TECHNICAL RESPONSE TO WATER PLANNING COUNCIL'S MAY 29, 2018 REVIEW COMMENTS

Lenard Engineering, Inc. (LEI) has reviewed the above referenced comments from the Connecticut Water Planning Council (WPC), and has the following comments on their document.

1) Public Act 16-16 Report Requirements- The February 2018 final report specifically addressed the requirements of this act, which identified six main topics, which are listed in Chapter 1 of the report. In addition, LEI submitted a detailed scope of services, which included topics over and above those required by the Public Act, but were requested by both the Council on Environmental Quality (CEQ) and the WPC. The final report meets and exceeds the requirements of these items.

   Many of the items identified in the WPC document were outside the scope of the original public act, i.e. determine the impacts of other alternatives (a future Lamson Corner Reservoir, use of Crescent Lake, etc.) A comparison of the proposed 2.3 billion gallon Storage Reservoir versus other available options is discussed below, and will be part of the City's public presentation to be held in June.

2) Discrepancy between data used in this report and past New Britain Water Supply plans and Central Connecticut WUCC documents- The February 2018 Environmental Report utilizes **updated values** for safe yield, available supply and water demand projections, which explains most of the differences in the numbers. LEI is in the process of revising the City's Individual Water Supply Plan, which was last revised in 2014, with water demand projections last updated in the 2011 revision.

   The minor differences between past plans, the WUCC report, and the February 2018 Environmental Report, as noted below:

   - Updated Safe Yield Value- During the most recent drought of 2016-17, the City asked us to evaluate potential operational changes which would help them optimize safe yield. LEI evaluated various operational changes, and by utilizing some of their pumped sources earlier, we obtained a slight increase in safe yield, from 17.64 MGD in previous plans, to 18.23 MGD. This 18.23 MGD is the new baseline safe yield value that was used in our study.

   - Updated Water Demand Projections- LEI utilized updated water demand projections, both for the City, as well as for the four interconnected water systems (Kensington Fire District, Berlin Water Control Commission, Valley Water Systems and City of Bristol). We attribute the slight differences in different data sets used by the WUCC and more accurate, up-to-date values utilized by LEI. This comparison shows only minor differences, which should not impact conclusions made by either report.

- Future Available Supply Values – Previous Water Supply Plans utilized 17.64 MGD, the historic safe yield as this value. The Central Connecticut WUCC plan utilized this 17.64 MGD value, but also subtracted an estimated value of 1.634 MGD for anticipated reductions to meet DEEP minimum streamflow regulations, reducing this value to **16.007 MGD.** The WUCC plan also discussed potential safe yield reductions due to climate change, but does not assign a value.

  In contrast, the 2018 Environmental Report utilized the new, updated system safe yield value of 18.23 MGD, and for the year 2030 planning period subtracted 2.0 MGD for impacts of minimum streamflow regulations, reducing this value to **16.23 MGD**. Comparing our 16.23 MGD value to the WUCC reports value of 16.007 MGD shows these two reports are **in general agreement** as to estimated available supply, even after adjustments for minimum streamflow regulations.

  In addition for reductions due to DEEP streamflow reguations, the 2018 Environmental Report evaluates the impact of several potential impacts, including a) potential reductions due to climate change, b) potential reductions due to water diversion regulation changes, c) the impacts of a potential town or large user connecting to the system, and d) the City's contract with the MDC.

  Although not easily quantified, each of these items are items of concern in the June 2018 Final Draft State Water Plan, with sections of this report referenced below:

  a) climate change (Section 3.4),
  b) water diversion registrations (Section 4-2.1.1), and
  c) impacts of large users (Section WP4-2.1.2).

  We agree with the WPC that exclusive of the required compliance with DEEP minimum streamflow regulations, the simultaneous occurrence of all these items is unlikely, and that a cumulative 7 MGD reduction in available supply may never occur. We disagree, however, that these should be ignored, given the fact the same events are topics of concern to the entire water industry, and justifiably discussed in the WPC's own State Water Plan.

3) "Quarrying would create the potential for decades of increased risk to the City's nearby Shuttle Meadow Reservoir" – We **strongly disagree** with this conclusion in the WPC's comments. Although a detailed design of the future quarry expansion to create the reservoir was not a requirement of the Public Act, as part of the City's public presentation, a more detailed sequence of operations and description of the quarrying process will be presented, which will demonstrate **no negative impacts** on water quality in Shuttle Meadow Reservoir or its watershed.

This sequential expansion plan will show the process 1) will be a phased, incremental plan where small areas of forested land will be disturbed at a time, and 2) the operation will contain all stormwater runoff within the quarry excavation itself, and be treated and discharged outside of the public water supply watershed for Shuttle Meadow Reservoir.

4) Impact on raw reservoir quality - The WPC comments discuss their items of concern, including perchlorate, trichloroethene and 1,2,4 trichlorobenzene, stratification, manganese, and the quality of water from Coppermine Brook. We disagree with the WPC's assessment.

   With respect to perchlorate, in follow-up discussions with Tilcon, perchlorate was a component of some but not all blasting agents, and it has been eliminated from use since identified as a potential carcinogen in the early 1990's. Given the non-detectable concentrations indicated in the most recent sample, as well as the fact the perchlorate is no longer used, water quality concerns regarding its presence on site, especially moving forward, are minimal.

   With respect to TCE and 1,2,4- trichlorobenzene being detected, please note the WPC was erroneously referencing pages of the analytical test results that are part of the laboratory's quality control protocol, **not the actual surface water sample** from the Tilcon site. TCE and 1,2,4-trichlorobenzene were not detected in the 2017 surface water sample collected by Tighe & Bond, as shown on page 14 of the Analytical Report. Copies of these pages, with these items highlighted in yellow, are attached.

   A correct statement by the WPC should have read: "**A review of water quality results from the surface water at the site documents non-detectable concentrations of both perchlorate and volatile organic compounds. Additional testing in the future should continue to confirm this conclusion.**"

   With respect to continued use of Coppermine Brook, as noted in Ray Esponda's letter attached to this report this surface water has been used since the 1920's without incident. Note that Table 2 of the Tighe & Bond report in Chapter 8 (copy attached) shows the average and maximum turbidity values from the White Bridge Pump Station of **similar raw water quality** as those in Shuttle Meadow and Wasel Reservoirs.

   A review of the WPC comments and the report's findings of the report does not change the conclusions of the report, that modifications to the Shuttle Meadow water treatment plant are not anticipated to be needed to treat water from the proposed reservoir. These topics will be addressed in the City's public presentation.

5) Mitigation Measures- Mitigation measures already incorporated into the current report include preservation of 61 acres on the site (44 acres on the west, and 17 acres to the east). These preserve the NDDB identified ridgeline habitat on Bradley Mountain, and provide a buffer of between 600 – 1300 feet between the ridgeline and the limits of excavation, preserving the majority of the trap rock ridge habitat on the site. This also provides 200' setback for the sites two largest vernal pools.

Additional details on potential mitigation measures will be part of the City's public presentation, including off- site mitigation among the 291 acres of land proposed to be donated by Tilcon, among others.

6) Alternatives Analysis – Although not required by PA 16-61 or the approved project scope, a discussion on alternatives to the proposed Quarry Reservoir will be included in the City's public presentation. Included will be a potential Lamson Corner Diversion and Reservoir, use of the Patton Brook well, Crescent Lake, enhanced conservation measures, and other options. As noted in Ray Esponda's cover letter to these comments, initial evaluations indicate that creation of a Lamson Corner Reservoir will have significantly more environmental impacts that the proposed Quarry reservoir. This will be discussed in detail in the public presentation.

7) The City's report does not consider **regional** water supplies and demands- We **strongly disagree** with this statement. One of the six key study components required by PA 16-61 is an analysis of "long-term water supply needs for the City of New Britain as well as interconnected and reasonably feasible interconnected, water companies in the general geographic region supplied by New Britain's reservoir system". Chapter 5, entitled "Water Demand Projections for New Britain and Surrounding Communities" fulfills the requirements of the public act. Cumulative water demands for New Britain, Kensington Fire District, Berlin Water Control Commission, Valley Water Systems and the City of Bristol are discussed in detail.

   As the second largest water supplier in Central Connecticut, the City of New Britain looks forward to working with their current customers as well as other utilities in the Central Connecticut WUCC to share our water resources, especially in time of need, to create a viable, resilient regional system.

8) The Report does not substantiate the need for the proposed new reservoir- The WPC's comments seem to indicate that as long as New Britain maintains a 1.15 margin of safety, that no additional sources of supply are required, or should be considered. As a regional supplier, responsible for meeting the City's water needs as well as our neighboring communities, New Britain seeks to maintain larger surpluses of water than this DPH minimum value, to account for emergencies, unforeseen events and potential issues identified both in our Environmental Report and the State Water Plan.

   The Central Connecticut WUCC Integrated Report defined "Resiliency" as "the ability of a system, population or community to prepare for, withstand, recover from, and adapt to stresses like natural disasters and climate change." It also states that "Resiliency is not a one-time effort. It must be continuously maintained and improved over time due to the risks of climate change." Continuing, "Thus, even if water system infrastructure vulnerabilities remain static by doing nothing, risks will increase."

Therefore, the City of New Britain believes that not only acknowledging the potential for impacts to system supply, but actually planning for them, is the more responsible approach to managing the natural resources under its control. We believe these goals are similar to those of the Water Planning Council, whose current review comments seem to dissuade the City from pursuing additional sources of supply.

Client: Tighe & Bond
Project/Site: Blasting Impacted Surface Water

TestAmerica Job ID: 160-22501-1

Client Sample ID: SW-1
Date Collected: 05/23/17 08:45
Date Received: 05/24/17 07:50

Lab Sample ID: 160-22501-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			05/27/17 20:19	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			05/27/17 20:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.25	ug/L			05/27/17 20:19	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			05/27/17 20:19	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			05/27/17 20:19	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			05/27/17 20:19	1
1,2,4-Trichlorobenzene	ND		5.0	0.55	ug/L			05/27/17 20:19	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			05/27/17 20:19	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			05/27/17 20:19	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			05/27/17 20:19	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			05/27/17 20:19	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			05/27/17 20:19	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			05/27/17 20:19	1
2-Butanone (MEK)	ND		20	0.39	ug/L			05/27/17 20:19	1
2-Hexanone	ND		20	0.59	ug/L			05/27/17 20:19	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			05/27/17 20:19	1
Acetone	ND		20	6.7	ug/L			05/27/17 20:19	1
Benzene	ND		5.0	0.25	ug/L			05/27/17 20:19	1
Bromoform	ND		5.0	0.37	ug/L			05/27/17 20:19	1
Bromomethane	ND		10	0.40	ug/L			05/27/17 20:19	1
Carbon disulfide	ND		5.0	0.37	ug/L			05/27/17 20:19	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			05/27/17 20:19	1
Chlorobenzene	ND		5.0	0.38	ug/L			05/27/17 20:19	1
Dibromochloromethane	ND		5.0	0.33	ug/L			05/27/17 20:19	1
Chloroethane	ND		10	0.38	ug/L			05/27/17 20:19	1
Chloroform	ND		5.0	0.15	ug/L			05/27/17 20:19	1
Chloromethane	ND		10	0.55	ug/L			05/27/17 20:19	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			05/27/17 20:19	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			05/27/17 20:19	1
Cyclohexane	ND		10	0.36	ug/L			05/27/17 20:19	1
Bromodichloromethane	ND		5.0	0.25	ug/L			05/27/17 20:19	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			05/27/17 20:19	1
Ethylbenzene	ND		5.0	0.30	ug/L			05/27/17 20:19	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			05/27/17 20:19	1
Isopropylbenzene	ND		5.0	0.26	ug/L			05/27/17 20:19	1
Methyl acetate	ND		25	2.3	ug/L			05/27/17 20:19	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			05/27/17 20:19	1
Methylcyclohexane	ND		10	0.26	ug/L			05/27/17 20:19	1
Methylene Chloride	ND		5.0	1.7	ug/L			05/27/17 20:19	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			05/27/17 20:19	1
o-Xylene	ND		5.0	0.32	ug/L			05/27/17 20:19	1
Styrene	ND		5.0	0.35	ug/L			05/27/17 20:19	1
Tetrachloroethene	ND		5.0	0.28	ug/L			05/27/17 20:19	1
Toluene	ND		5.0	1.0	ug/L			05/27/17 20:19	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			05/27/17 20:19	1
trans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			05/27/17 20:19	1
Trichloroethene	ND		5.0	0.29	ug/L			05/27/17 20:19	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			05/27/17 20:19	1
Vinyl chloride	ND		5.0	0.43	ug/L			05/27/17 20:19	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-22536-A-4 MSD
Matrix: Water
Analysis Batch: 310973

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		50.0	55.9		ug/L		112	74 - 123	9	20
1,1,2,2-Tetrachloroethane	ND		50.0	50.2		ug/L		100	60 - 150	2	20
1,1,2-Trichloroethane	ND		50.0	51.2		ug/L		102	70 - 134	2	20
1,1-Dichloroethane	ND		50.0	53.4		ug/L		107	80 - 120	5	20
1,1-Dichloroethene	ND		50.0	54.9		ug/L		110	66 - 137	11	20
1,2,4-Trichlorobenzene	ND		50.0	53.5		ug/L		107	72 - 129	8	20
1,2-Dibromo-3-Chloropropane	ND		50.0	52.2		ug/L		104	58 - 148	2	20
1,2-Dichlorobenzene	ND		50.0	52.4		ug/L		105	80 - 124	3	20
1,2-Dichloroethane	ND		50.0	53.0		ug/L		106	56 - 136	1	20
1,2-Dichloropropane	ND		50.0	53.1		ug/L		106	80 - 123	5	20
1,3-Dichlorobenzene	ND		50.0	52.4		ug/L		105	80 - 120	3	20
1,4-Dichlorobenzene	ND		50.0	52.2		ug/L		104	80 - 120	4	20
2-Butanone (MEK)	ND		50.0	50.2		ug/L		100	58 - 143	3	20
2-Hexanone	ND		50.0	47.5		ug/L		95	47 - 150	0	20
4-Methyl-2-pentanone (MIBK)	ND		50.0	50.1		ug/L		100	53 - 150	1	20
Acetone	ND		50.0	48.1		ug/L		96	52 - 138	0	20
Benzene	ND		50.0	53.2		ug/L		106	80 - 120	6	20
Bromoform	ND		50.0	49.9		ug/L		100	65 - 133	0	20
Bromomethane	ND		50.0	47.0		ug/L		94	53 - 146	3	20
Carbon disulfide	ND		50.0	54.0		ug/L		108	69 - 139	10	20
Carbon tetrachloride	ND		50.0	55.2		ug/L		110	70 - 126	8	20
Chlorobenzene	ND		50.0	53.4		ug/L		107	80 - 120	5	20
Dibromochloromethane	ND		50.0	52.8		ug/L		106	68 - 133	0	20
Chloroethane	ND		50.0	47.2		ug/L		94	59 - 144	11	20
Chloroform	ND		50.0	54.1		ug/L		108	80 - 120	5	20
Chloromethane	ND		50.0	43.3		ug/L		87	61 - 137	3	20
cis-1,2-Dichloroethene	ND		50.0	53.8		ug/L		108	80 - 124	4	20
cis-1,3-Dichloropropene	ND		50.0	54.3		ug/L		109	67 - 130	2	20
Cyclohexane	ND		50.0	53.0		ug/L		106	70 - 143	7	20
Bromodichloromethane	ND		50.0	55.6		ug/L		111	71 - 128	7	20
Dichlorodifluoromethane	ND		50.0	41.0		ug/L		82	65 - 140	7	20
Ethylbenzene	ND		50.0	52.1		ug/L		104	80 - 121	6	20
1,2-Dibromoethane (EDB)	ND		50.0	51.8		ug/L		104	65 - 138	0	20
Isopropylbenzene	ND		50.0	55.2		ug/L		110	78 - 138	6	20
Methyl acetate	ND		250	267		ug/L		107	57 - 150	2	20
Methyl tert-butyl ether	ND		50.0	54.0		ug/L		108	64 - 137	1	20
Methylcyclohexane	ND		50.0	53.2		ug/L		106	71 - 133	7	20
Methylene Chloride	ND		50.0	55.7		ug/L		111	80 - 120	8	20
m-Xylene & p-Xylene	ND		50.0	53.3		ug/L		107	80 - 123	5	20
o-Xylene	ND		50.0	54.4		ug/L		109	80 - 129	5	20
Styrene	ND		50.0	53.7		ug/L		107	44 - 150	3	20
Tetrachloroethene	ND		50.0	53.5		ug/L		107	66 - 132	5	20
Toluene	ND		50.0	52.5		ug/L		105	75 - 134	6	20
trans-1,2-Dichloroethene	ND		50.0	55.1		ug/L		110	79 - 121	9	20
trans-1,3-Dichloropropene	ND		50.0	52.6		ug/L		105	68 - 143	2	20
Trichloroethene	1.7	J	50.0	55.7		ug/L		108	63 - 120	6	20
Trichlorofluoromethane	ND		50.0	51.4		ug/L		103	53 - 150	10	20
Vinyl chloride	ND		50.0	49.0		ug/L		98	54 - 140	5	20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 160-22536-A-4 MS
Matrix: Water
Analysis Batch: 310973

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	ND		50.0	52.4		ug/L		105	56 - 136
1,2-Dichloropropane	ND		50.0	50.7		ug/L		101	80 - 123
1,3-Dichlorobenzene	ND		50.0	50.6		ug/L		101	80 - 120
1,4-Dichlorobenzene	ND		50.0	50.0		ug/L		100	80 - 120
2-Butanone (MEK)	ND		50.0	51.8		ug/L		104	58 - 143
2-Hexanone	ND		50.0	47.6		ug/L		95	47 - 150
4-Methyl-2-pentanone (MIBK)	ND		50.0	49.7		ug/L		99	53 - 150
Acetone	ND		50.0	48.2		ug/L		96	52 - 138
Benzene	ND		50.0	50.3		ug/L		101	80 - 120
Bromoform	ND		50.0	49.9		ug/L		100	65 - 133
Bromomethane	ND		50.0	45.4		ug/L		91	53 - 146
Carbon disulfide	ND		50.0	48.6		ug/L		97	69 - 139
Carbon tetrachloride	ND		50.0	51.0		ug/L		102	70 - 126
Chlorobenzene	ND		50.0	51.0		ug/L		102	80 - 120
Dibromochloromethane	ND		50.0	52.6		ug/L		105	68 - 133
Chloroethane	ND		50.0	42.5		ug/L		85	59 - 144
Chloroform	ND		50.0	51.5		ug/L		103	80 - 120
Chloromethane	ND		50.0	41.9		ug/L		84	61 - 137
cis-1,2-Dichloroethene	ND		50.0	51.5		ug/L		103	80 - 124
cis-1,3-Dichloropropene	ND		50.0	53.2		ug/L		106	67 - 130
clohexane	ND		50.0	49.5		ug/L		99	70 - 143
Bromodichloromethane	ND		50.0	51.8		ug/L		104	71 - 128
Dichlorodifluoromethane	ND		50.0	38.2		ug/L		76	65 - 140
Ethylbenzene	ND		50.0	49.0		ug/L		98	80 - 121
1,2-Dibromoethane (EDB)	ND		50.0	51.9		ug/L		104	65 - 138
Isopropylbenzene	ND		50.0	51.8		ug/L		104	78 - 138
Methyl acetate	ND		250	271		ug/L		108	57 - 150
Methyl tert-butyl ether	ND		50.0	53.4		ug/L		107	64 - 137
Methylcyclohexane	ND		50.0	49.5		ug/L		99	71 - 133
Methylene Chloride	ND		50.0	51.7		ug/L		103	80 - 120
m-Xylene & p-Xylene	ND		50.0	50.5		ug/L		101	80 - 123
o-Xylene	ND		50.0	51.8		ug/L		104	80 - 129
Styrene	ND		50.0	52.3		ug/L		105	44 - 150
Tetrachloroethene	ND		50.0	50.7		ug/L		101	66 - 132
Toluene	ND		50.0	49.5		ug/L		99	75 - 134
trans-1,2-Dichloroethene	ND		50.0	50.3		ug/L		101	79 - 121
trans-1,3-Dichloropropene	ND		50.0	51.6		ug/L		103	68 - 143
Trichloroethene	1.7	J	50.0	52.4		ug/L		101	63 - 120
Trichlorofluoromethane	ND		50.0	46.6		ug/L		93	53 - 150
Vinyl chloride	ND		50.0	46.8		ug/L		94	54 - 140
Xylenes, Total	ND		100	102		ug/L		102	80 - 124

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 129*
Dibromofluoromethane (Surr)	*107*		*80 - 121*
Bromofluorobenzene (Surr)	*99*		*71 - 139*
,,2-Dichloroethane-d4 (Surr)	*106*		*76 - 121*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 160-310973/8
Matrix: Water
Analysis Batch: 310973

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.29	ug/L			05/27/17 16:34	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.43	ug/L			05/27/17 16:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.25	ug/L			05/27/17 16:34	1
1,1,2-Trichloroethane	ND		5.0	0.57	ug/L			05/27/17 16:34	1
1,1-Dichloroethane	ND		5.0	0.39	ug/L			05/27/17 16:34	1
1,1-Dichloroethene	ND		5.0	0.37	ug/L			05/27/17 16:34	1
1,2,4-Trichlorobenzene	1.45	J	5.0	0.55	ug/L			05/27/17 16:34	1
1,2-Dibromo-3-Chloropropane	ND		10	1.2	ug/L			05/27/17 16:34	1
1,2-Dichlorobenzene	ND		5.0	0.28	ug/L			05/27/17 16:34	1
1,2-Dichloroethane	ND		5.0	0.37	ug/L			05/27/17 16:34	1
1,2-Dichloropropane	ND		5.0	0.32	ug/L			05/27/17 16:34	1
1,3-Dichlorobenzene	ND		5.0	0.23	ug/L			05/27/17 16:34	1
1,4-Dichlorobenzene	ND		5.0	0.35	ug/L			05/27/17 16:34	1
2-Butanone (MEK)	ND		20	0.39	ug/L			05/27/17 16:34	1
2-Hexanone	ND		20	0.59	ug/L			05/27/17 16:34	1
4-Methyl-2-pentanone (MIBK)	ND		20	0.33	ug/L			05/27/17 16:34	1
Acetone	ND		20	6.7	ug/L			05/27/17 16:34	1
Benzene	ND		5.0	0.25	ug/L			05/27/17 16:34	1
Bromoform	ND		5.0	0.37	ug/L			05/27/17 16:34	1
romomethane	ND		10	0.40	ug/L			05/27/17 16:34	1
arbon disulfide	ND		5.0	0.37	ug/L			05/27/17 16:34	1
Carbon tetrachloride	ND		5.0	0.36	ug/L			05/27/17 16:34	1
Chlorobenzene	ND		5.0	0.38	ug/L			05/27/17 16:34	1
Dibromochloromethane	ND		5.0	0.33	ug/L			05/27/17 16:34	1
Chloroethane	ND		10	0.38	ug/L			05/27/17 16:34	1
Chloroform	ND		5.0	0.15	ug/L			05/27/17 16:34	1
Chloromethane	ND		10	0.55	ug/L			05/27/17 16:34	1
cis-1,2-Dichloroethene	ND		5.0	0.16	ug/L			05/27/17 16:34	1
cis-1,3-Dichloropropene	ND		5.0	0.34	ug/L			05/27/17 16:34	1
Cyclohexane	ND		10	0.36	ug/L			05/27/17 16:34	1
Bromodichloromethane	ND		5.0	0.25	ug/L			05/27/17 16:34	1
Dichlorodifluoromethane	ND		10	0.45	ug/L			05/27/17 16:34	1
Ethylbenzene	ND		5.0	0.30	ug/L			05/27/17 16:34	1
1,2-Dibromoethane (EDB)	ND		5.0	0.44	ug/L			05/27/17 16:34	1
Isopropylbenzene	ND		5.0	0.26	ug/L			05/27/17 16:34	1
Methyl acetate	ND		25	2.3	ug/L			05/27/17 16:34	1
Methyl tert-butyl ether	ND		5.0	0.40	ug/L			05/27/17 16:34	1
Methylcyclohexane	ND		10	0.26	ug/L			05/27/17 16:34	1
Methylene Chloride	ND		5.0	1.7	ug/L			05/27/17 16:34	1
m-Xylene & p-Xylene	ND		5.0	0.57	ug/L			05/27/17 16:34	1
o-Xylene	ND		5.0	0.32	ug/L			05/27/17 16:34	1
Styrene	ND		5.0	0.35	ug/L			05/27/17 16:34	1
Tetrachloroethene	ND		5.0	0.28	ug/L			05/27/17 16:34	1
Toluene	ND		5.0	1.0	ug/L			05/27/17 16:34	1
trans-1,2-Dichloroethene	ND		5.0	0.18	ug/L			05/27/17 16:34	1
ans-1,3-Dichloropropene	ND		5.0	0.35	ug/L			05/27/17 16:34	1
ichloroethene	ND		5.0	0.29	ug/L			05/27/17 16:34	1
Trichlorofluoromethane	ND		5.0	0.22	ug/L			05/27/17 16:34	1

Water quality of the existing reservoirs is summarized in Table 2. Table 2 also includes water quality from the White Bridge Pump Station, which pumps water from Copper Mine Brook. The proposed new reservoir will contain flood-skimmed water from Copper Mine Brook. Water quality in the brook is expected to be representative of water flowing into the proposed reservoir.

TABLE 2

2016 Minimum, Maximum, and Average Source Water Quality from Monthly Monitoring Data

		Shuttle Meadow Reservoir	Wasel Reservoir	Whigville Reservoir	White Bridge Pump Station (Copper Mine Brook)
pH	Min	7.3	7.3	6.7	6.8
	Max	8.5	7.7	7.5	7.5
	Avg	7.5	7.6	7.1	7.1
Alkalinity (mg/L)	Min	16	22	6	17
	Max	23	33	13	37
	Avg	19	27	9	23
Hardness (mg/L)	Min	32	38	12	32
	Max	42	48	40	66
	Avg	39	43	23	50
Iron (mg/L)	Min	0.04	0.02	0.01	0.07
	Max	0.18	0.11	1.41	0.32
	Avg	0.09	0.05	0.26	0.17
Manganese (mg/L)	Min	0.022	0.019	0.017	0.030
	Max	0.166	0.218	0.071	0.246
	Avg	0.067	0.057	0.034	0.068
Turbidity (NTU)	Min	0.93	0.91	0.82	0.43
	Max	4.16	4.21	1.89	4.10
	Avg	2.12	1.76	1.09	1.65
Color	Min	5	13	15	3
	Max	33	45	30	55
	Avg	22	23	23	29

Copper Mine Brook water quality (from White Bridge Pump Station) is comparable to the existing reservoirs. However, Copper Mine Brook water will only be discharged to the new