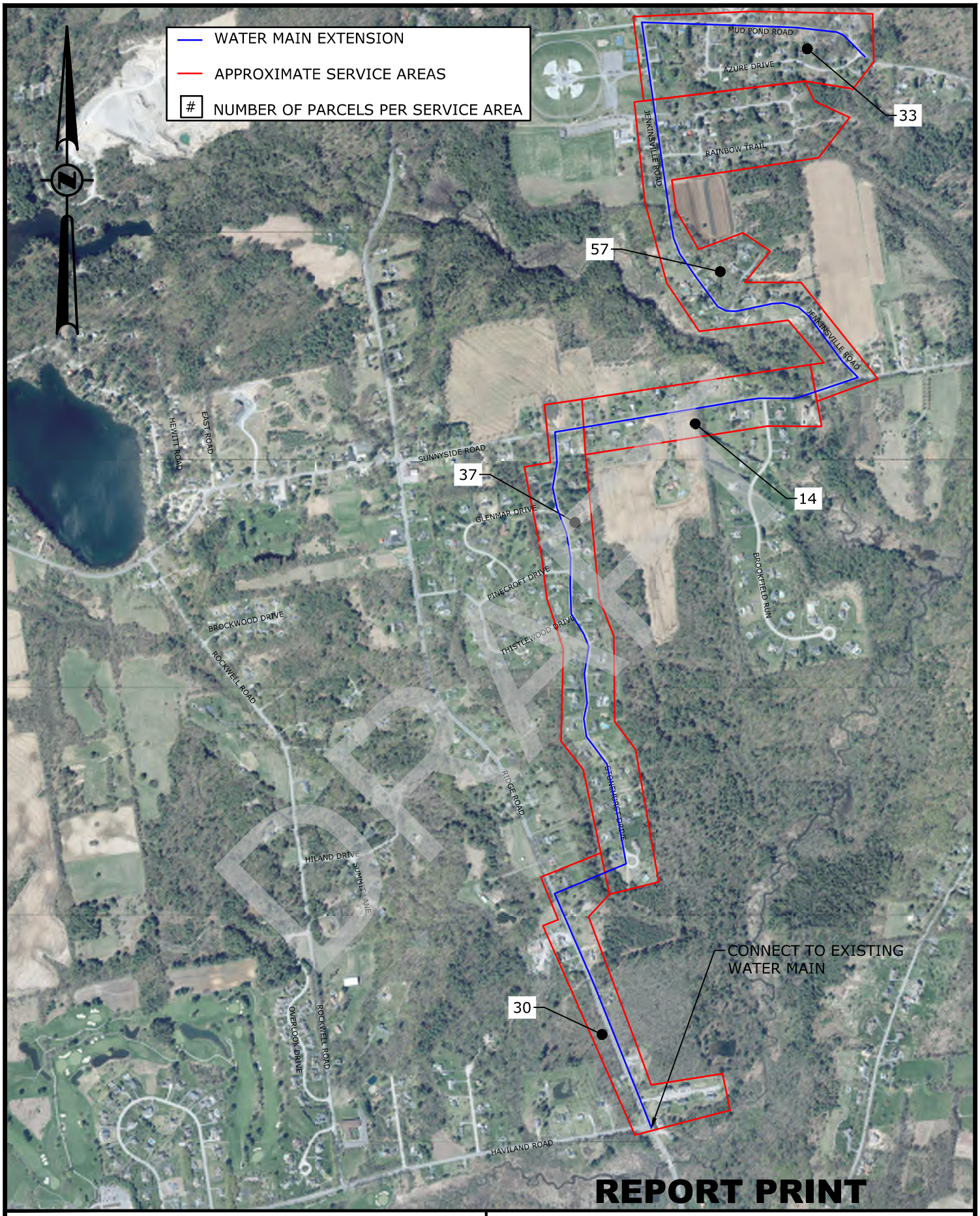

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FIGURE 2 - PROPOSED JENKINSVILLE SERVICE AREA

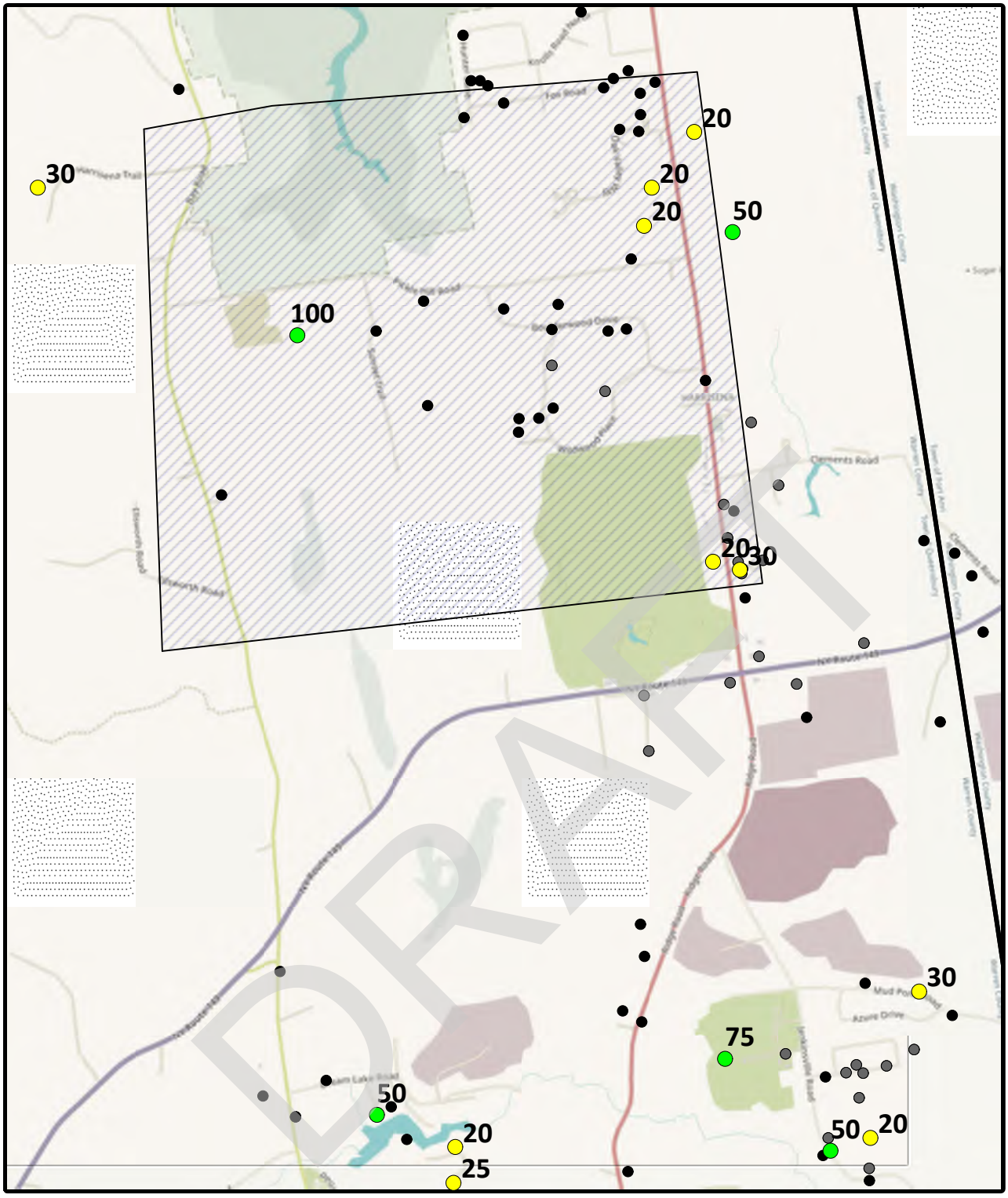
TOWN OF QUEENSBURY WATER AGE ANALYSIS

PROJ. NO.: 21.1201	DRAFTED: BFJ	SCALE: NTS	DATE: 12/22/2021	TOWN OF QUEENSBURY	WARREN COUNTY, NEW YORK

CAD DWG. FILE NAME: FILENAME

FIGURE 3

New Well Source Map



C.T. Male Associates

Test Well Area / New Water Supply
Jenkinsville Residential Area
Town of Queensbury
Warren County, New York

CTM Project # 21.1201
Scale: 1" = 2000'
Drafted: DK
Checked: KM
April 2022

LEGEND

- Area of Consideration
- Bedrock Supply Well, >50 gpm
- Bedrock Supply Well, 20-50 gpm
- Bedrock Supply Well, <20 gpm
- Overburden Supply Well