

**Meeting Minutes**  
**Western WUCC Convening Meeting**  
**Brookfield Municipal Center – 100 Pocono Road, Brookfield, CT**  
**July 11, 2017 10:00 AM**

The Western Water Utility Coordinating Committee (WUCC) held a meeting on July 11<sup>th</sup>, 2017 at 10:00 a.m. at the Brookfield Municipal Center at 100 Pocono Road in Brookfield, Connecticut. Prior written notice of this meeting was given via emails from the Department of Public Health (DPH) to eligible WUCC members, chief administrative officials, local health directors, town clerks, the Secretary of State, state agencies (OPM, PURA, DEEP, CT Office of Consumer Counsel, CT DOT, CT DECD, the Commissioner of Agriculture), and other interested persons. Notice of the meeting was also posted on the DPH website <http://www.ct.gov/dph/wucc/>.

The following WUCC member representatives were in attendance (listed in alphabetical order of affiliation):

<b>WUCC Member Representative</b>	<b>Affiliation</b>
Dan Lawrence (Co-Chair)	Aquarion Water Company
Doug Arndt	Town of Bethel
Russell Posthauer (Co-Chair)	Candlewood Springs Property Owners Assoc.
Keith Nadeau	CT Water Co.
David Day	Danbury Public Utilities
Mike Elliot	First Taxing District Water Department
David Banker	Metropolitan District Commission
Aaron Budris	Naugatuck Valley Council of Government
Donna Culbert	Newtown Health Department
Joanna Wozniak-Brown	Northwest Hills Council of Government
Tuffany Lufkin	South Central CT Regional Water Authority
Tom Villa	South Norwalk Electric & Water
Steve Cerruto	Torrington Water Co.
Jim Rollins	Winsted Water Works
Richard Nalette	Winsted Water Works

The following non-WUCC member representatives were in attendance (listed in alphabetical order of affiliation):

<b>Non-WUCC Member Representative</b>	<b>Affiliation</b>
Doug Hoskins	CT Department of Energy & Environmental Protection
Melissa Czarnowski	CT Department of Energy & Environmental Protection
Linda Ferraro	CT Department of Public Health
Lori Mathieu	CT Department of Public Health
Eric McPhee	CT Department of Public Health
Justin Milardo	CT Department of Public Health
David Murphy	Milone & MacBroom, Inc. (MMI)
Gail Lucchina	CT Public Utility Regulatory Agency
Margaret Miner	Rivers Alliance
Steve Rugar	Tata & Howard

A copy of the meeting agenda is attached. The following actions took place:

### **1. Welcome & Roll Call**

The Chairs opened the meeting at 10:00 AM. The chairs requested a roll call of attendees. Mr. Murphy provided a brief refresher of the process to date and an overview of the goals of the meeting.

### **2. Review of June Meeting Minutes**

Mr. Lawrence asked if there were any comments or changes from the floor. No comments were made. Mr. Posthauer moved to approve the minutes. Mr. Villa seconded. Members voted unanimously to approve, Ms. Wozniak-Brown and Mr. Rollins abstained from the vote.

### **3. Review of Formal Correspondence**

Mr. Banker stated that four correspondences had been sent or received by the Western WUCC since the last meeting:

- 2017-06-13 – Letter from Western WUCC accompanying the Final Recommended ESA document to DPH from Milone & MacBroom
- 2017-06-22 – Letter from Western WUCC with Data Request for Integrated Report
- 2017-06-27 – Letter from Water System Specialties with information regarding Landmark Academy small system.
- 2017-06-27 – Letter from Water System Specialties with information regarding Wellspring Foundation small system.

### **4. Public Comment**

The Chairs opened the public comment period. No public comment was received.

### **5. Water Planning Council State Water Plan Review**

- Ms. Mathieu made a presentation reviewing the State Water Plan process and points covered in the draft State Water Plan document. Ms. Mathieu reviewed the following topics:
  - Goals of the State Water Plan
  - Objectives
  - Five Most Important Points of the Plan
- Mr. Murphy reviewed slides regarding:
  - Stakeholder Process
  - Key Plan Elements
  - Background White Papers
  - Technical Information

- Modeling Opportunities
- Ms. Mathieu closed out the presentation discussing:
  - Policy Recommendations
  - Top Ten Consensus Policy Priorities
  - Pathways Forward
  - Comment Process Utilizing PURA Docket 17-07-01, expected to begin Mid-July
- Ms. Miner raised concern with the process involved to submit comments on a PURA docket and the need for help for municipalities and public water systems to implement conservation based rates, similar to the WICA rate adjustment process for private utilities.

**6. Integrated Report Module 1 – Maintenance & Replacement of Existing Supply Sources/Asset Management**

- Mr. Murphy asked the attendees to hold off on questions or comments until the presentation on the three modules was completed.
- Mr. Murphy reviewed the schedule of topics for discussion, discussed updates to the module questions disseminated at the last WUCC meeting.

**7. Integrated Report Module 2 – Financial Considerations/Declining Revenue vs. Increasing Costs**

- Mr. Murphy reviewed module two, including issues with declining revenues, collections, variations in the cost of water across the WUCC and state as well as the revised questions included in the module.

**8. Integrated Report Module 3 – Coordination of Planning (Between Systems, with Towns, Across ESA Boundaries)**

- Mr. Murphy reviewed the existing examples of coordination of planning, including the WUCC process, mutual aid organizations and POCD/water supply planning processes. Mr. Murphy also discussed the limitations of some data due to security concerns, limitations to coordination due to different planning schedules and the accessibility of GIS Data.
- Mr. Murphy reviewed the revised module three questions and opened the floor to questions/comments.
- Ms. Wozniak-Brown stated that the COGs and municipalities had been involved with providing data and feedback in the Water Supply Assessment, but based on the modules; questions for the COGS seem limited. What will the COGS/municipalities be able to contribute to the Integrated Report process?
- Mr. Murphy states that the COGs can review and consider how they would respond to the module questions.
- Mr. Lawrence stated that the WUCC will need to work to define a path forward for small medium and large utilities alike.
- Ms. Wozniak-Brown stated that future requests for information should include a paragraph or blurb with the request to inform the reader of the importance and use of the data being requested.

- Ms. Wozniak-Brown asked if there would be a benefit to the process if outside groups or organizations were brought in to discuss their experience with topics, such as farmers with drought.
- Mr. Lawrence replied that this may be difficult due to the Integrated Report's focus on water supply
- Mr. Posthauer asked who among small systems had been contacted with the last data request.
- Mr. Murphy replied that the request had been sent by DPH to the listed administrative contact.
- Ms. Miner stated concern over the small percentage of the overall WUCC membership which attend the meetings and asked where in the integrated plan topics/modules the environmental impacts and aquatic habitat would be considered.
- Mr. Murphy replied that although there are not specific modules for these items, they will be included among several topics such as interconnections, and it will be addressed where there is a nexus among in-stream flow, new source, interconnection and source water protection.
- Mr. Murphy stated that the WUCC will distribute the revised module questions after the meeting. They will remain in a draft format, since there still could be revisions to the questions moving forward.
- Mr. Rupar asked if it is the WUCCs intention to obtain answers to the modules prior to the WUCC meetings to present results at the meetings.
- Mr. Murphy replied yes, results will be presented at the meeting and will be used in drafting the appropriate section of the Integrated Report.
- Ms. Lufkin asked if it is the intent for members to provide answers to modules prior to the meeting to discuss those modules.
- Mr. Murphy replied yes, if possible. Members could answer and submit all of the module questions now, or submit each module prior to the appropriate meeting.
- Mr. Posthauer asked if it is best to provide answers in an electronic word document format.
- Mr. Murphy replied that an electronic format would work best.
- Mr. Lawrence added that the WUCC would request responses in a word file format.
- Ms. Miner raised concern with the expanded exclusive service area, the potential acquisition of Aquarion by Eversource and having a single entity responsible for water, gas and electric service.
- Mr. Murphy stated that there were not substantial exclusive service area changes observed in half of the Western WUCC area.

## **9. Review Integrated Report Modules for the Next Meeting**

- Mr. Murphy reviewed the list of modules for discussion at the August WUCC meeting, including the modules reviewed today and source water protection, joint use/ownership of facilities, fire protection, water conservation and drought planning.

## **10. Other Business**

- Mr. McPhee stated that DPH has developed an on-line GIS map to view ESAs within Connecticut. The application should be available within a few weeks, but the ESA lines may not be accurately depicted beyond a certain scale.

- Mr. Budris suggested setting a scale dependency to prevent users from zooming in beyond the range of accuracy.

No items were raised for discussion.

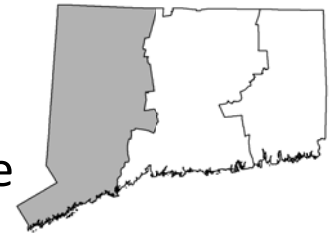
As there was no more business, Mr. Villa made a motion to adjourn. Mr. Posthauer seconded the motion. The motion passed unanimously and the meeting closed at 11:51 AM.

The next Western WUCC Meeting is scheduled for Tuesday August 8<sup>th</sup>, 2017 to be held at the Brookfield Municipal Center at 100 Pocono Road in Brookfield, Connecticut.

Respectfully Submitted,

David Banker, Recording Secretary – Western WUCC

# Western Region Water Utility Coordinating Committee



## Meeting Agenda

July 11, 2017

Location: Brookfield Town Hall

Time: 10:00 a.m. to 12:00 p.m.

Russell Posthauer, Jr., Co-Chair  
russellposthauer@ccaengineering.com  
203-775-6207

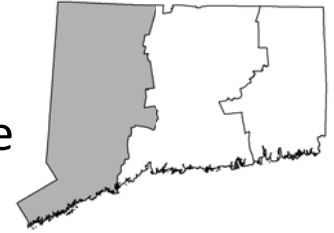
Daniel Lawrence, Co-Chair  
DLawrence@aquarionwater.com  
203-362-3055

David Banker, Recording Secretary  
DBanker@themdc.com  
860-278-7850 Ext. 3650

1. Welcome & Roll Call (5 minutes)
2. Review and Approval of June Meeting Minutes (5 minutes)
3. Review of Formal Correspondence (5 minutes)
4. Public Comment (5 minutes)
5. Water Planning Council State Water Plan Review Tentative (20 minutes)
6. Integrated Report Module 1 – Maintenance & Replacement of Existing Supply Sources/Asset Management (25 minutes)
7. Integrated Report Module 2 – Financial Considerations/Declining Revenue vs. Increasing Costs (25 minutes)
8. Integrated Report Module 3 – Coordination of Planning (Between Systems, with Towns, Across ESA Boundaries) (20 minutes)
9. Review Integrated Report Modules for next meeting (10 minutes)
10. Other Business, if time allows

If the meeting is postponed, the revised meeting date will be Tuesday July 18<sup>th</sup>.

# Western Region Water Utility Coordinating Committee



June 13, 2017

Ms. Lori Mathieu  
Public Health Section Chief  
Connecticut Department of Public Health  
Drinking Water Section  
410 Capitol Avenue, MS #51 WAT  
Hartford, CT 06134-0308

Russell Posthauer, Jr., Co-Chair  
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RE: Final Recommended Exclusive Service Area Boundaries  
Western Region WUCC

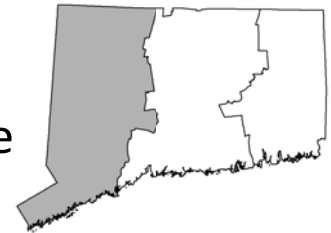
In accordance with CGS 25-33g, the Western Connecticut Water Utility Coordinating Committee (WUCC) has prepared Final Recommended Exclusive Service Area Boundaries for the Western Connecticut Public Water Supply Management Area. The consultant will provide a copy separate from this letter and an electronic copy will be available on the Western WUCC webpage at <http://www.ct.gov/dph/WUCC>.

Very Truly Yours,

  
Russel Posthauer  
Western Region WUCC Co-Chair

  
Daniel Lawrence  
Western Region WUCC Co-Chair

# Western Region Water Utility Coordinating Committee



June 22, 2017

Via Electronic Mail

To: Western WUCC Members

RE: Data Request for the Integrated Report

The Western WUCC is commencing its study of recommended and required topics within the Integrated Report for the Coordinated Water System Plan. An Integrated Report Planning Document outlining requirements and discussion topics is attached.

Specific to Section 4.0 of the attached document, the Western Water Utility Coordinating Committee (WUCC) requests that all Western WUCC members provide the following data **prior to the November 2017** Western WUCC meeting:

- 2016 raw water withdrawn and finished water distributed by month;
- 2016 average day, peak day, and peak month demands;
- 2016 water use by user category (residential, commercial, industrial, municipal, and unaccounted-for water);
- 2016 purchased and/or sold water to/from another utility;
- Population served projections for the 5, 20, and 50-year WUCC planning periods for your exclusive service area;
- Water demand projections for the 5, 20, and 50-year WUCC planning periods for your exclusive service area;
- Planned new sources of supply, if any, for the 5, 20, and 50-year WUCC planning periods to serve your exclusive service area, and status of capital planning for such sources;
- Planned water purchases for the 5, 20, and 50-year WUCC planning periods to serve your exclusive service area;
- Proposed plan to serve any currently unserved areas within your exclusive service area boundaries (including previously allocated or expanded ESA boundaries);
- Planned interconnections, and status of capital planning for such interconnections;
- Anticipated impacts (if any) from the Streamflow Standards and Regulations;
- List of any joint use/jointly managed or jointly-owned services, equipment, and facilities, or the willingness to participate in such arrangements;
- Plans for satellite management of systems; and
- Any information on how future regulations may impact your utility or water system.

The 5, 20, and 50-year planning periods equate to years 2023, 2030, and 2050. For water systems supplying water to one thousand or more persons or two hundred fifty or more customers, much of this information can be obtained by updating your most recent Individual Water Supply Plan. The Western WUCC recognizes that some of the above items may not apply to smaller public water systems, but all data received will be utilized to inform the Integrated Report. Participation from all members is requested to provide as much detail and representation from across the region as possible for the report. The Western WUCC would be pleased to accept your response to this data request in parts or all at once as is convenient for each WUCC member. Please direct your responses to these data requests by mail to the Western WUCC at the address below, or via electronic mail to our consultant, Mr. David Murphy of Milone & MacBroom, Inc., at [DaveM@miloneandmacbroom.com](mailto:DaveM@miloneandmacbroom.com).

Russell Posthauer, Jr., Co-Chair  
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# Western Region Water Utility Coordinating Committee



In addition, please be reminded that the discussion prompts within each Integrated Report module (attached) are anticipated to be discussed at the respective meeting identified in the attached schedule (which will be amended as necessary). For example, answers to questions for Module #1, #2, and #3 are requested before the July 11, 2017 meeting, and are presented below:

## **Module #1 - Asset Management**

1. Does your system specifically budget for maintenance and replacement of sources and/or assets or are these maintained and/or replaced as the situation requires?
2. Do you have a formal asset management plan for your system?
3. What are the most critical elements of your system relative to maintenance and replacement?
4. If your system relies on groundwater wells, have you had to redevelop or relocate them since bringing on line? If yes, after approximately how many years of operation was maintenance/replacement needed?
5. Generally speaking, how does your system fund maintenance and capital improvements?

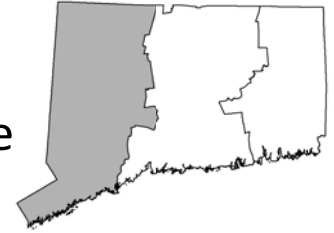
## **Module #2 – Financial Considerations**

1. Is your system metered?
2. Is your rate structure inclining, declining, or flat?
3. Have you seen declining demand trends and/or revenue over the past five to ten years?
4. Have you received state or federal funding for past or ongoing projects? If so, do you have any lessons learned to share?
5. Are you planning or do you anticipate constructing interconnections or projects of a regional nature that will involve your system?

## **Module #3 – Coordination of Planning**

1. If you are a municipal utility, what mechanisms are in place for coordination with other municipal departments relative to water supply?
2. If you are not a municipal utility, do you have regular contact and/or a formal mechanism with which to communicate with your service community(ies)?
3. Are you in regular communication with surrounding water system representatives?

# Western Region Water Utility Coordinating Committee



4. Do you have any specific suggestions as to how communication and coordination could be improved among water systems, municipal government, and within the region?
5. Is there currently any nexus between local development plan reviews in a watershed and/or aquifer protection area that could potentially affect your system?

Please provide answers via electronic mail to our consultant at [DaveM@miloneandmacbroom.com](mailto:DaveM@miloneandmacbroom.com). We look forward to your responses, thoughts, and comments on these and future modules. For current information regarding the WUCC process, please visit the DPH website at <http://www.ct.gov/dph/wucc>.

Very Truly Yours,



**Russel Posthauer**  
Western Region WUCC Co-Chair



**Daniel Lawrence**  
Western Region WUCC Co-Chair

# Introduction to Integrated Report Planning Elements of the Coordinated Water System Plan June 2017

## 1.0 Background

Section 25-33h-1 of the Regulations of Connecticut State Agencies require each Water Utility Coordinating Committee (WUCC) to prepare an Integrated Report. Whereas the Water Supply Assessment process was an inventory of existing conditions and identification of issues, deficiencies and needs, and the Exclusive Service Area process delineated service area providers to meet potential future needs, the Integrated Report will analyze the future conditions in recognition of the newly established and historical ESA boundaries. Per the regulations, the Integrated Report must contain the following:

- Population and consumption projections for 5, 20, and 50-year planning periods for the public water supply management area as a whole and for each municipality within the area;
- Projected population, historical and projected water demand by user category for 5, 20, and 50-year planning periods for each public water system's exclusive service area and for the combined service areas;
- Sources of supply, safe yield, and amounts of purchased water available for 5, 20, and 50-year planning periods for each public water system's exclusive service area and for the combined service areas;
- Determination of the amount and percentage of projected population within each municipality within the public water supply management area to be serviced by public water supplies for 5, 20 and 50-year planning periods;
- Identification of areas not within exclusive service area boundaries and discussion of water supply alternatives;
- Discussion of the relationship and compatibility of the coordinated water system plan with proposed or adopted land use plans and growth policies, as reflected in local, regional and state plans. Consideration should be given to both protection and development of public water supply sources and to availability of public water service;
- Evaluation and identification in priority order of alternative water sources recommended to supply future areawide water system needs. Include appropriate ground or surface water studies, safe yield estimates and arrangement for development and delivery of the water supply;
- Plans for any necessary interconnection of both raw and treated water between public water systems for both daily and emergency water supply use;
- A plan for joint use, management or ownership of services, equipment, or facilities;
- A plan for satellite management or transfer of ownership;
- Provisions for minimum design standards applicable to all water system improvements and all new public water systems within the management area;
- Presentation of financial data as related to areawide issues such as interconnections, shared or joint use facilities, regional projects, and information not included in individual water system plans; and
- Consideration of the potential impacts of the plan on other uses of water resources, including water quality, flood management, recreation, hydropower, and aquatic habitat issues.

In December of 2016, each regional WUCC published its Water Supply Assessment, which identified the following issues, needs, and deficiencies to be addressed in the Integrated Report:

### Sources of Supply

- Existing Supply Sources
- Future Supply Sources
- Impacts of Climate Change
- Impacts of Current Streamflow Regulations
- Impact of Future Anticipated Regulations
- Source Water Protection
- Raw Well Water Quality
- Environmental Concerns Associated with Water Withdrawals

### Planning

- Coordination of Water Utility Planning
- Coordination of Planning between Utilities and Communities
- Disjointed Service Areas
- Exclusive Service Areas
- Use of Current Data

### Interconnections

- Development of New Interconnections
- Movement of Water through Interconnections

### Small Water Systems

- Challenges of Operating Small Systems
- New Public Water Systems
- Viability of Small Water Systems

### Water Usage

- High Water Usage by Agricultural, Industrial, and Power Generation Facilities
- Declining Revenue and Increasing Costs
- Increasing Ratio of Peak-Day Demands to Average-Day Demands
- Infrastructure
- Lack of Fire Protection
- Lack of Funding
- Water Conservation
- Enactment of Voluntary and Mandatory Conservation Measures

## 2.0 Integrated Report Planning Periods

The regulations define the 5-, 20-, and 50-year planning horizons. The 5-year horizon is projected from the time of the Coordinated Water System Plan development or, in this case, the year 2023. The 20 and 50-year planning horizons are projected from the last U.S. census, or 2010. Accordingly, the 20 and 50-year planning horizons are 2030 and 2060.

## 3.0 Process and Timeline

The schedule on the following page presents a timeline for draft completion of the Integrated Report elements by December 2017 to enable time for public review, document completion, preparation of the final element of the Coordinated Water System Plan (the Executive Summary), and approval of the

Coordinated Water System Plan in May of 2018. This schedule will enable completion of the statewide Coordinated Water System Plan by June of 2018, as required.

Prior to each meeting, WUCC members will be provided with background information and discussion prompts that will serve to focus the meeting discussions and input from WUCC members. Members are encouraged to submit their responses in writing to help document the discussions. This information will be used to draft the associated Integrated Report sections.

#### 4.0 Data, Mapping, and Information Needs

The following specific information is required from each ESA holder within the region:

- 2016 raw water withdrawn and finished water distributed by month
- 2016 average day, peak day, and peak month demands
- 2016 water use by user category (residential, commercial, industrial, municipal, and unaccounted-for water)
- 2016 purchased and/or sold water to/from another utility
- Service area population projections for the 5, 20, and 50-year WUCC planning periods for your ESA
- Water demand projections for the 5, 20, and 50-year WUCC planning periods for your ESA
- Planned new sources of supply, if any, for the 5, 20, and 50-year WUCC planning periods for your ESA, and status of capital planning for such sources
- Planned water purchases for the 5, 20, and 50-year WUCC planning periods to serve your ESA
- Proposed plan to serve any currently unserved areas within the ESA boundaries (including previously allocated or expanded ESA boundaries)
- Planned interconnections, and status of capital planning for such interconnections
- Anticipated impacts (if any) from the streamflow regulations
- List of any joint use/jointly managed or jointly-owned services, equipment, and facilities, or the willingness to participate in such arrangements
- Plans for satellite management of systems
- Any information on how future regulations may impact the utility

## Integrated Report Module #1

Topic: Maintenance and Replacement of Existing Supply Sources/Asset Management

Genesis: Asset management was raised in the Water Supply Assessment under the topic of issues, needs, and deficiencies. Specifically, the WSA reflects the following:

Infrastructure – Water infrastructure is aging, with the cost of replacement, the need for asset management, and mechanisms for funding being shared across small and large systems alike. Replacement cycles are getting longer, and infrastructure is getting older and more vulnerable to failure.

Existing Supply Sources – Some groundwater sources require maintenance to maintain the hydraulic capacity and water quality while other sources require eventual replacement. Finding locations for replacement wells is challenging and expensive due to the cost of land, encroaching developments, permitting, and other factors.

Goal: To develop a regional strategy and approach to addressing maintenance and replacement needs and asset management

Discussion Prompts:

1. Does your system specifically budget for maintenance and replacement of sources and/or assets or are these maintained and/or replaced as the situation requires?
2. Do you have a formal asset management plan for your system?
3. What are the most critical elements of your system relative to maintenance and replacement?
4. If your system relies on groundwater wells, have you had to redevelop or relocate them since bringing on line? If yes, after approximately how many years of operation was maintenance/replacement needed?
5. Generally speaking, how does your system fund maintenance and capital improvements?

## Integrated Report Module #2

Topic: Financial Considerations/Declining Revenue vs. Increasing Costs

Genesis: The Coordinated Water System Planning regulations require presentation of financial data as related to areawide issues such as interconnections, shared or joint use facilities, regional projects, and information not included in individual water system plans. Additionally, the Water Supply Assessment raises numerous issues, needs, and deficiencies surrounding coordinated planning. Specifically, the WSA reflects the following:

*Declining Revenue and Increasing Costs* – Some water systems are experiencing a trend of decreasing average-day demands. With continued conservation, the decline of industry, and the housing market decline of the Great Recession, water systems have been challenged by declining revenue. Because of the high fixed-cost requirements of public water systems, this has, in some cases, negatively impacted levels of service and made paying for infrastructure more challenging. Examples can be found throughout the region. Creative solutions, such as the infrastructure replacement and revenue adjustment mechanisms authorized under Public Acts 07-139 and 13-78, respectively, are needed to recapture lost revenue and/or pay for maintenance and improvements.

*Lack of Funding* – A continued lack of straightforward access to capital improvement funding has delayed many desired projects in the region. The Drinking Water State Revolving Fund 2011 Needs Survey identified \$3.5 billion in infrastructure replacement needs over the next 20 years, and the 2015 survey results to be published in spring 2017 are expected to be even higher.

Goal: To better understand the financial issues and needs in the region, develop planning level cost estimates for future regional projects, and identify potential funding sources

Discussion Prompts:

1. Is your system metered?
2. Is your rate structure inclining, declining, or flat?
3. Have you seen declining demand trends and/or revenue over the past five to ten years?
4. Have you received state or federal funding for past or ongoing projects? If so, do you have any lessons learned to share?
5. Are you planning or do you anticipate constructing interconnections or projects of a regional nature that will involve your system?

## Integrated Report Module #3

Topic: Coordination of Planning (Between Systems, with Towns, Across ESA Boundaries)

Genesis: The basis and legislative finding contained in CGS Section 25-33e specifically directs the Department of Public Health to administer a procedure to coordinate the planning of water supply systems. The subsequent regulations require the WUCCs to discuss the relationship and compatibility of the coordinated water system plan with proposed or adopted land use plans and growth policies, as reflected in local, regional and state plans, with consideration given to both protection and development of public water supply sources and to availability of public water service. Additionally, the Water Supply Assessment raises numerous issues, needs, and deficiencies surrounding coordinated planning. Specifically, the WSA reflects the following:

*Coordination of Water Utility Planning* – In the years since the Bioterrorism Act of 2002 and throughout the revision and updates to Emergency Contingency Plans, many larger water utilities have made significant advancements in emergency planning with other utilities through memorializing mutual aid agreements and formalizing other forms of cooperation. Additional coordination between community water systems (CWSs) with respect to various aspects of water supply, such as shared use of equipment and technical staff, is also desirable from a financial perspective. Improved coordination has the potential to greatly benefit smaller systems that may not have the financial ability to purchase equipment such as that required for spill response or emergency power. Finally, a key benefit of improved coordination among water utilities is the potential to establish a more organized and holistic approach to the exploration of future water supplies and interconnections such as those described below. The WUCC process is precisely aimed at such coordination efforts.

*Coordination of Planning between Utilities and Communities* – In some cases, state, regional, and local planners have limited understanding of the long-term planning goals of water utilities and vice versa. For example, although larger utilities account for local planning efforts as part of their water supply plans (WSPs), this information does not necessarily inform the local planner. Review of the Coordinated Water System Plan should be encouraged as part of local planning efforts along with increasing the lines of communication between larger utilities and local staff. In addition, planning between water utilities and communities is typically performed in a staggered manner, with utilities reviewing current planning documents that may be several years old.

Goal: To identify means and measures aimed at improving coordination among systems and between systems and their service communities.

Discussion Prompts:

1. If you are a municipal utility, what mechanisms are in place for coordination with other municipal departments relative to water supply?



2. If you are not a municipal utility, do you have regular contact and/or a formal mechanism with which to communicate with your service community(ies)?
3. Are you in regular communication with surrounding water system representatives?
4. Do you have any specific suggestions as to how communication and coordination could be improved among water systems, municipal government, and within the region?
5. Is there currently any nexus between local development plan reviews in a watershed and/or aquifer protection area that could potentially affect your system?

DRAFT

## Integrated Report Module #4

Topic: Source Water Protection

Genesis: Source protection was raised in the Water Supply Assessment (WSA) under the topic of needs and deficiencies. Specifically, the WSA reflects the following:

Source Water Protection – Members of environmental groups and the general public have urged the WUCC to protect Connecticut's environment and maintain pure drinking water supplies. Protection of the environment and protection of water supply sources in many ways are mutually beneficial. Source protection and environmental conservation, for instance, are harmonious throughout many drinking water supply watersheds and groundwater aquifers. Wellhead and watershed protection for both existing and future supply sources has made significant progress in the past 15 to 20 years with completion of the Source Water Assessment Program (SWAP), completion of the majority of the Level A mapping, and full implementation of the Aquifer Protection Area (APA) regulations. However, continued land development and the need to address issues that cross-jurisdictional boundaries are of particular interest regarding watershed lands. While DPH has promoted a program to assess systems that cross municipal divides (known as the Drinking Water Quality Management Planning process) and address protection of drinking water supplies on a regional scale, there has been little traction for using this unique collaborative approach in the Central PWSMA.

Goal: To heighten individual utility and regional efforts towards source water protection, share ideas among utilities, and develop a regional approach to protecting the region's drinking water supply sources

Discussion Prompts:

1. Do you have a formal source water protection program?
2. Do you have a groundwater supply, reservoir supply, or both?
3. What measures (in general terms) do you currently undertake to protect your sources of supply?
4. Are your sources within or outside of the town in which your service area is located?
5. Do you have any specific recommendations for improved source water protection in your system, in small community and non-community systems, and/or throughout the region?

## Integrated Report Module #5

Topic: Joint Use, Management, or Ownership of Facilities, Shared Resources

Genesis: The Coordinated Water System Planning regulations require a plan for joint use, management or ownership of services, equipment, or facilities.

Goal: To understand the realities and benefits of joint use, management, or ownership of facilities and shared resources and identify means and measures to most efficiently enable sharing of equipment, people, and knowledge

Discussion Prompts:

1. Do you share resources with another system, including joint ownership of equipment or facilities?
2. Would your utility benefit from future shared resources or joint ownership of infrastructure, such as supply sources, storage, treatment, or distribution system components?
3. Do you sell water to a neighboring utility through an interconnection?
4. Do you have shared resource agreements (formal or informal) with one or more utilities or municipalities?

## Integrated Report Module #6

Topic: Fire Protection

Genesis: Lack of fire protection was raised in the Water Supply Assessment under the topic of needs and deficiencies. Specifically, the WSA reports the following:

Lack of Fire Protection – Many rural parts of the Western and Eastern PWSMAs are relying on ponds, dry wells, and cisterns for fire protection. While this is less common in the Central PWSMA, the eastern fringe of the Central region does rely on these types of protection. These approaches will continue in most of the rural and less densely populated areas but may not be desired in specific areas that would benefit from increased protection afforded by a public water system with storage and adequate pressure. Additionally, some parts of the region are already served by public water systems where hydrants are installed but pressures are currently insufficient for fire flows.

Goal: To evaluate the need for and develop a regional approach to fire protection

Discussion Prompts:

1. Does your system have fire protection capabilities for some or all of your service area?
2. What means of fire protection (other than that which may be provided by your water system) is employed within your ESA boundary and who provides it?
3. Do you consider your service area vulnerable to fire hazards?
4. Do you have fire-fighting resources that could potentially benefit neighboring water systems if shared?
5. In your opinion, should there be a specific strategy and/or approach within the region to address fire protection?

## Integrated Report Module #7

Topic: Water Conservation, Drought Planning, High Volume Users, and Increasing Peaking Ratios

Genesis: Water conservation was raised in the Water Supply Assessment (WSA) under the topic of issues, needs, and deficiencies. Specifically, the WSA reflects the following:

Water Conservation – Water conservation is an important element of sound public water system operation. In some cases, significant conservation measures have already been enacted, and additional water conservation efforts by a utility may have a minimal return. While all of the larger utilities practice water conservation, many smaller systems limit conservation to end-user controls such as low-flow toilets, faucets, and showers. Additionally, many smaller systems have minimal meters, and the amount of lost or wasted water is unclear. Continuing education is necessary to inform users of conservation methods, and additional education is needed for the general public regarding the amount of water being saved today that may have been wasted in the past. Water conservation may also be an issue with some systems where declining revenues are already negatively affecting revenue requirements.

Enactment of Voluntary and Mandatory Conservation Measures – The recent droughts in Connecticut have raised public awareness of voluntary and mandatory water conservation measures, which are enacted by many utilities to reduce demands during a drought. Typically, such reductions are requested on a percentage basis for each customer. One issue raised by the public as part of the recent widely reported and protested commercial bottling plant in Bloomfield was whether commercial/industrial users should be completely shut off prior to limiting water for residential customers. The WUCC will evaluate potential refinements to the methodology of how drought-related conservation measures are enacted in the customer base in the Integrated Report.

High Water Usage by Agricultural, Industrial, and Power Generation Facilities – Some agricultural, industrial, and power generation facilities require substantial water commitments from nearby public water systems for active daily supply as well as potential peaking supply, and there is often a large discrepancy between these figures. Some of these facilities do not require potable water and may be better served by non-potable water.

Increasing Ratio of Peak-Day Demands to Average-Day Demands – Some water systems are experiencing a trend of decreasing average-day demands along with an increase in peak-day demands. This negatively impacts the ability to manage sources and treatment facilities in some systems and points to a need for conservation during peak-day conditions. This is often the case during the summer months coincident with irrigation and water-intensive recreational activities. Although reservoir systems are typically better able to handle increased peak-day demands than groundwater systems from a supply perspective (provided adequate treatment capacity exists), increased peak-day usage by reservoir systems is of concern to DPH as overuse of surface water sources can result in taste and odor complaints, elevated levels of cyanotoxins, and other water quality concerns.

Goal: To better understand and develop best practices for water conservation within the region, identify deficiencies that may exist, and evaluate potential refinements to the methodology of how drought-related conservation measures are enacted

Discussion Prompts:

1. Do you have a formal water conservation plan and if so, what is the date of the last revision?
2. What water conservation measures do you employ?
3. What conservation measures have been most impactful in your system?
4. Do you have high water usage agricultural, industrial, or power generation customers within your exclusive service area? If so, approximately what percentage of your daily demand is comprised by these users?
5. Has your system experienced increasing ratios of peak-day demands to average-day demands? What is your current ratio?
6. What are your drought trigger levels based upon? How often in the last 10 years have these triggers been initiated? Have these or are these likely to change based upon the streamflow regulations?

## Integrated Report Module #8

Topic: Satellite Management / Small System Challenges and Viability

Genesis: The Coordinated Water System Planning regulations require a plan for satellite management or transfer of ownership. Additionally, the Water Supply Assessment identified the following issues, needs, and deficiencies associated with the operation and management of small water systems:

Challenges of Operating Small Systems – Many municipalities and privately owned public water utilities own and operate numerous small systems. Operational requirements such as regulatory permitting, technical assessment, system maintenance, infrastructure replacement, and water supply need require a disproportionate amount of time and money compared to the operation of a larger system. In particular, the lack of proper planning and/or asset management planning for many small community water systems (CWSs) – particularly a lack of knowledge regarding the full cost of providing a safe and reliable supply of drinking water – has resulted in systems with limited financial capacity to address public health code issues.

New Public Water Systems – In general, the need for new public water systems in the region is driven by the following conditions:

- Creating public water systems in some village centers may be necessary due to high densities and challenging lot sizes coupled with a desire for nominal growth.
- Creating public water systems in some village centers or neighborhoods may be necessary due to water quality concerns.
- Over time, developers are expected to approach municipalities about new projects ranging from commercial establishments to various types of residential developments. Many of these will necessitate the development of new public water systems (whether Community or Non-Community).

Some of the above needs may be addressed through extension of existing public water systems. However, not all areas may be easily served by water main extensions and system expansions and creation of new systems is costly.

Viability of Small Water Systems – The number of small public water systems in the region is not viewed as an issue per se. However, the viability of these systems is an issue of concern, particularly in areas where the density of small systems is moderate to high. Additionally, the operation of small water systems immediately adjacent to larger systems can result in a disparity of the cost of water among populations in close proximity, especially when small systems fail to fully fund their water system operations. The cost of interconnecting small systems can be prohibitive or at the very least a disincentive. More fully understanding the technical, managerial, and financial capacity of small systems to provide water supply is of interest. Several sets of challenges are facing the region:

- Eliminating the proliferation of small systems may be possible in communities where larger public water system expansions have occurred, and these larger systems are now immediately adjacent to small systems. Typical barriers to connecting small systems to larger systems (thus eliminating the small separate systems) include lack of funding and/or desire to make the investment, lack of interest from the small system, potential changes in water quality, and potential changes in pressure. For the most part, these types of barriers should be feasible to transcend provided funding is available.
- Reducing the number of small systems may be possible in some communities where options are limited.
- Potential acquisitions of water systems may be of interest to system owners that are not in the business of providing water.
- Potential acquisitions of water systems may be of interest to owners that are currently experiencing significant technical, managerial, and capacity challenges. These systems particularly the numerous Non-Community systems, could benefit from different ownership.

Goal: To better understand which systems within the region may be amenable to and would benefit from consolidation and/or satellite management

Discussion Prompts:

1. Are you a small system? If so, what are your biggest challenges?
2. Have you ever taken over or assimilated a small system?
3. Do you manage any community water systems that you do not own?
4. Do you currently or do you intend in the future to operate satellite water systems within your designated exclusive service area?
5. Do you have a potential need for contract operation of all or portions of your system?
6. Is your utility available to operate satellite water systems for other providers?



## Integrated Report Module #9

Topic: Minimum Design Standards

Genesis: The Coordinated Water System Planning regulations require provisions for minimum design standards applicable to all water system improvements and all new public water systems within the management area.

Goal: To establish regional minimum design standards

Discussion Prompts:

1. Does your system have minimum design standards that are unique from the state design standards?
2. How are minimum design standards communicated to developers within your service area?
3. Do you have specific recommendations for minimum design standards related to safe yield, source protection, water quality, fire protection, or distribution system components?

## Integrated Report Module #10

Topic: Future Sources / Raw Well Water Quality / Acquisition of Land for New Stratified Drift Wells

Genesis: The Coordinated Water System Planning regulations require evaluation and identification in priority order of alternative water sources recommended to supply future areawide water system needs, considering appropriate ground or surface water studies, safe yield estimates and arrangement for development and delivery of the water supply. The regulations also require the WUCC to identify areas that are not within exclusive service area boundaries relative to water supply alternatives. Additionally, the regional Water Supply Assessments raise the following issues, needs, and deficiencies surrounding coordinated planning:

Future Supply Sources – Several of the community water systems (CWSs) in the region have identified the need for additional water supply sources to meet current and future projected demands due to continued development within their existing service areas. Many systems rely on modest networks of surface water supplies and groundwater supplies that are located within municipal boundaries or nearby in adjacent communities, and they do not have the ability to easily develop new sources of supply. Even larger utilities have identified the potential need for additional supply sources if future conditions warrant.

Raw Well Water Quality – It is recognized that the raw well water utilized for public drinking water in the region tends to be variable with respect to quality and quantity. Elevated concentrations of arsenic, radioactive elements, and/or iron and manganese are prevalent in certain public water system well supplies, and treatment can be costly. In general, poor water quality and legacy contamination may present a disproportionate burden on small CWSs and Non-Community water systems, and it may necessitate extending public water systems into areas served by private wells or creation of new public water systems.

Goal: To understand future water supply needs in the context of newly established exclusive service area boundaries and water quality challenges within the region

Discussion Prompts:

1. Do you forecast that your system will require additional sources of supply in the 5, 20, or 50-year WUCC planning periods? If so, have you begun to plan for their development?
2. Are you experiencing, or have you experienced in the past issues relating to raw water quality? If so, how are you/have you addressed them?
3. What do you perceive as the biggest obstacle to procuring new sources of supply?

## Integrated Report Module #11

Topic: Future Interconnections and Impact / Disjointed Service Areas / Integration

Genesis: The Coordinated Water System Planning regulations require reporting of plans for any necessary interconnection of both raw and treated water between public water systems for both daily and emergency water supply use. Additionally, the regional Water Supply Assessments raise the following issues, needs, and deficiencies surrounding coordinated planning:

*Disjointed Service Areas* – Numerous communities are served by multiple public water systems (whether privately owned or municipal or regional) that are located proximal to one another but not actively interconnected, which can result in higher cost of operation, lack of efficiency, and lack of redundancy. In some cases, the cost for a customer to purchase water can be significantly more expensive in one system than the other system despite the customer's proximity.

*Development of New Interconnections* – New interconnections may be desired where not already present. This can help address water supply imbalances and increase redundancies that are desirable during water supply emergencies or droughts. Some interconnections will require pumping stations, meter pits, and/or pressure-reducing valves, which can greatly add to the project cost. The development of interconnections should include consideration of raw water interconnections among utilities, which utilize surface water. Such interconnections currently exist in the region and can be utilized to bolster surface water supplies during prolonged drought conditions.

*Movement of Water through Interconnections* – The movement of water from areas of surplus to areas of need is not always straightforward, even where interconnections are already present. Potential barriers include water quality differences, pressure gradients, the challenges associated with diversion permitting, and/or lack of agreements for the movement of water. In the future, it may be desirable to facilitate new instances of active, daily transfers of water. In addition, concerns about the potential long-term environmental and economic development impacts of transfers of water into or out of a basin must also be considered. Emergency interconnections, which exist solely to address short-term events, are an opportunity to provide critical supply redundancy with minimal long-term impact.

Goal: To identify opportunities for new interconnections to better serve the region and create a more robust regional water supply network

Discussion Prompts:

1. Do you currently have any interconnections with other systems? If yes, are you the recipient or the donor system, or both? Is the interconnection for regular use or for emergency purposes only?
2. Do you hold a Sale of Excess Water permit?

3. Have you applied for/obtained a diversion permit for an interconnection? If so, what was the biggest obstacle?
4. Do you have any plans to interconnect with another system in the future?
5. If funding were not an obstacle, are you aware of any local or regional interconnections that would lessen the vulnerability within the region or provide other supply benefits?
6. Is your system in a position to sell excess water now or in the future to a neighboring system?

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## Integrated Report Module #12

Topic: Impacts of Climate Change

Genesis: Climate change was raised in the Water Supply Assessment under the topic of needs and deficiencies. Specifically, the WSA reflects the following:

*Impacts of Climate Change* – The resiliency of water systems to climate change and natural hazards is a significant concern, particularly given the extensive power outages that occurred throughout the state during Tropical Storm Irene, Winter Storm Alfred, and Hurricane Sandy. Many smaller systems do not have standby power facilities. A DPH study is underway headed by the Connecticut Institute for Resilience & Climate Adaptation (CIRCA) to develop a Drinking Water Vulnerability Assessment and Resiliency Plan for Connecticut that considers the impacts of flooding from extreme weather, drought, and other impacts of climate change on public water systems. Furthermore, the State Water Plan describes changes in water resources due to climate change. Future planning will be necessary to prepare for and respond to climate change. Interconnections may become more important as part of these efforts.

Goal: To understand how climate change could potentially impact water supply sources, distribution infrastructure, and service

Discussion Prompts:

1. Is your system located within a coastal community?
2. Do you have a source in close proximity to a river or within a designated FEMA floodplain?
3. If you operate a reservoir supply, do you envision any capacity issues related to climate change and increases in precipitation?
4. Does any part of your service area experience regular flooding?
5. Have you had flooding issues at any of your sources or distribution system infrastructure?
6. Do you have a formal flood management plan?
7. Have you specifically evaluated the potential impacts of climate change on your water supply system?
8. What, if any, concerns do you have relative to climate change in terms of its potential impact on your individual water system components?

## Integrated Report Module #13

Topic: Impacts of Existing and Future Regulations

Genesis: The impact of existing and future regulations was raised in the Water Supply Assessment (WSA) under the topic of needs and deficiencies. Specifically, the WSA reflects the following:

*Impacts of Current Streamflow Regulations* – Several of the community water systems (CWSs) in the region may experience impactful reductions in reservoir safe yields upon full implementation of the Streamflow Regulations by 2026 or 2027. The regulations will mainly affect mid-sized systems with surface water supplies that rely on surface water supplies that are not exempt from the Streamflow Regulations. Future water supply sources may be needed to offset reductions in safe yield. Therefore, implementation of the Streamflow Regulations is believed to be a primary driver for determining the need for future interconnections and new source development across the state. Utilities may also choose to develop and enter into flow management plans with multiple parties as a method to comply with the Streamflow Regulations.

*Impact of Future Anticipated Regulations* – Regulations that affect public water systems will remain an issue for this region as well as for water systems statewide. The total coliform rule (TCR) is one such example. The TCR will lead to proliferation of new and improved treatment systems, and it may lead to abandonment of some water supply wells. If the Streamflow Regulations are modified in the future to include progressive cutbacks of groundwater withdrawals, the adverse impact on available water will be significantly felt in the region and statewide. These and other as-of-yet unknown future regulations can be costly to implement, maintain, and significantly affect the logistics of operating a public water system.

Goal: To better understand how existing and future regulations may impact regional water systems, plan for such impacts, and engage systems in the draft regulation process

Discussion Prompts:

1. What regulation(s) pose the biggest challenge to your system?
2. Are your sources permitted under the Water Diversion program or are they grandfathered?
3. Will your system be impacted by the streamflow regulations? If so, have you undertaken analysis to determine the implications on safe yield?
4. Are you aware of any up and coming regulations that would impact your system?

## Integrated Report Module #14

Topic: Potential Impacts on Other Use of Water Resources, Including WQ, Flood Management, Recreation, Hydropower, and Aquatic Habitat Issues

Genesis: The Coordinated Water System Planning regulations require that the WUCCs consider the potential impacts of the plan on other uses of water resources, including water quality, flood management, recreation, hydropower, and aquatic habitat issues. Additionally, the Water Supply Assessment raises the following concern surrounding coordinated planning:

*Environmental Concerns Associated with Water Withdrawals* – Members of environmental groups and the general public have voiced concern over the potential for environmental impact of water withdrawals from reservoirs and groundwater aquifers. For new withdrawals and for those previously permitted under the Water Diversion Act administered by the Connecticut DEEP, potential environmental impacts are rigorously reviewed. Previously *registered* water diversions, including those for public drinking water supply, did not undergo environmental review. These withdrawals are grandfathered. The Coordinated Water System Plan must consider the potential impacts of the plan on other uses of water resources, including water quality, flood management, recreation, hydropower, and aquatic habitat issues.

Goal: To identify and consider potential impacts of the Coordinated Water System Plan on surrounding resources and water uses

Discussion Prompts:

1. What specific system expansions, upgrades, or modifications do you have planned in the 5, 20, and 50-year WUCC planning periods that could potentially cause impact on surrounding resources or water uses?
2. Do you have any recent, ongoing, or planned system modifications that have been evaluated relative to their potential environmental impact?

## Integrated Report Module #15

Topic: Regional Population and Service Ratio, Consumption by Demand Category, Safe Yield, Excess Water

Genesis: The Coordinated Water System Planning regulations require the following data:

- Population and consumption projections for 5, 20, and 50-year planning periods for the public water supply management area as a whole and for each municipality within the area
- Projected population, historical and projected water demand by user category for 5, 20, and 50-year planning periods for each public water system's exclusive service area and for the combined service areas
- Sources of supply, safe yield, and amounts of purchased water available for 5, 20, and 50-year planning periods for each public water system's exclusive service area and for the combined service areas
- Determination of the amount and percentage of projected population within each municipality within the public water supply management area to be serviced by public water supplies for 5, 20 and 50-year planning periods

Goal: To develop a consistent database for existing and future planning periods

Discussion Prompts:

1. Has your exclusive service area expanded as a result of the WUCC process?
2. Have you prepared an individual water supply plan? If so, what is the date of the most recent plan update and has it been approved?
3. When is your next plan update due?
4. What is the anticipated impact of future projections on the need for additional water to serve your system?



## Integrated Report Module #16

Topic: Compatibility with Local, Regional, and State Plans

Genesis: The Coordinated Water System Planning statutes and regulations require an assessment of the compatibility of water system plans with local, regional, and state plans.

Goal: To better understand the compatibility of local, regional, and state plans relative to water system planning and create a platform for planning discussions moving forward

Discussion Prompts:

1. Is your current supply source(s) and distribution system service area compatible with local, regional, and state plans? If not, how so?
2. Have you discussed future service plans with the municipal planning entity?
3. Are your future identified sources and/or service area expansions compatible with local, regional, and state plans?

# Water Systems Specialties

~ We're All About Water ~

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June 27, 2017

Western Region WUCC-c/o David Banker  
Metropolitan District Commission  
555 Main Street  
Hartford, CT 06142-0800

**RE: Landmark Academy, CT 1179113: location is 20 Portland Avenue, Redding, CT**

Landmark Academy leases the above property from Salvatore Pilato.

They are a NTNC public water system that serves a daycare and preschool housed in (3) buildings. The population is approximately 250 people and daily water usage is approximately 400 gallons per day. The system is served by a single drilled well. Per the well drilling completion report dated May 28, 1997, the final well depth is 675' and the yield at that time was 7 gpm. The pump is set at 600' and has a pumping rate of 7-8 gallons per minute.

2016 Water Usage				
	Meter Reading	Amount	# of days	G/P/ Day
1/4/2016	1,567,240	9,100	34	268
2/3/2016	1,581,400	14,160	30	472 (Highest)
3/2/2016	1,591,340	9,940	28	355
4/4/2016	1,606,070	14,730	33	446
5/25/2016	1,636,210	30,140	51	590
6/23/2016	1,649,070	12,860	29	443
7/6/2016	1,653,200	4,130	13	318
8/26/2016	1,665,500	12,300	51	241
9/13/2016	1,668,510	3,010	18	167 (lowest)
10/19/2016	1,680,570	12,060	36	335
11/22/2016	1,693,060	12,490	35	356
12/5/2016	1,696,470	3,410	13	262
<b>TOTAL</b>		<b>138,330</b>	<b>371</b>	<b>Avg 373 gpd</b>

This water system does not experience low pressure during normal or peak usage and does not haul in bulk water to supplement the water system. Aquarion Water Co. is the closest water system and does not currently serve this area. We do not expect any usage or supply changes in the future for this location.

*Reale D. Lemay*

CT DPH Certified Operator for Landmark Academy

Cc: Kimberly Swabsin, Director of Landmark

# Water Systems Specialties

## ~ We're All About Water ~

June 27, 2017

Western Region WUCC-c/o David Banker  
 Metropolitan District Commission  
 555 Main Street  
 Hartford, CT 06142-0800

**RE: The Wellspring Foundation: CT0105023 and Wellspring Foundation Shiloh CT 105053 in Bethlehem, CT**

The Wellspring Foundation consists of (2) NTNC public water systems: The Wellspring Foundation and Wellspring Foundation-Shiloh. Each system is served by their own single drilled well. Torrington Area Health does not have any well completion reports available for either system.

The population of The Wellspring Foundation is approximately 63 with a daily water usage of approximately 1,100 gallons per day and supplies (3) buildings. The well is 238' and the pump is set at 220' with a pumping rate of 6 gpm.

The Shiloh location feeds (1) building and serves approximately 27 people with a daily water usage of approximately 287 gallons per day. The well is 188' and the pump is set at 160' with a pumping rate of 8 gpm.

2016 Water Usage for The Wellspring Foundation					2016 Water Usage for Wellspring-Shiloh		
	# of days	Meter Reading	Amount	G/P/ Day	Meter Reading	Amount	G/P/Day
1/20/16	44	2051620	43,900	998	53,030	11,830	269
2/16/16	27	2075270	23,650	<b>876</b>	61,860	8,830	327
3/28/16	41	2119790	44,520	1,086	74,430	12,570	307
4/21/16	24	2147180	27,390	1,141	81,050	6,620	276
5/11/16	20	2170300	23,120	1,156	86,520	5,470	273
6/2/16	22	2200190	29,890	<b>1,358</b>			
7/29/16	50	2267430	67,240	1,344	111,620	25,100	<b>354</b>
8/18/16	20	2285470	18,040	902	116,920	5,300	265
9/19/16	32	2319110	33,640	1,051	123,070	6,150	<b>192</b>
10/28/16	39	2367940	48,830	1,252	132,850	9,780	250
11/28/16	31	2396220	28,280	912	141,640	8,790	283
12/19/16	21	2418440	22,220	1,058	147,550	5,910	281
<b>TOTALS</b>	371		<b>410,720</b>	<b>Avg 1,108</b>		<b>106,350</b>	<b>Avg. 287</b>

This water system does not experience low pressure during normal or peak usage and does not haul in bulk water to supplement the water system. There is no nearby public water system of significant size to allow an interconnection with these systems. We do not expect any usage or supply changes in the near future for these locations.

*Reale D. Lemay*  
 CT DPH Certified Operator for Wellspring Foundation

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