



PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS

July 20, 2012

Mr. Winn Abbott, Town Manager
Town of Milton
115 Federal Street
Milton, Delaware 19968

**RE: Water Facility Planning Study Report
Town of Milton, Delaware**

Dear Mr. Abbott:

Pennoni Associates Inc. ("Pennoni") is pleased to provide the Town of Milton with our Water Facility Planning Study Report. Our report is the result of the Town's request for proposals dated April 12, 2012 and addresses the scope of work set forth under the Town Manager's direction. It is our understanding this report consists of recommendations to the existing Water Facility Plan prepared for the Town of Milton by Cabe Associates.

It is also our understanding this report will require public outreach and presentation before the Town of Milton and be utilized for application for a grant through the Comprehensive Funding Pool of the Water Management Account of the Division of Public Health Office of Drinking Water (ODW).

PURPOSE

The purpose of this report is to review the current Town of Milton Water Facilities Preliminary Engineering Report and provide the Town of Milton with recommendations for moving forward with capital improvements to serve existing need for central water service as well as plan for future growth of the Town's central water system utility.

SCOPE OF WORK

In accordance with the direction of the Town of Milton, Pennoni performed a comprehensive review of the previous Water Facilities Plan and Preliminary Engineering Report, interviewed Town Officials, Public Works Staff and State Agencies concerning the existing central water system. Pennoni acquired available records, maps and data concerning the system and system performance. Pennoni reviewed the available information and developed a draft report for review and approval of the Town of Milton. The report of recommendations has been structured to be utilized by the Town to apply for potential grant funding as listed in Section II of the Guidelines and Application for Water Facility Planning Grants issued by the Office of Drinking Water.

MEETINGS WITH TOWN OFFICIALS

Pennoni attended Town Council Meetings, conducted meetings with the Mayor, Town Manager, Water Committee and Public Works Department Staff in preparation of the Water Facility Planning Study Report. Separate meetings with Public Works staff were conducted to obtain technical information concerning the existing water system, demand, pumping records and measured usage, metered data as well as ongoing maintenance and future needs. Direction was received from Town Officials concerning serving their existing need and future plans for water service in and around the Town of Milton.

REVIEW OF INFORMATION

Information received from Town Officials was compiled and reviewed. Data evaluated included the current Water Facilities Plan Preliminary Engineering Report prepared by Cabe Associates, Inc., correspondence with the Delaware River Basin Commission and DNREC Division of Water Resources, available maps of the existing water system, previous referendum information, past well pumping data, past population data, current water meter usage data, existing water system maintenance history and current operational issues.

FINDINGS

Based upon the our review of the current Water Facilities Plan Preliminary Engineering Report, meetings with Town Officials and data obtained from the Public Works Department, our findings are as follows;

1. The Town's pumping records indicate the Town's Water Allocation Permit is not adequate to meet the Town's Water Demand on several days throughout the summer months. See attached Town of Milton Water Pumping Data-Exhibit A and DNREC Water Allocation Permit Modification Letter dated December 2, 2012-Exhibit B.
2. The Town's reported pumping records and updated water meter data indicates approximately 10 mg/quarter of unmetered water. The Town is working to replace defective hydrants, meters and leaking components and is participating in a water system improvement program with Delaware Rural Water Association to account for and minimize losses in the system. See attached Exhibit C.
3. The Town's reported population and water usage data have increased proportionately from the 2008 Water Facilities Plan Preliminary Engineering Report prepared by Cabe Associates, Inc. See attached Population and Water Usage-Exhibit D.
4. The Town of Milton Boundary Map as shown in the 2008 Water Facilities Plan Preliminary Engineering Report prepared by Cabe Associates, Inc. Exhibit I-1, Planning Area Map Exhibit I-2, Existing Water System Schematic Exhibit II-1 and

CPCN Service Area Map Exhibit IV-4 have not changed, as reported by Town Officials, and do not require revision.

ALTERNATIVES

Based upon our review of the above information and our above Findings, alternatives selected were as follows;

1. Alternative A-Increase in Water Supply.

This alternative is the recommended alternative to alleviate the immediate needs while providing back up redundancy within the water utility. See Alternatives Cost Estimate Comparison Exhibit E.

During Peak Demand times, the current system pumps near capacity to keep up with demand. Should any system component fail or require maintenance, the utility risks not being able to meet demand. The existing wells already have sufficient supply to service existing and future need, as shown by the existing 2008 Water Facility Preliminary Engineering Report prepared by Cabe Associates, Inc. page II-2 and II-3.

Well #2 Permitted Allocation (87-009A-R2M) was reported at 360,000 GPD, Well #3/#7 Permitted Allocation (87-009A-R2M) was reported at 482,400 GPD, Well #4 Permitted Allocation (87-009B-R2M) was reported at 374,000 GPD and Well #5 Permitted Allocation (87-009A-R2M) was reported at 374,000 GPD respectively. The combined Well capacity equates to 1,590,000 GPD. However, the total combined Water Allocation Permit limits the sum of the supply to 500,000 GPD with a 24-hour period, 10,000,000 Gallons in any 30-day period and 100,000,000 Gallons within any 12 month period.

Town combined well pumping records indicate Peak Demands pumped from Wells #2, #3/#7 & #4 for 2011 averaged approximately 350,000 GPD but peaked as high as 653,000 GPD during the summer months. Town combined well pumping records also indicate Wells #2, #3/#7 and #4 are interconnected for water quality treatment and when all pumps are running to meet peak demand, the pumping capacity declines in Well #2, which may indicate a necessary upgrade in supply mains and/or pumping control systems.

This alternative recommends installation of a new well or re-activation of Well #5, which is currently out of service. Well #5 has a permitted Water Allocation (87-0009B-R2M) of 374,000 GPD and is screened at 420-460 feet deep (Federalsburg Aquifer). This well is located on the southern side of Town across the Broadkill River and is situated near the Town's CPCN service area that has future growth potential. This well has been taken out of service due to sulfur odor. Based upon the reported demand, an alternative source of supply and back-up in the event of failure, emergency or maintenance should be established. Well#5 has already been constructed and permitted and could be brought

back into service. The Town should test the water quality and investigate the costs for revitalizing this well or constructing a new well at that location. The existing treatment building at the Well#5 location should be upgraded for adequate water quality treatment and also to provide a secondary Treatment site as a secondary facility for the main treatment building in the event it needs to be taken off-line for maintenance and for future growth and expansion of the system to service additional areas within the Town's existing CPCN and potential growth areas.

2. Alternative B-Increase in Water Supply by Increase in Elevated Storage.

This alternative has been evaluated and addressed by the 2008 Water Facilities Plan Preliminary Engineering Report prepared by Cabe Associates. A 500,000 Gallon Elevated Storage Tank at the location indicated by Referendum Presentation Information is the most logical selection for this alternative. See Alternatives Cost Estimate Comparison Exhibit E.

The 500,000 gallon tank would provide an adequate source of supply to meet demand during peak usage as well as provide adequate supply as recommended by 10-States Standards and State Fire Prevention Regulations. Construction cost of the elevated storage facility is higher than Alternative A but does not require addressing the shortcomings of the existing water system listed in the Additional Request for Water Allocation Permit Letter dated December 12, 2012 from DNREC Division of Water Resources. See Exhibit B.

3. Alternative C-Connectivity with neighboring Private Water Utilities.

This alternative has not been fully evaluated and does not match the criteria communicated by the Town as pre-requisite for consideration in moving forward with providing service to meet existing and future need. Interconnectivity with a private water utility and competing CPCN territory may limit the Town's future customer base and block future growth into developing areas in and around the Town as well as possibly concede control of rates and fees to the Public Service Commission for utilizing private water supply.

Interconnection would require installation of a meter, meter pit, connection piping and may be grant eligible and/or partially funded by the connecting utility. See Alternatives Cost Estimate Comparison Exhibit E.

RECOMMENDATIONS

Based upon our review of the above information and our above Findings, our recommendations are as follows;

1. The Town should continue to comply with the Stage I and Stage II Environmental Monitoring and Reporting recommendations in Section II of the 2008 Water Facility Plan Preliminary Engineering Report by Cabe Associates, Inc.
2. The Town should continue to apply for an increase/modification of the Town's Water Allocation Permit 87-0009 from 500,000 gpd to 750,000 gpd to keep pace with demand and provide for future growth. Submission of this request to DNREC and Delaware River Basin Commission will require compliance with the Town of Milton RFI2 letter from William W. Cocks, Water Allocations Program Manager, DNREC dated December 2, 2012.

It is recommended the Town continue to improve performance of the existing water system and proceed with the water audit. The data should be in accordance with the AWWA program format to establish uniformly accepted accounting of the Town's water consumption for use in applying for an increase in water allocation and any system shortcomings be addressed and corrected accordingly.

3. The Town should consider upgrading the existing well pumps, back-up generators, supply lines and/or control systems on Wells #2, #3/#7 & #4 to increase water pumping supply to 750,000 GPD to service existing need and plan for future development.
4. The Town should consider testing and investigate re-activating existing Well #5 or establish a new well and back-up generator at that location to provide a back-up source of supply in the event of emergency or maintenance to other wells/sources of supply and upgrade the existing Well #5 Treatment Building to treat water quality and provide a back-up Water Treatment Facility.
5. The Town should extend existing water mains to establish interconnectivity of dead-end mains to increase system pressure to areas of poor service and replace older problematic mains. See Water Main Improvements Exhibit F for the list of proposed improvements and costs and Exhibit G Town of Milton Water System Map from the 2008 Water Facility Preliminary Engineering Report prepared by Cabe Associates, Inc.

Based upon feedback and direction received from Town Officials, performance of Item #3 10-inch water main extension from Wagamons West Shores to Chestnut Street and Items #5/#11 Atlantic Avenue main upgrades should be given construction priority on the water main capital improvement program list. See Exhibit F.

6. A Capital Improvement Plan should be established to set aside funding to adequately maintain the system and replace poorly performing components. A rate study should be performed to evaluate the existing rates and set aside adequate funding for maintenance of the system. An impact fee study should also be performed to evaluate the existing rates and set aside adequate funding for future improvements to the system resulting from

the annexation of future development and potential up-zoning of existing properties within the Town's CPCN service area.

7. The Town should develop an accurate map of the existing water system. There are partial as-built plans of the newer portions of the system and accurate maps of the older water system components do not exist. The system needs to be mapped and recorded such that the system can be better measured, quantified and managed. A map of the system depicting the actual locations, pipe sizes, and types, location of towers, treatment buildings, individual services, meters, valves and hydrants should be made in digital format.
8. A water system model should be run to evaluate the performance of the system such that the system operations can be optimized and shortcomings identified as well as necessary upgrades and improvements be identified to service future customers and development.

This model should indicate system pressures and performance of the system components such that pumping power and system pressure can be optimized to reduce operational costs and identify weaknesses/losses in the system as well as provide the ability to identify necessary system upgrades required to service future development.

9. The following updates should be made to the existing 2008 Water facility Plan Preliminary Engineering Report prior to applying for additional Grant Funding:
 - The Town's Existing Water System Map-Attachment A should be updated from the 2008 Water Facility Preliminary Engineering Report to add improvements made and defective hydrants removed since 2008. See Exhibit C.
 - The Water Use Exhibit II-2 should be updated to include the latest water data from through 2012 and depict the water usage and population increase. See Exhibit A.
 - The Nitrate and pH Sampling Results Exhibit II-4 needs to be updated to include the latest Sampling Results Data.
 - The Water Demand Projection Exhibit II-5 needs to be updated in accordance with the latest water usage and population data through 2012. See Exhibit A.
 - The Future Water System Schematic Exhibit II-6 should be updated in accordance with the Final Recommendations of this report as adopted by the Town of Milton.
 - The Projected Capital Costs-Water Supply and Treatment Improvements Exhibit II-7 should be updated in accordance with the Final Recommendations of this report as adopted by the Town of Milton.
 - The Tank Maintenance Contract Summary Exhibit III-1 should be updated with the current maintenance information.
 - The Projected Capital Costs-Water Storage Improvements Exhibit III-2 should be updated in accordance with the Final Recommendations of this report as adopted by the Town of Milton.

- The Hydrant Test Results Exhibit IV-1 should be updated to include current test information.
- The Defective Hydrant Exhibit IV-2 should be updated to include removal of terminated and repaired hydrants. See Exhibit C.
- The Projected Capital Costs-Water Distribution Improvements Exhibit IV-3 should be updated in accordance with the Final Recommendations of this report as adopted by the Town of Milton.

In summary, our recommendations indicate the Town's need to increase the source of water supply to meet the demand indicated by the water usage data supplied by Town Officials. Methods for increasing supply include increasing water production, storage, interconnectivity with other utilities and improvements to the main distribution system. Based upon the information obtained from the Town, our findings indicate the Town should apply for increased production of the current supply system (wells) while working to reduce unmetered water (losses) within the system and improve system performance and reporting while applying for grant funding to finance the recommended system improvements.

This report has been prepared in accordance with the Town's direction and provides our best professional recommendations for moving forward with water system improvements to meet existing need and provide for future growth while keeping capital costs as low as possible.

We appreciate the opportunity to serve the Town of Milton in support of this project. Should you have any questions or require additional information, please do not hesitate to contact me directly at (302) 684-6210. We look forward to continuing to serve the Town of Milton. Thank you for your business.

Sincerely,

PENNONI ASSOCIATES INC.

Richard S. McCabe, PE
Senior Engineer

Mark H. Davidson
Associate Vice President

Attachments: Exhibits A-G

Exhibit A Town Well Pumping Data

2011 WATER USAGE ALL WELLS #2, #4 & #7

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1	369,000	357,000	330,000	260,000	370,000	424,000	621,000	506,000	426,000	546,000	290,000	283,000
2	365,000	312,000	345,000	346,000	158,000	481,000	357,000	508,000	288,000	314,000	309,000	400,000
3	161,000	378,000	270,000	374,000	392,000	598,000	601,000	455,000	403,000	160,000	368,000	184,000
4	374,000	277,000	420,000	295,000	293,000	518,000	295,000	433,000	455,000	315,000	143,000	362,000
5	316,000	268,000	411,000	240,000	309,000	545,000	367,000	433,000	316,000	339,000	316,000	243,000
6	322,000	380,000	346,000	359,000	326,000	311,000	414,000	549,000	147,000	476,000	324,000	309,000
7	330,000	303,000	140,000	253,000	406,000	471,000	366,000	618,000	367,000	386,000	313,000	304,000
8	466,000	380,000	349,000	378,000	370,000	524,000	492,000	287,000	313,000	486,000	326,000	290,000
9	361,000	290,000	304,000	420,000	211,000	622,000	400,000	244,000	370,000	394,000	291,000	290,000
10	208,000	279,000	331,000	233,000	433,000	534,000	455,000	416,000	500,000	290,000	319,000	411,000
11	314,000	368,000	318,000	241,000	300,000	590,000	498,000	443,000	352,000	299,000	443,000	415,000
12	367,000	413,000	319,000	389,000	422,000	363,000	457,000	376,000	156,000	331,000	318,000	146,000
13	266,000	394,000	285,000	249,000	298,000	431,000	605,000	463,000	291,000	336,000	382,000	313,000
14	277,000	185,000	334,000	372,000	470,000	495,000	435,000	571,000	393,000	387,000	162,000	271,000
15	384,000	303,000	382,000	256,000	308,000	503,000	490,000	226,000	243,000	440,000	354,000	280,000
16	347,000	387,000	267,000	384,000	260,000	519,000	496,000	653,000	345,000	253,000	260,000	389,000
17	412,000	257,000	380,000	360,000	377,000	270,000	537,000	273,000	407,000	261,000	270,000	350,000
18	206,000	403,000	245,000	249,000	274,000	613,000	543,000	597,000	281,000	389,000	307,000	346,000
19	348,000	423,000	445,000	301,000	343,000	249,000	453,000	364,000	373,000	325,000	317,000	244,000
20	277,000	233,000	306,000	327,000	277,000	417,000	440,000	360,000	313,000	295,000	308,000	325,000
21	288,000	363,000	217,000	304,000	331,000	498,000	454,000	565,000	454,000	295,000	301,000	306,000
22	433,000	271,000	342,000	423,000	408,000	428,000	412,000	173,000	321,000	387,000	393,000	323,000
23	245,000	300,000	345,000	351,000	180,000	383,000	516,000	391,000	355,000	289,000	264,000	331,000
24	235,000	373,000	281,000	287,000	377,000	450,000	524,000	376,000	308,000	318,000	248,000	535,000
25	415,000	269,000	336,000	184,000	356,000	610,000	444,000	403,000	507,000	336,000	505,000	332,000
26	315,000	429,000	272,000	426,000	455,000	347,000	459,000	326,000	57,000	412,000	218,000	242,000
27	401,000	350,000	392,000	330,000	327,000	268,000	436,000	422,000	313,000	116,000	256,000	183,000
28	394,000	315,000	270,000	400,000	581,000	470,000	469,000	202,000	327,000	447,000	281,000	284,000
29	420,000		356,000	240,000	303,000	475,000	456,000	363,000	295,000	357,000	405,000	283,000
30	374,000		288,000	381,000	496,000	503,000	538,000	335,000	317,000	339,000	278,000	372,000
31	209,000		378,000		370,000		369,000	347,000		156,000		314,000
TO	10,199,000	9,260,000	10,004,000	9,612,000	10,781,000	13,910,000	14,399,000	12,678,000	9,993,000	10,474,000	9,269,000	9,660,000

TOTAL GAL YR. 130,239,000

2011 Q4: 130,239,000 = 356,575 GPD
365.25

WELL	2009 TOTAL DAILY GALLONS PUMPED - ALL WELLS COMBINED												PER DAY			
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.				
1	321,000	291,000	315,000	367,000	308,000	204,000	359,000	393,000	377,000	372,000	247,000	316,000				
2	109,000	238,000	221,000	237,000	340,000	384,000	415,000	507,000	357,000	262,000	257,000	216,000				
3	295,000	358,000	243,000	353,000	321,000	320,000	358,000	379,000	432,000	303,000	255,000	306,000				
4	198,000	233,000	360,000	311,000	220,000	402,000	500,000	418,000	373,000	330,000	276,000	218,000				
5	192,000	358,000	248,000	318,000	251,000	277,000	343,000	413,000	537,000	384,000	318,000	317,000				
6	204,000	244,000	415,000	281,000	315,000	422,000	326,000	456,000	320,000	368,000	216,000	322,000				
7	178,000	360,000	242,000	284,000	238,000	271,000	449,000	319,000	417,000	287,000	318,000	233,000				
8	201,000	337,000	409,000	347,000	347,000	259,000	474,000	442,000	319,000	375,000	295,000	211,000				
9	216,000	243,000	233,000	403,000	349,000	399,000	446,000	422,000	475,000	342,000	288,000	321,000				
10	217,000	345,000	359,000	374,000	402,000	330,000	602,000	422,000	288,000	374,000	214,000	248,000				
11	201,000	298,000	225,000	271,000	252,000	305,000	499,000	495,000	355,000	342,000	327,000	351,000				
12	160,000	311,000	348,000	250,000	348,000	345,000	510,000	454,000	413,000	320,000	219,000	277,000				
13	219,000	307,000	256,000	269,000	270,000	327,000	311,000	431,000	309,000	261,000	256,000	324,000				
14	182,000	339,000	374,000	240,000	382,000	389,000	516,000	434,000	279,000	403,000	321,000	193,000				
15	183,000	383,000	320,000	334,000	364,000	241,000	433,000	487,000	377,000	315,000	285,000	251,000				
16	180,000	196,000	249,000	234,000	417,000	384,000	560,000	403,000	375,000	334,000	227,000	263,000				
17	302,000	307,000	232,000	372,000	309,000	291,000	439,000	428,000	341,000	251,000	314,000	291,000				
18	224,000	350,000	358,000	283,000	207,000	327,000	631,000	581,000	411,000	262,000	204,000	282,000				
19	185,000	268,000	253,000	330,000	353,000	317,000	454,000	452,000	368,000	387,000	307,000	251,000				
20	239,000	354,000	366,000	230,000	320,000	214,000	438,000	597,000	367,000	252,000	221,000	290,000				
21	259,000	393,000	392,000	349,000	356,000	188,000	433,000	263,000	366,000	357,000	289,000	153,000				
22	177,000	189,000	205,000	254,000	293,000	332,000	442,000	506,000	346,000	272,000	242,000	365,000				
23	239,000	285,000	255,000	334,000	417,000	324,000	406,000	421,000	437,000	364,000	357,000	307,000				
24	215,000	363,000	370,000	352,000	388,000	264,000	462,000	325,000	287,000	253,000	225,000	419,000				
25	335,000	284,000	246,000	377,000	487,000	360,000	453,000	343,000	409,000	360,000	203,000	401,000				
26	228,000	274,000	398,000	256,000	216,000	335,000	460,000	444,000	335,000	238,000	322,000	233,000				
27	244,000	269,000	234,000	300,000	346,000	444,000	367,000	435,000	322,000	283,000	246,000	378,000				
28	343,000	356,000	359,000	387,000	303,000	407,000	423,000	335,000	341,000	362,000	339,000	168,000				
29	239,000		0	302,000	353,000	231,000	389,000	483,000	373,000	223,000	183,000	266,000				
30	355,000		0	282,000	450,000	421,000	415,000	393,000	350,000	315,000	222,000	388,000				
31	327,000		0	246,000	293,000		423,000	228,000		335,000		256,000				
TOTAL	7,167,000	8,533,000	9,315,000	9,316,000	10,215,000	9,714,000	13,736,000	13,038,000	11,056,000	9,886,000	7,993,000	8,815,000				
D.A.	231,194	304,750	300,484	310,533	329,516	313,354	443,097	420,581	368,533	318,903	266,433	284,355				
								YEAR TOTAL GAL.				118,784,000				

365.25
2009 Q4 = 225,212.87 GPD

Exhibit B



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES &
ENVIRONMENTAL CONTROL
DIVISION OF WATER RESOURCES
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

December 2, 2011

Town of Milton
115 Federal Street
Milton, DE 19968

Attn: Mr. Alan Atkins

RE: Water Allocation Permit Application -
Modification of 87-0009

Dear Mr. Atkins:

The Department acknowledges receipt of the permit application referenced above, as well as your letter of response dated November 15, 2011. Thank you for your continuing efforts to provide all the needed information on your water supply system. There remain some questions about the proposed water use. This letter represents notice that the application is incomplete and that additional information is required. Please respond to the concerns herein. Processing of the permit application can not continue until the requested information is submitted.

Further information required

1. Water supply facilities – The Water Allocation Program agrees with the proposed change in the status of the following wells: 47007, 50293, 50294, and 224973. Please report which, if any, are connected to the distribution system. All
2. The requested allocation of 0.441 MGD (average) and 1.1 MGD (maximum) represents a per capita daily water use of 140 gpcd (average) for a projected population of 3,140 (revised Section C of the November 15 response). This water use is much higher than in past years and may indicate a weakening of the Town's good water conservation practice. Please address the cause of the Town's higher per capita water use (higher than normal industrial/commercial use, excessive lawn irrigation, high seasonal populations, etc). Please use the following data in addressing the problem:
 - a. The water use breakdown (Residential, commercial, institutional and industrial) is not reported as separate values as required by the permit. Please resubmit the Water Use reports, including these breakdowns, for years 2005 – 2010.
 - b. Please comment on the 5-year trend in each of the categories listed above.
 - c. Please report the peak day and peak month withdrawals for years 2005 – 2010.
3. The application does not discuss an ongoing plan to reduce per capita water use within existing structures or existing practices. Please submit a revised Water Conservation Plan outlining the steps that will be taken to achieve good water conservation goals (such as a per capita water use of 100 gpcd). Milton

Delaware's good nature depends on you!

December 2, 2011

4. Consumptive use is defined as the percentage of water withdrawals that is not returned to the source after use. The source of the Town's water is groundwater, and any water that is eventually discharged to tide from a wastewater treatment plant falls in this category. Please recalculate consumptive use based on this definition.
5. The revised Water Use Reports which reported static and pumping water levels since September 2011, did not include full information about the pumping status of the wells at the time of measurement. Please submit relevant water level measurements for the remaining months of 2011, using the revised water level reporting forms. Please include the wells now recommended for observation status (wells: 47007, 50293, 50294, and 224973) including the pumping status of the nearest production well on each record.

The Water Allocation Program agrees with the proposal to resume the use of well 224974 to the degree that it is needed to maintain state drinking water standards. However, submittal of an application three weeks before the moment of exceedance of the annual allocation is a poor justification for that violation. The Notice of Violation cannot be resolved until the causes of increased water use are addressed and a plan to correct the issues has been agreed to by both parties. Please address the concerns listed under "Further information required" above, so that processing of this application may continue. Please feel free to contact me, at (302) 739-9945 if you feel further discussions are needed on these issues.

Thank you for your help.

Sincerely,



William W. Cocke
Program Manager
Water Allocations Program

Cc: Stewart Lovell
Scott Hoffman/Cabe

PUBLIC WATER ALLOCATION:

FOR WELLS #2, #4, #5, #7

- 1. IN ANY TWENTY-FOUR (24) HOUR PERIOD: PUMPAGE FROM THESE WELLS MUST NOT EXCEED 500,000. PUMPAGE FROM ALL WELLS COMBINED MUST NOT EXCEED 500,000 GALLONS.**

- 2. IN ANY THIRTY (30) DAY PERIOD: PUMPAGE FROM THESE WELLS MUST NOT EXCEED 10,000,000 GALLONS. PUMPAGE FROM ALL WELLS COMBINED MUST NOT EXCEED 10,000,000 GALLONS.**

- 3. IN ANY TWELVE (12) MONTH PERIOD: PUMPAGE FROM THESE WELLS MUST NOT EXCEED 100,000,000 GALLONS. PUMPAGE FROM ALL WELLS COMBINED MUST NOT EXCEED 100,000,000 GALLONS.**

Exhibit C-Hydrants Repaired by Town

DEFECTIVE HYDRANTS

HYDRANT NO.	LOCATION	COMMENTS
		(Action taken by Public Works) ↓
5	Front and Walnut Streets	Does not open 100% (Taken out of Service)
13	519 Federal Street	Leaks at base (Scheduled to be removed.)
28	Walnut and Coulter Streets	Operating nut weather seal damaged (Repaired)
42	Mulberry and Willow Streets	Damaged - Out of Service (Repaired)
47	Rt. 16 and Mulberry Street	Does not open 100% (Scheduled for repair)
57	Atlantic and Spruce Street	Does not open 100% (Scheduled for repair)
61	Bay Avenue and Yew Street	Difficulty opening/closing (Repaired)
62	Bay Avenue and Cedar Street	Difficulty opening/closing (Taken out of Service)
71	111 Milton Ellendale Hwy	Does not close 100% (Repaired)
72	Chandler and Behringer Streets	Does not open (Taken out of Service)
76	403 Behringer Street	No Flow Observed (Ornamental Hydrant Not in actual service)
85	Rt. 16 - Bayport Business Park	Bonnet Leaks (Repaired)
101	Rt. 16 - Milton Park Center Entrance	Difficulty opening/closing (Repaired)
132	Cucumber Lane	No Flow Observed (Taken out of Service)
139	Chandler Street and Valley Road	Bonnet Leaks (Repaired)
148	West Shore Drive	Does not close 100% - Side Outlet (Repaired) Loose

EXHIBIT D

POPULATION AND WATER USAGE

Figure A-Milton Population and Water Use per 100 Gallons indicated by Town Records.

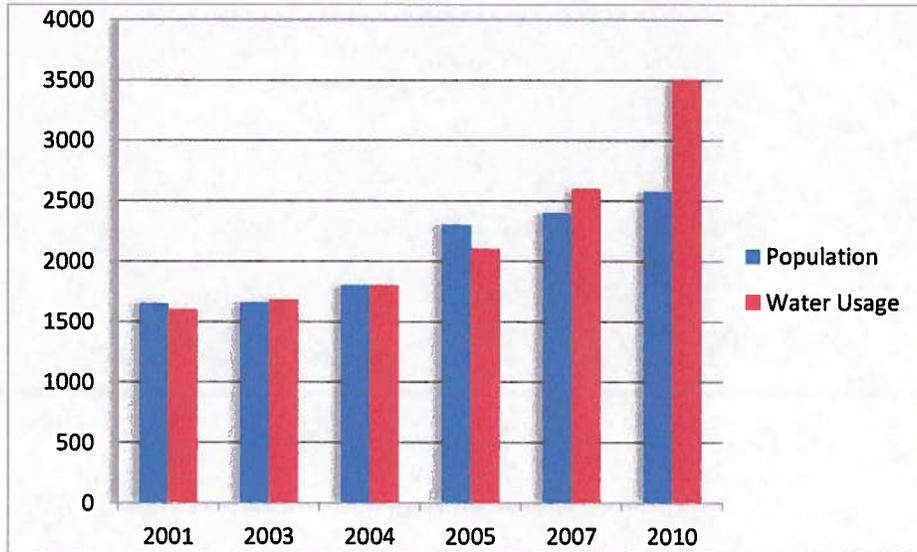


Figure B-Historical Water Use Table from 2012 Referendum Presentation by Cabe Associates, Inc.

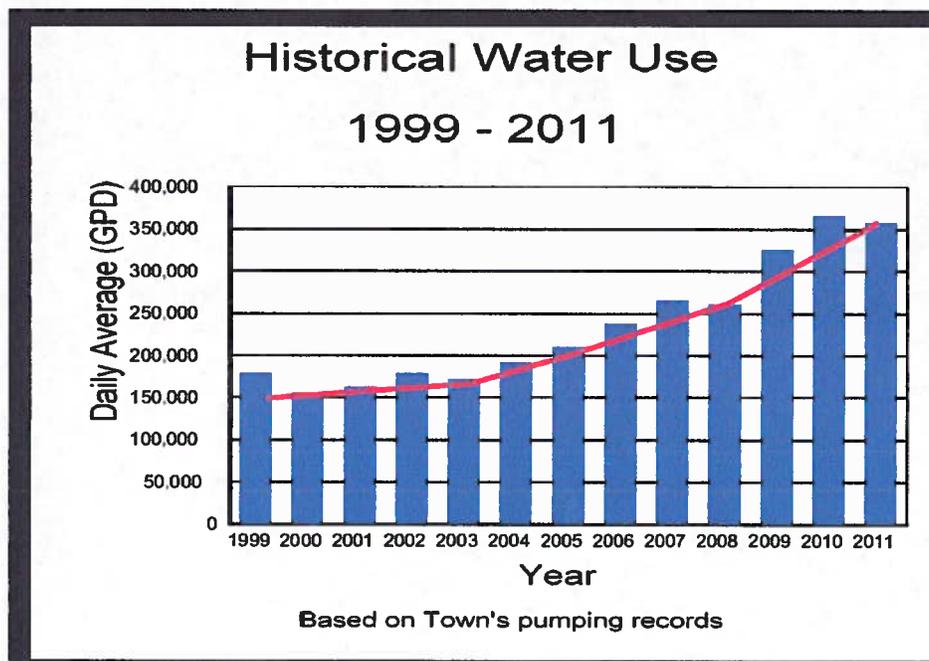


Exhibit E-Construction Cost Estimates of Alternatives

This exhibit depicts cost estimates for alternatives described by this report. The costs shown are subject to water quality test results, water treatment requirements, location of recommended infrastructure and material cost changes.

Alternative A-Increase in Supply.

Testing & Permitting	\$50,000.00
Well Pump Upgrades	\$250,000.00
Well Drilling	\$160,000.00
Well Head, Pumps and piping	\$120,000.00
Treatment Building Upgrades	\$250,000.00
Updated Control System	<u>\$50,000.00</u>
	\$880,000.00

Alternative B-Elevated Storage Tank

500,000 Gallon Elevated Storage Tank	\$1,350,000.00
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Alternative C-Interconnectivity with neighboring Private Utility.

Meter Pit, Control Valve, Connection Piping.	\$250,000.00
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Exhibit F

PROJECTED CAPITAL COSTS
WATER DISTRIBUTION IMPROVEMENTS

Project	Description	Size - Length	Cost
1	Sam Lucas Road - Town Property to Atlantic Street	12" dia - 2,500 LF	\$290,000
2	Atlantic Street - Sam Lucas Road to Round Pole Branch Pumping Station	12" dia - 2, 200 LF	260,000
3	Wagamons West Shores to Chestnut Street	10" dia. - 2,300 LF	250,000
4	Route 16 - Union Street to Western Town Limits	10" dia. - 2,400 LF	260,000
5	Route 16 - Palmer Street to Country Road to Atlantic Avenue	10" dia - 2,300 LF	240,000
6	Union Street - Route 16 to Chandler Street	8" dia. - 3,500 LF	370,000
7	Federal Street - Front Street to Town Limits	8" dia. - 3,300 LF	350,000
8	Chestnut Street - Front Street to Coulter St.	8" dia. - 730 LF	80,000
9	Front Street - Federal Street to Town Limits	10" dia - 1,800 LF	190,000
10	Bay Avenue - Palmer Street to Sussex St.	8" dia. - 1,750 LF	190,000
11	Atlantic Ave. - Behringer Street to Country Rd.	10" dia. - 2,000 LF	210,000
12	Chestnut Street - Town Limits to Route 5	10" dia. - 1,600 LF	<u>170,000</u>
Total			\$2,560,000