



# Monthly Meeting #19

## Coordinated Water System Plan Central Region

MDC Training Center; 125 Maxim Road, Hartford, Connecticut | December 13, 2017

# Agenda

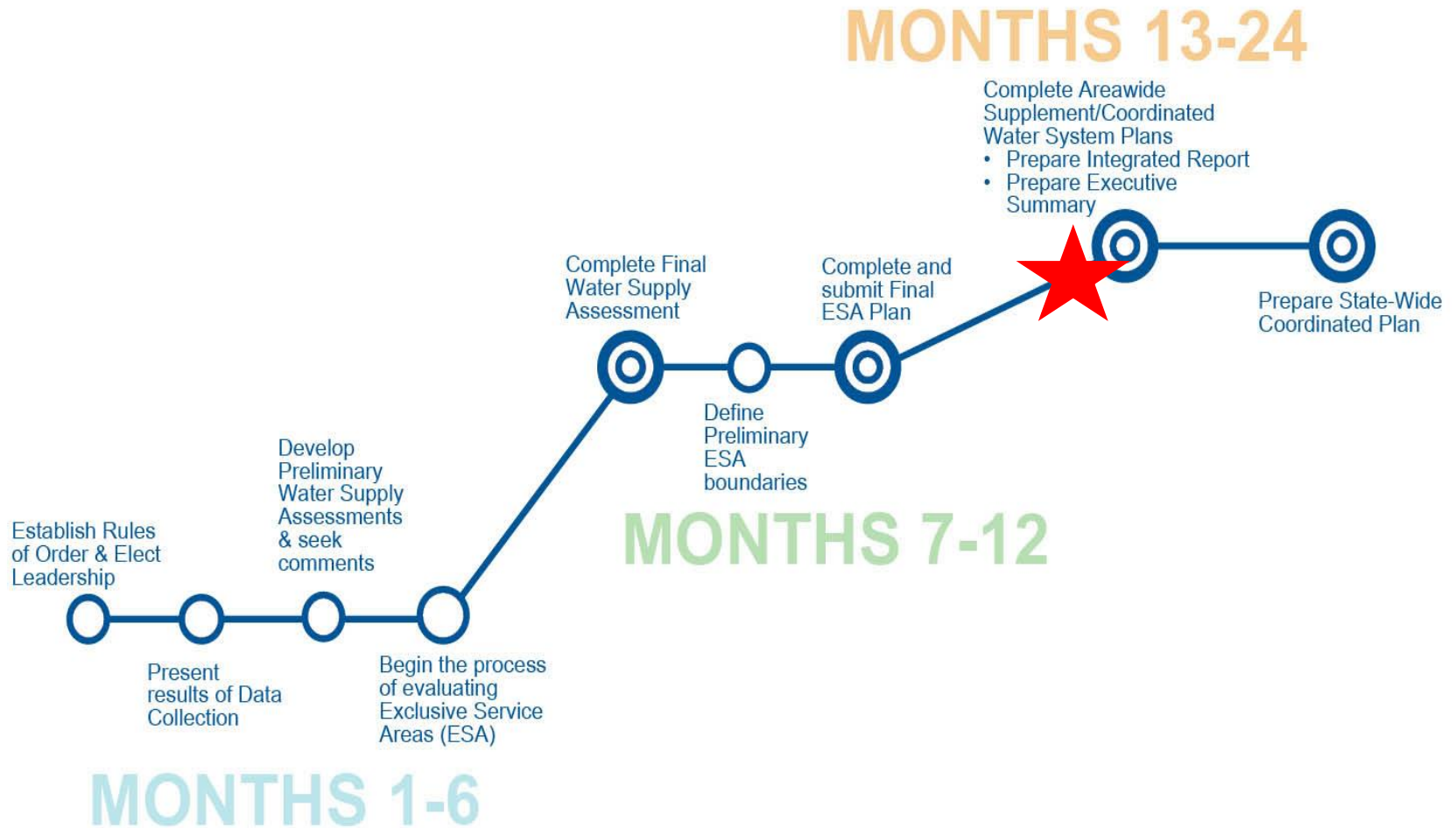


1. Welcome & Roll Call (5 minutes)
2. Approval of November Meeting Minutes (5 minutes)
3. Review of Formal Correspondence (5 minutes)
4. Integrated Report Review (60 minutes)
  - a. Review Projections
  - b. Review Draft Integrated Report & Schedule
  - c. Discussion of Issues to Resolve
  - d. Prioritization of Strategies and Actions
5. Next Steps and Revised Timeline (15 minutes)
6. Public Comment (10 minutes)
7. Other Business (5 minutes)

# 1. Welcome and Roll Call

- ***What Have We Accomplished?***
  - ✓ Discussed Integrated Report Modules #1 through #16
- ***What Are We Doing Today?***
  - ✓ Additional Integrated Report Discussion
- ***What's Next?***
  - ✓ Review Draft Integrated Report

# WUCC Time Frame



## 2. Approval of Meeting Minutes

## 3. Formal Correspondence

# Formal Correspondence



Date	From	To	Main Topic(s)
11/21/17	CT DPH	Graybill Properties	Well Use Approval for Well 1
12/8/17	MDC	MMI and WUCC	Analysis of potential impacts from Streamflow Regulations assuming Class 3 rivers below dams



## 4. Integrated Report Review

# Integrated Report Table of Contents



## 1.0 INTRODUCTION

Overview of Integrated Report

Overview of the Central Public Water Supply Management Area

Public Comments

## 2.0 EVALUATION OF ISSUES

Planning

Impacts of Existing and Future Regulations

Satellite Management and Small system Challenges

Asset Management

Financial Solvency and Access to Funding

Climate Change and Resiliency

# Integrated Report Table of Contents



## 3.0 POPULATION, CONSUMPTION, & AVAILABLE WATER PROJECTIONS

Introduction

Municipal Population and Demand Projections

Exclusive Service Area Population and Demand Projections

Existing and Future Available Water

## 4.0 EXISTING AND POTENTIAL FUTURE INTERCONNECTIONS

Existing Interconnections in the Region

Sale of Excess Water

Diversion Permitting Requirements

Regional Interconnections

System Specific Interconnections

Recommended Interconnection Guidelines

# Integrated Report Table of Contents



- 5.0 ANALYSIS AND PRIORITIZATION OF POTENTIAL FUTURE SUPPLIES
  - Goals
  - Introduction
  - Previous Studies
  - Regional Water Supply Source Investigation
  - Inventory of Surface Water Supplies
  - Inventory of Groundwater Supplies
  - Investigation of Potential Regionally Significant Surface & GW Supplies
  - Recommended Future Water Sources
  - Land Acquisition for Proposed Stratified Drift Wells
  - Inventory of Potential Locally Significant Surface and GW Supplies
  - Implementation Strategy
  - Recommendations
  - Demand Management

# Integrated Report Table of Contents



- 6.0 JOINT USE, MANAGEMENT, OR OWNERSHIP OF SERVICES, EQUIPMENT, AND FACILITIES
- 7.0 SATELLITE MANAGEMENT AND TRANSFER OF OWNERSHIP
- 8.0 MINIMUM DESIGN STANDARDS
  - Overview
  - Local Minimum Design Standards
  - Impact on Existing Systems
  - Conclusions and Recommendations
- 9.0 POTENTIAL IMPACT ON OTHER USES OF WATER RESOURCES
- 10.0 RELATIONSHIP AND COMPATIBILITY WITH OTHER PLANNING DOCUMENTS
- 11.0 SUMMARY OF ESTIMATED COSTS FOR IMPLEMENTATION

# Current and Projected Water Demands



- Projections have been trickling in – Thank you!
- **Please send them if you haven't!**
- For current demands, we have 2015 or 2016 data for most systems
  - Estimating older demands as needed
  - User Categories include Residential, Non-Residential, and Unaccounted
  - Using existing Available Water to determine surplus or deficit
    - Sales are subtracted from Total ADD to create “System ADD”
    - Available Water adjusted for commitments

***CWSP regulations require “projected population, historical and projected water demand by user category for 5, 20, and 50 year planning periods for the PWSMA as a whole and for each municipality within the area”, and by user category for each ESA***  
***RCSA 25-33h-1(d)(C)(i)(aa-cc)***

# Total PWS Demands – By Town (mgd)



Municipality	Current Total PWS Demand	Municipality	Current Total PWS Demand	Municipality	Current Total PWS Demand	Municipality	Current Total PWS Demand
Andover	0.02	East Hartford	6.21	Mansfield	1.53	Simsbury	2.22
Avon	1.64	East Haven	3.02	Marlborough	0.09	Somers	0.64
Berlin	1.87	East Windsor	0.68	Meriden	5.07	South Windsor	2.77
Bethany	0.04	Ellington	0.88	Middlefield	0.09	Southington	3.87
Bloomfield	2.50	Enfield	4.06	Middletown	3.98	Stafford	0.66
Bolton	0.06	Essex	0.26	Milford	5.73	Suffield	0.77
Branford	2.88	Farmington	2.77	New Britain	7.37	Tolland	0.38
Canton	0.39	Glastonbury	3.02	New Haven	13.75	Vernon	2.02
Chester	0.18	Granby	0.31	Newington	3.67	Wallingford	3.94
Clinton	0.92	Guilford	1.05	North Branford	0.58	West Hartford	7.88
Columbia	0.06	Haddam	0.06	North Haven	2.28	West Haven	5.66
Coventry	0.17	Hamden	6.00	Old Lyme	0.23	Westbrook	0.36
Cromwell	1.71	Hartford	15.97	Old Saybrook	0.65	Wethersfield	3.30
Deep River	0.23	Hebron	0.12	Orange	1.13	Willington	0.18
Durham	0.10	Killingworth	0.08	Plainville	1.51	Windsor	3.51
East Granby	0.32	Lyme	0.00	Portland	0.68	Windsor Locks	1.20
East Haddam	0.08	Madison	1.05	Rocky Hill	2.23	Woodbridge	0.17
East Hampton	0.18	Manchester	4.94				

# Total PWS Demands – By ESA (mgd)



ESA Holder	Current Total PWS Demand in ESA	ESA Holder	Current Total PWS Demand in ESA
Avon Water Company	1.66	Southington Water Department	3.87
Aquarion Water Company	2.45	Stage Agency Existing Service Area (CVH)	0.30
Berlin Water Control Commission	0.83	Stage Agency Existing Service Area (UConn)	0.89
Cromwell Fire District	1.71	Tolland Water Department	0.20
CT Water Company	19.86	Town of Bolton	0.02
East Hampton WPCA	0.17	Town of Coventry	0.04
ESA Unassigned	0.01	Town of Durham	0.07
Hazardville Water Company	1.54	Town of East Haddam	0.06
Kensington Fire District	0.81	Town of Lyme	0.00
Manchester Water Department	4.96	Town of Marlborough	0.09
MDC	50.02	Town of Middlefield	0.09
Meriden Water Division	5.07	Valley Water Systems	1.51
Middletown Water Department	3.68	Wallingford Water Department	3.94
New Britain Water Department	7.72	Windham Water Works	0.21
Portland Water Department	0.68	Worthington Fire District	0.22
SCCRWA	41.23		



# Surplus Available Water – System ADD



- “If no one developed any new sources for Community systems, where would we be in 2060?”
  - Some systems may need to develop new sources or interconnections to meet ADD and commitments, or rescind commitments
  - Some small systems will continue to exist with very little surplus available water to meet ADD
  - Some systems will be in good shape for ADD with current sources and commitments
- Integrated Report will have ADD data for C, NTNC, and TNC systems by general user category in tabular format

# Current and Projected Water Demands



- Still need to evaluate potential declines in Available Water for reservoir systems (more on this later)
- While the majority of systems can meet ADD in 2060, MMADD (and perhaps PDD) demands will drive need for new sources and interconnections
  - Peaking data is unavailable for NTNC and TNC systems, and for most small C systems – focus will be on the larger systems where data is available
  - Projected available water estimates will be used

# Issues to Resolve

- Long-term impacts of Streamflow Regulations
  - Safe yield analyses need to be updated to account for releases, drought triggers, etc.
    - Most utilities haven't done that level of analysis yet
    - Hard data is largely not available
  - Will use initial estimates in Integrated Report, and straight percentage where unknown – what percentage is appropriate?
    - MDC exempt, but estimates a 9.4 mgd reduction in safe yield (12.2%) – system Margin of Safety declines below 1.15
    - Wallingford's initial estimate is a potential 30% reduction to safe yield
    - Aquarion's analysis estimates overall 10%-11% decrease
    - Use 15%? 20%?

# Prioritization of Strategies and Actions

- Looking at a regional level – what will benefit more than one system?
  - Expected sequence of prioritization to improve water supply:
    - New Emergency Interconnections \* - \$\$\$
    - Reactivation of Inactive Supplies - \$
    - New Active Interconnections \* - \$\$\$\$
    - Development of Ground Water Sources - \$\$\$
    - Development of New Surface Water Sources - \$\$\$\$\$
- \*Potential for small system consolidations*
- Presently proposed projects will be given more discussion as there is more information available (i.e. generally 5-20 year projects)

# Recommendations – Interconnections



- New or Enhanced Interconnections
  
- Examples:
  - Consolidation of numerous C, NTNC, and TNC systems in downtown East Hampton
  
  - Interconnection to Durham Center from Middletown
  
- Reasons could include drought and climate change resiliency, needing more water for organic growth, to offset Streamflow Regulations, or to support expansion to address contamination in areas served by private wells

# Recommendations – “New” Sources



- Active or Semi-Regular use of Inactive or Emergency Sources
  - Raw or Treated Water purchases from MDC
- New Sources:
  - Connecticut River aquifer
- Reasons are the same as interconnection reasons (*drought and climate change resiliency, needing more water for organic growth, to offset Streamflow Regulations, or to support expansion to address contamination in areas served by private wells*)

# Recommendations – Source Challenges



- WUCC assistance to solve long-term challenges of regional significance
  - Meeting long-term needs of Bristol
  - Addressing long-standing groundwater contamination concerns in Durham
  - Ensuring sufficient water in Quinnipiac River basin

# Recommendations – Small System Bins

- Options for small systems to become more resilient:
  - A: Seek resources for internal improvements
  - B: Pursue interconnection
  - C: Pursue acquisition and remain a satellite
  - D: Pursue acquisition and consolidation
  - E: Seek new management





# Recommendations – New Systems

- WUCC could provide a framework for monitoring the situations where new systems are needed
  - What thresholds make sense? Population, density, etc.?
  - Who should monitor? DPH, WUCC, Town, or Health District?
- Examples
  - East Hampton
  - Durham

# Recommendations – State Water Plan



- By necessity, the WUCCS will be involved with the State Water Plan recommendation to “Encourage regional water solutions where they are practical and beneficial”
  
- WUCCs could help implement other aspects of the State Water Plan *if asked by the WPC and the WPCAG*. Examples:
  - Identifying existing or new customers who could use Class B waters and free up Class A treated water
  - Show leadership in drought planning, reducing peaking factors, and setting new drought response thresholds
  - Show leadership in source protection strategies

# Recommendations – Policies or Regs



- Water Supply Planning Regulations are system specific, but Coordinated Water System Planning Regulations are very municipal specific...and State Water Plan encourages basin-level planning
- Better guidance/regulations regarding the calculation of Available Water, to ensure that sales to other utilities are not double counted, and that emergency interconnections do not count against Available Water

# Upcoming Meetings



- ✓ Review Draft Integrated Report
- ✓ Continued Discussion of How to Resolve Issues
- ✓ Prioritization of Strategies and Actions

## 5. Next Steps and Revised Timeline

# CWSP Schedule



Action	Timeline
• Issue draft Preliminary CWSP	By Early January 2018
• Discuss draft Preliminary CWSP	January 17, 2018 meeting
• Issue final draft Preliminary CWSP	January 31, 2018
• Approve Preliminary CWSP for Public Comment	February 21, 2018 meeting
• Min. 30-Day Public Comment period	February to March 2018
• Final prioritization of recommendations, discuss public comments	March 21, 2018 meeting
• Issue draft Final CWSP	March 31, 2018
• Review draft Final CWSP	April 18, 2018 meeting
• Issue final draft Final CWSP for review	April 30, 2018
• Approve Final CWSP for Submission to DPH	May 16, 2018 meeting

## 6. Public Comment

## 7. Other Business