



Monthly Meeting #14

Coordinated Water System Plan Eastern Region

Southeastern Connecticut COG, 5 Connecticut Avenue, Norwich, Connecticut | July 12, 2017

Agenda



1. Welcome & Roll Call (5 minutes)
2. Approval of June Meeting Minutes (5 minutes)
3. Formal Correspondence (5 minutes)
4. Public Comment Period (10 minutes)
5. ESA Modifications Discussion / Updates (10 minutes)
6. State Water Plan Presentation by Water Planning Council (30 minutes)
7. Integrated Report Topics (45 minutes)
 - Asset Management Responses
 - Financial Considerations
 - Coordination of Planning
 - Introduction of August Topics
8. Other Business (10 minutes)



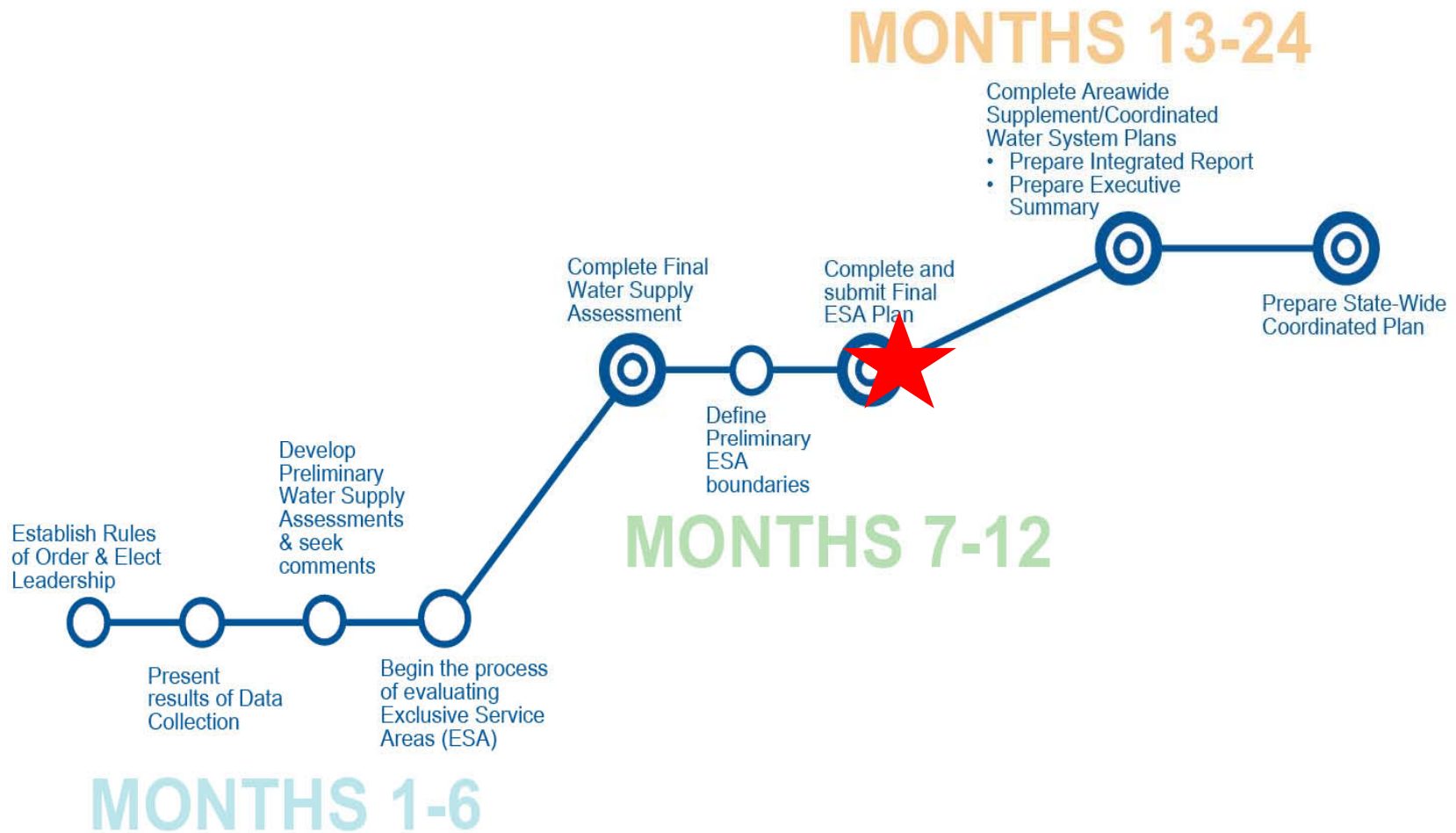
1. Welcome and Roll Call

Taking Stock



- ***What Have We Accomplished?***
 - ✓ The Final Recommended ESA Document was sent to DPH and posted
 - ✓ A draft syllabus for the Integrated Report was promulgated
- ***What Are We Doing Today?***
 - ✓ Receiving updates on any ESA Modification processes
 - ✓ Receiving a presentation with Q&A time regarding the State Water Plan
 - ✓ Discussing suggested updates to the Integrated Report syllabus
 - ✓ Discussing Asset Management, Financial Considerations, Coordination of Planning
- ***What's Next?***
 - ✓ Additional Integrated Report Topics

WUCC Time Frame



2. Approval of Meeting Minutes

3. Formal Correspondence

Formal Correspondence



Date	From	To	Main Topic(s)
6/16/2017	MMI	CT DPH	Final Recommended Exclusive Service Area Document for posting and distribution
6/21/2017	Eastern WUCC (via DPH)	Eastern WUCC Members	Data Request for Integrated Report and questions on Asset Management, Financial Considerations, and Coordination of Planning
6/28/2017	Green Valley Hospitality, LLC	MMI	Response to data request and questions for modules 1-3
7/7/2017	Windham Water Works	MMI	Response to questions for modules 1-3
7/7/2017	SCWA	MMI	Response to questions for modules 1-3
7/8/2017	Aquarion Water Co.	MMI	Response to questions for modules 1-3
7/10/2017	Norwich Public Utilities	MMI	Response to questions for modules 1-3

4. Public Comment Period

5. ESA Modifications Discussion / Updates

6. State Water Plan Presentation by Water Planning Council



The Connecticut Water Planning Council



Presented by:
Lori Mathieu, DPH

July 12, 2017

Connecticut State Water Plan Update

Presented to Eastern WUCC



WATER PLANNING COUNCIL



**Betsey
Wingfield**
DEEP

**Lori
Mathieu**
DPH

**Jack
Betkoski**
PURA

**Dave
LeVasseur**
OPM

Topics to Discuss

- State Water Plan Goals
- **5 Most Important Highlights**
- Review of the planning process
- Major components of the Plan:
 - Background on Current Conditions
 - Technical Findings
 - Policy Recommendations
 - Next Steps



Goals of the Plan



PURA



Goals of the Plan

The Plan is Aimed at:

- Building on work to date of Committees and Advisory Group
- Addressing each of the 17 Primary Goals outlined in the Statute, as a minimum
- Identifying a balance: *The right quantity and quality for each need.*

The Plan is NOT Aimed at:

- Solving all of Connecticut's Water Issues

Requirements of the State Water Plan

1. Identify the quantities/qualities of water available
2. Identify present/projected demands for water
3. Recommend utilization of water resources to balance public water supply, economic development, recreation and ecological health
4. Recommend steps to increase the climate resiliency of existing water resources and infrastructure
5. Recommend technology and infrastructure upgrades, interconnections and/or major engineering works
6. Recommend land use and other measures to ensure the desired water quality/abundance and promote development in concert with available water resources
7. Take into account desired ecological, recreational, agricultural, industrial and commercial use of water bodies
8. Inform state residents on the importance of water resource stewardship/conservation
9. Establish conservation guidelines/incentives for water conservation with energy efficiency consideration
10. Develop a water reuse policy with incentives for matching the water quality to the use
11. Meet data collection and analysis needs to provide for data driven decisions
12. Account for the ecological, environmental, public health/safety and economic impact implementation will have on the state
13. Include short and long-range objectives/strategies to communicate and implement the plan
14. Incorporate regional and local plans/programs for water use and management
15. Promote intra-regional solutions and sharing of water resources
16. Develop and recommend strategies to address climate resiliency
17. Identify modifications to laws/regulations necessary in order to implement recommendations

Summary of High-Level Plan Objectives

Synopsis

- Provide balanced water use for all needs.



Out-of-Stream
Needs



Instream
Needs

Specific Goals (Not prioritized)

- Provide reliable and resilient supply for all uses
- Promote public health and quality of life with high quality water
- Protect the environment
- Manage water cost-effectively for all users
- Develop an implementable plan
- Prepare for uncertain future climate
- Use science and data to recommend action
- Involve Connecticut citizens in water management

Make Progress on Each Identified Water Management Option or Challenge

Plan includes **policy recommendations** for well developed options with general consensus

Plan includes **pathways forward and decision processes** for issues that cannot be resolved within the 1-year planning process

Plan acknowledges that certain issues are being addressed elsewhere

Plan will include technical information on current and future water needs for human health, environmental health, industry, agriculture, and energy



The 5 Most Important Points in the Plan

The 5 Most Important Points in the Plan

- **FUNCTION OF THE PLAN:** The information in the Plan is not an answer, but a platform for consistent, informed decision making.
- **MAINTAIN HIGHEST QUALITY DRINKING WATER:** The Plan reaffirms the state's dedication to the highest standard of drinking water quality in the nation (Class A).
- **BALANCE:** Many river basins in Connecticut cannot satisfy all instream and out-of-stream needs all the time. The Plan offers many ideas for understanding and improving this balance, but more planning is needed to develop equitable responses to climate change (drier summers), development, used and unused registered diversions.
- **CONSERVATION:** While Connecticut leads the nation in protections of drinking water quality, the State lags in its conservation ethic. Outreach building on existing utility initiatives is one of the most important recommendations in this Plan.
- **MAINTAIN SCIENTIFIC DATA:** The plan advocates for the collection, maintenance and use of scientific hydrologic and water use data as well as centralized access to the data.



The Planning Process

Stakeholder Workshops and Public Meetings

PHASE I

Workshop #1: Plan Framework: Goals and Water Management Options

Public Meeting – Eastern CT

Public Meeting – Central CT

Public Meeting – Western CT

PHASE II

Workshop #2:
Refinement of
Options

Workshop #3:
Policies vs.
Pathways

Workshop #4:
Paths Forward /
Decision
Framework(s)

Workshop #5:
Policy
Recommendations

Workshop #6:
Plan
Recommendations

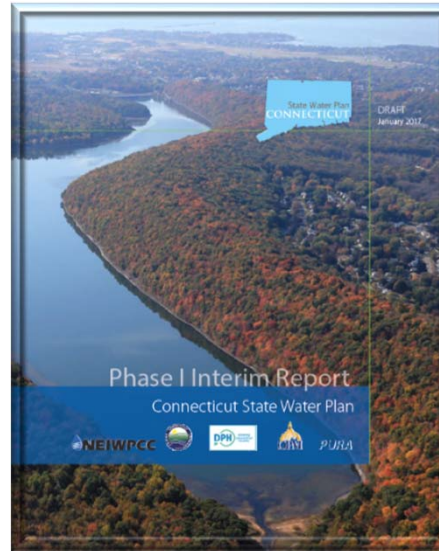
Public Meeting #4

Public Meeting #5

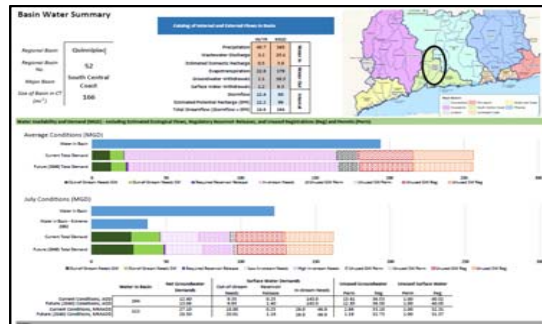
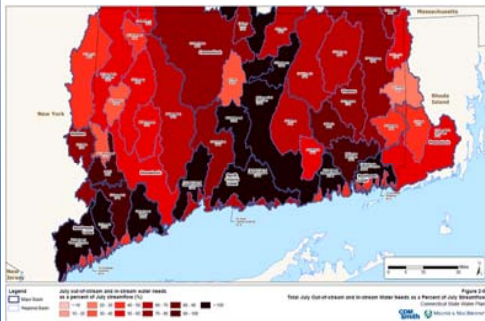
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Key Elements of the Plan

Background: Current Policies, Future Options



Technical information: Water Needs, Climate Change, Conservation



Recommendations

- Recommended **Policies** as guiding principles for future laws and regulations based on stakeholder consensus
- **“Pathways Forward”**:
 - Data Needs
 - Partnerships
 - Consensus Building
- **Implementation**
 - Outreach
 - Funding
 - Priorities

Elements of the Plan

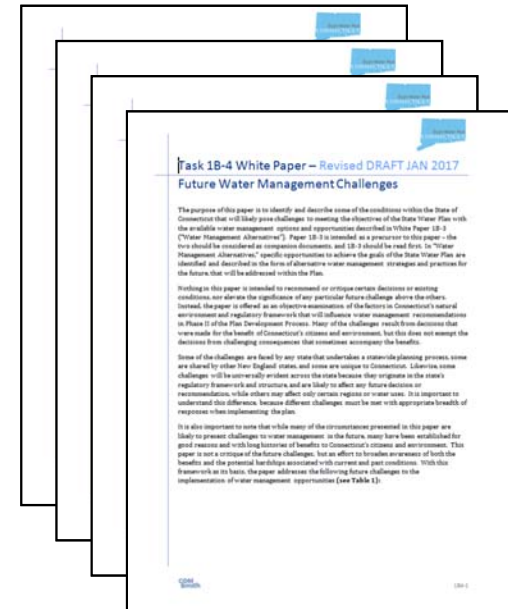


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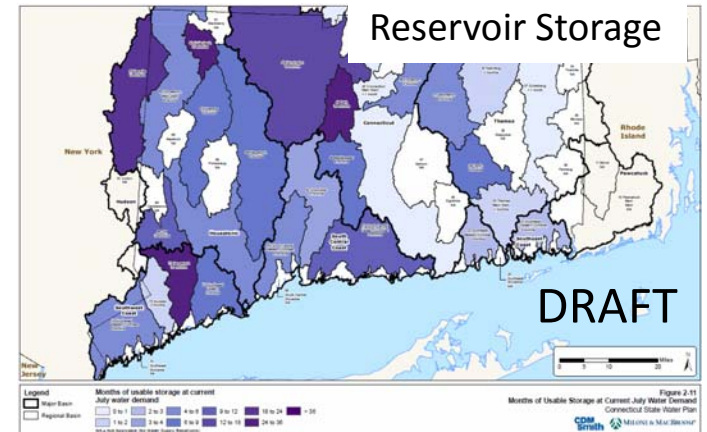
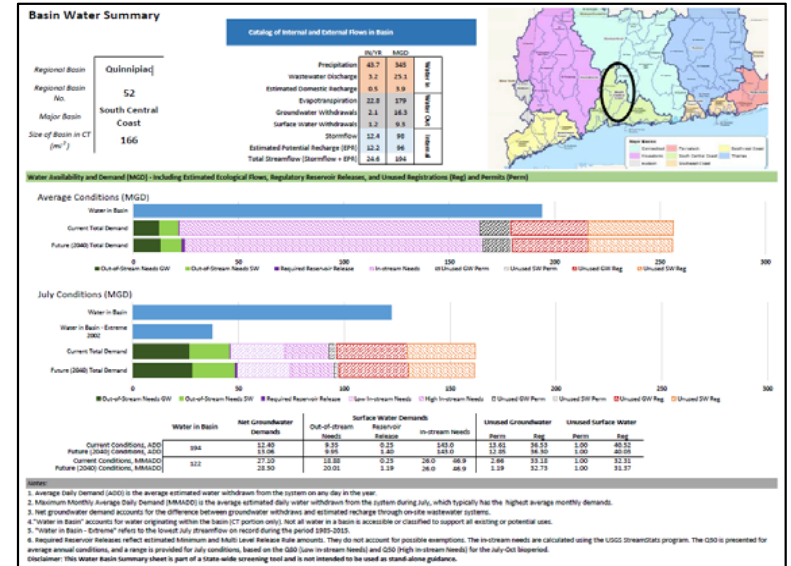
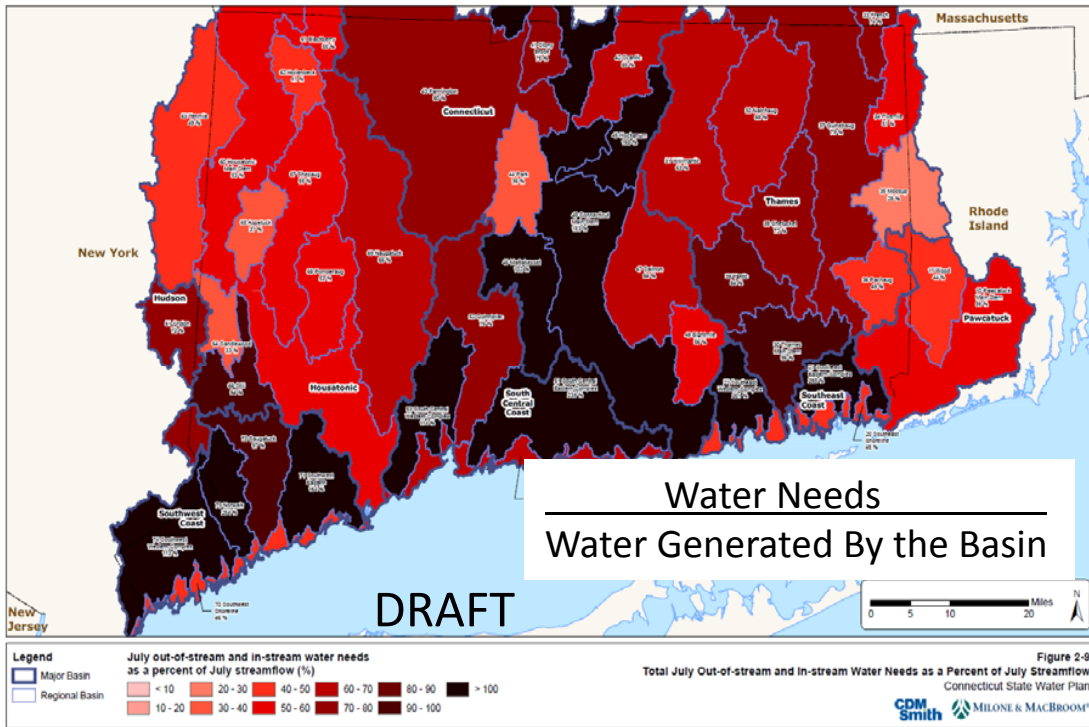


Background White Papers

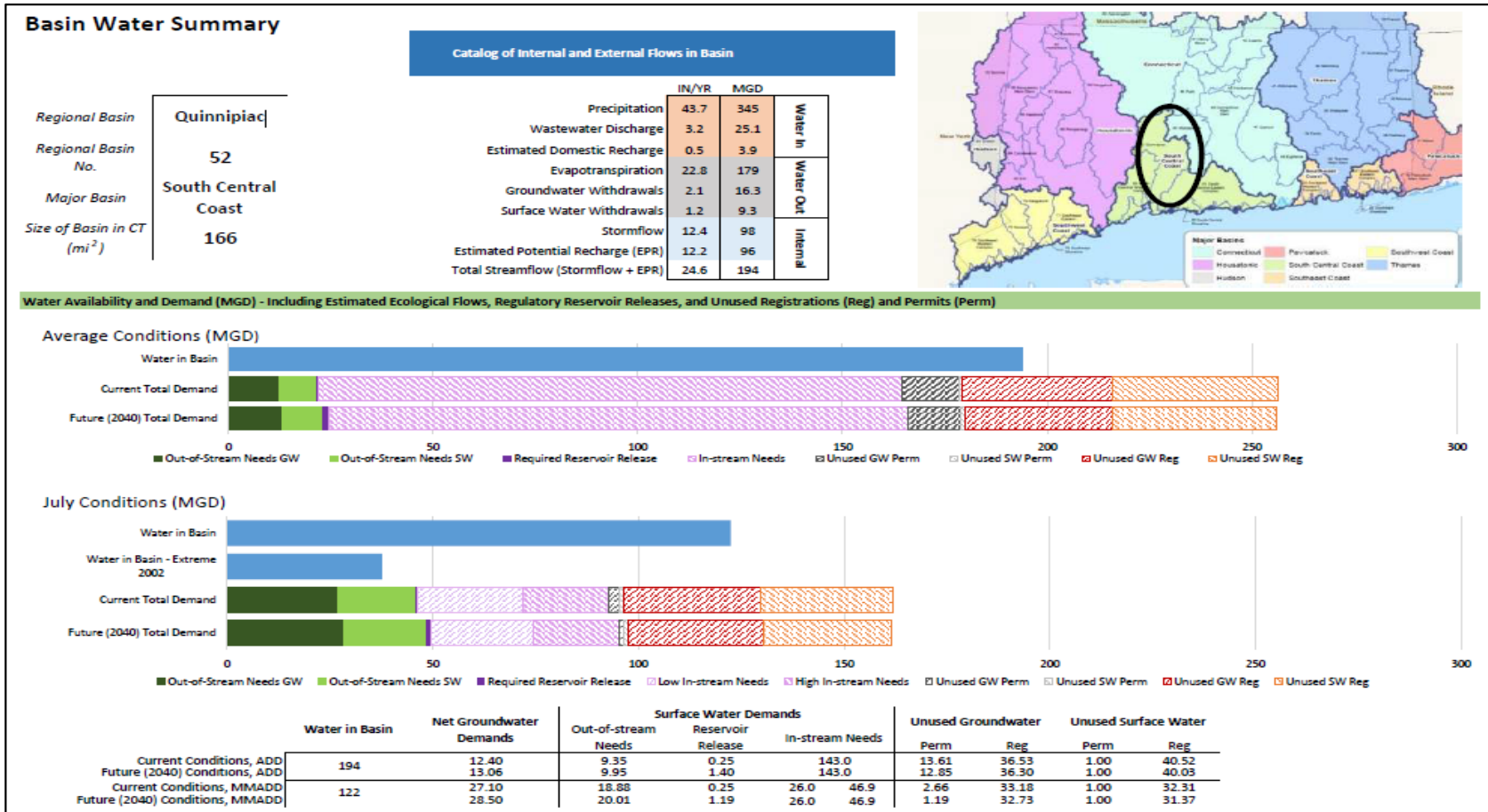
- Current Water Management Structure
 - Land Conservation and Economic Development
 - Future Water Management Options
 - Future Water Management Challenges
- All are available at:
<http://www.ct.gov/water>



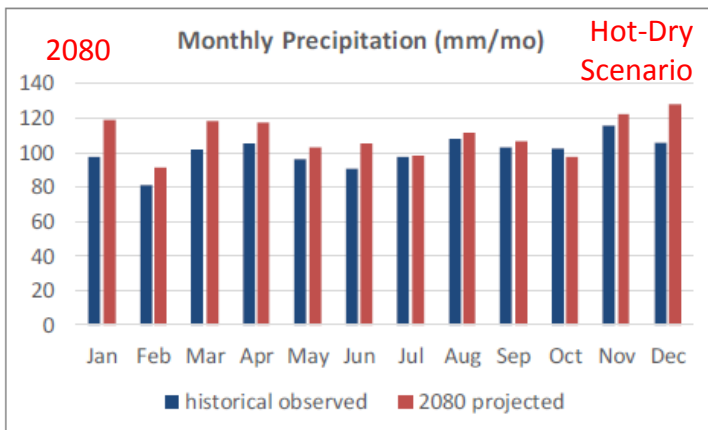
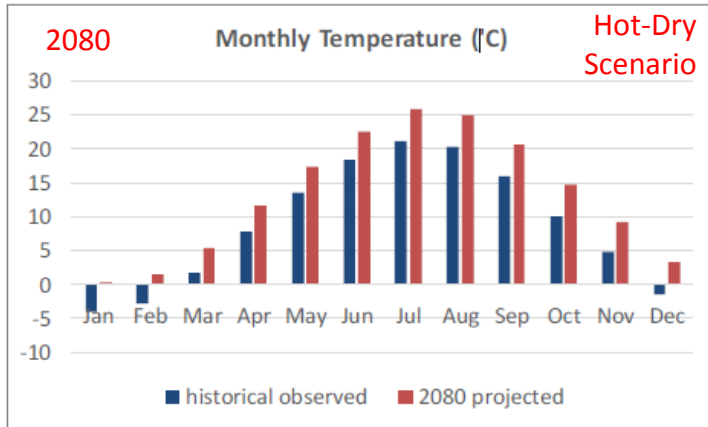
Technical Information



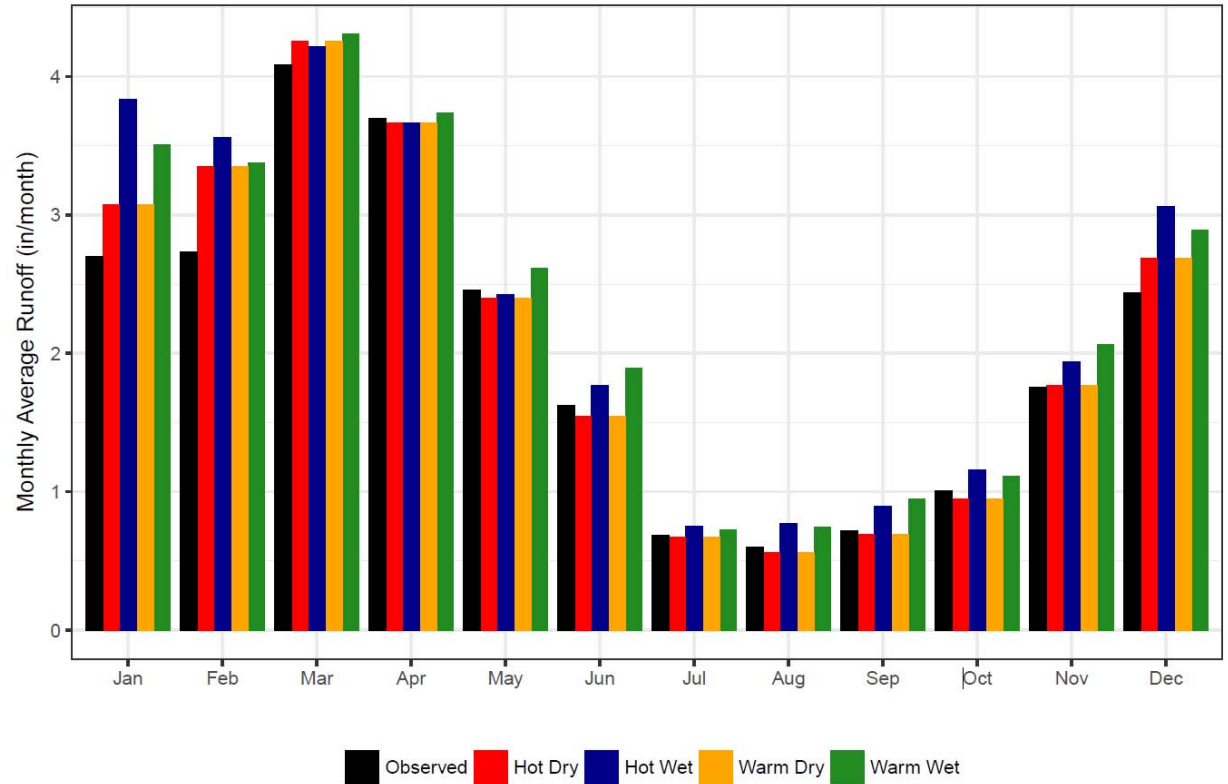
Basin Summary Sheets



Climate Change



Range of 2040 Runoff Changes:
Hockanum Basin as Example



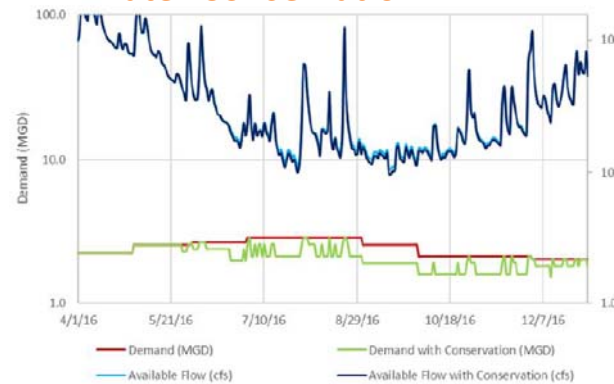
Climate Change Streamflow Projections for Hockanum Regional Basin

Future Modeling Opportunities

- To examine local issues
- To study impacts of policy decisions
- To assist with basin planning



Example only:
Water Conservation



Policy Recommendations

1. Land Use Practices and Protection Related to Water
2. Water Quality Impacts of Land Use
3. Water Conservation
4. Consistency with Existing State Plans
5. Monitoring for Plan Implementation
6. Agricultural Practices
7. Unused Registered Water Diversions
8. Implementation of Minimum Stream Flow Regulations
9. Outreach, Education and Public Engagement
10. Regionalization of Water Systems
11. Class B Water for Non-Potable Uses Only
12. Data Needs
13. Coordination with Water Utility Coordinating Committees (WUCCs)

Each of these contains many specific recommendations.

Top Consensus-Based Policy Priorities

- Water management should follow scientific examples.
- As possible, remove obsolete water registrations.
- Encourage innovation in agricultural water practices.
- Access to water data should be centralized in a single portal.
- Consider Class B Water for specific non-potable uses if environmentally prudent and cost-effective.
- The WPC should provide guidelines for review of Class B water for non-potable uses using the Triple Bottom Line philosophy (environmental, social, and economic metrics).
- Develop an education and outreach strategy focusing on water conservation topics.
- The WPC should provide ongoing review of other CT state plans in order to identify and address inconsistencies.
- Encourage regional water solutions where they are practical and beneficial.
- Reaffirm ongoing protection of land contributing to water supply. Expand to other watershed lands and land that feeds public aquifers or by private wells.
- Create a data-based water education program aimed at the general public and municipal officials.

Pathways Forward:

Next Steps for issues that cannot be fully resolved now

- Conservation
 - Regionalization/Interconnections
 - Registered Water Diversions
 - Aging Infrastructure
 - Economic Impacts
 - Funding for Implementation
 - Future Class B Water for Non-potable Uses
 - Statewide Drought Planning
 - Wastewater and Water Reuse
 - Water Use Accounting
 - Overcoming Future Challenges
 - Technology Issues
- Some of these issues have consensus aspects that were addressed in the policy recommendations.
 - Next Steps include:
 - Data Needs
 - Partnerships
 - Outreach

Implementing the Plan

- Priority Basins for Further Detailed Study
- Funding Opportunities
- Tracking Progress against Goals and Statute
- Roles of the WPC and Subcommittees going forward
- Managing Water Adaptively
 - Role in the legislative process: Early review to avoid conflicts
 - Suggest statutory modifications
 - Arbitration/Mediation using the Plan's principles and data
 - “Chief of Staff” for implementation

Next Steps

- Draft Report to be published on PURA webpage, with links to DEEP, OPM and DPH webpages
 - Executive Summary Document
 - 2-page Plan Summary
 - Full report and appendices
- WPC will continue outreach through Dec. 2017 (including a public comment period – mid July to Mid November 2017)
- Comments excepted under PURA Docket 17-07-01
- Final State Water Plan to Legislature by Dec. 31, 2017.



THANK YOU

Water Planning Council – *Jack Betkoski, Chair*

WPC Advisory Group – *Margaret Miner, Maureen Westbrook, Co-Chairs*
Citizens of Connecticut



7. Integrated Report Topics

Topic Schedule



WSA	Stat.	Reg.	Task	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			State Water Plan summary	X	X					
			Request and receive data from utilities	X	X					
✓			Maintenance and replacement of existing supply sources / asset management (aging infrastructure)	X	X					
✓		✓	Financial Considerations / declining revenue vs. increasing costs		X					
✓	✓		Coordination of planning (between systems, with towns, across ESA boundaries)		X					
✓		✓	Source Water Protection							
	✓	✓	Joint Use, Management, or Ownership of Facilities, Shared Resources							
✓			Lack of fire protection							
✓	✓		Water Conservation / Drought Planning / High volume users / Increasing peaking ratios							
✓	✓	✓	Satellite Management / Small System challenges and viability							
		✓	Minimum Design Standards							
✓	✓	✓	Future Sources / Raw Well Water Quality / Acquisition of land for new stratified drift wells							
✓	✓	✓	Future Interconnections and Impact (including WQ) / disjointed service areas / integration							
✓			Impacts of Climate Change							
✓			Impacts of Existing and Future Regulations							
	✓	✓	Potential Impacts on Other Use of Water Resources, including WQ, Flood Management, Recreation, Hydropower, and Aquatic Habitat Issues							
		✓	Regional Population and Service Ratio, Consumption by Demand Category, Safe Yield (Impacts of Streamflow Regulations), Excess Water							
	✓	✓	Compatibility with local, regional, and state plans							
✓			Other issues							

Integrated Report Syllabus



- Revised draft sent out with agenda
- ***Comments from Regional Water Authority (red text):***
 - ✓ Consolidate interconnection questions
 - ✓ Ask questions unrelated to data request
 - ✓ Ask open-ended questions rather than yes/no questions
 - ✓ Ask how the WUCC can be involved moving forward, esp. regarding communications and inter-agency agreements
 - ✓ Address questions to both large and small systems
- ***Comments from Wallingford Water Division (blue text):***
 - ✓ Clarify data request for Calendar year rather than fiscal
 - ✓ Numerous clarifications and suggested questions

Module #1



Revised Asset Management Questions

1. How does your system specifically budget for maintenance and replacement of sources and/or assets?
2. What planning period do you use for capital improvement planning (e.g., 5-year, 10-year, etc.)? How is your capital plan developed, approved (as applicable), and revised?
3. Are your maintenance and replacement planning processes the same, or are they tracked separately?
4. What percentage of capital improvements are planned, and what percentage of capital improvements are reactive (i.e., in response to a break or failure)?
5. How comprehensive is the formal asset management plan for your system? Describe the types of infrastructure covered in the plan (e.g. supply, treatment, distribution, pumping stations, storage tanks, etc.)

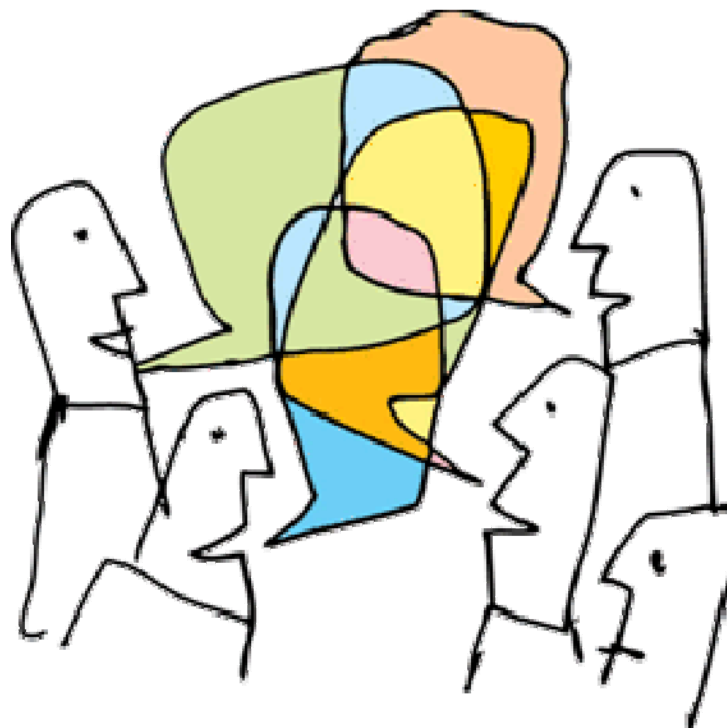
Module #1



Revised Asset Management Questions

6. What are the most critical elements of your water supply system relative to maintenance and replacement?
7. 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?
8. Generally speaking, how does your system fund maintenance and capital improvements? Do you generally fund all of the identified needs? If not, how do you decide what is improved and what is deferred?

Module #1 Discussion



Module #2



Financial Considerations / Declining Revenues vs. Increasing Costs

Sustainable finance for water supply systems should have two goals (OECD, 2009):

1. To cover investment in extending service to those currently without service, meet demands from growing populations, and replace and modernize old systems; and
2. To fund the cost of operating and maintaining existing networks and services, including major repairs and necessary upgrades

Module #2



Financial Considerations / Declining Revenues vs. Increasing Costs

Some important questions to ask when financial planning:

1. How do I demonstrate the need for additional revenue to meet the two goals?
2. For municipal utilities - Do my community leaders consider water to be a basic right, or a scarce economic product to be supplied at sustainable rates?
3. For municipal utilities - Is my system self-sufficient financially (reflects the true cost of providing water) or does it depend on municipal subsidies?

Module #2



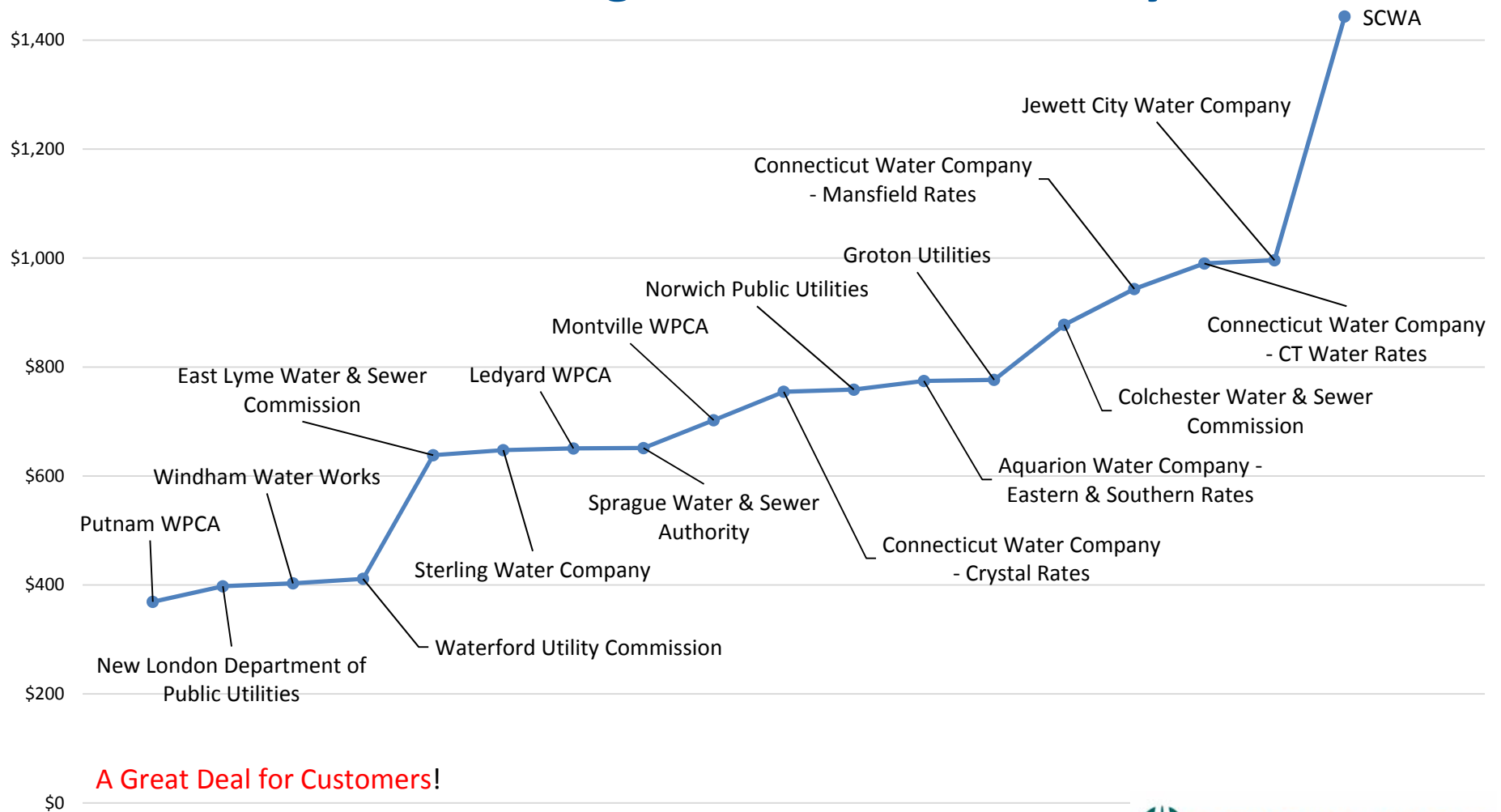
Financial Considerations / Declining Revenues vs. Increasing Costs

- The cost of operations (salaries, etc.), maintenance, and capital improvements increases each year
- Many systems have experienced declining revenues and margins due to:
 - Passive water conservation measures that reduce demands
 - The decline of industrial demands (industry leaving, or developing more efficient processes)
 - In some cases, costs may have increased faster than water rates (rates tend to be held)

Module #2



Cost of Water to Family of Four at 75 gpcd – ESA-Holding Eastern Utilities Only

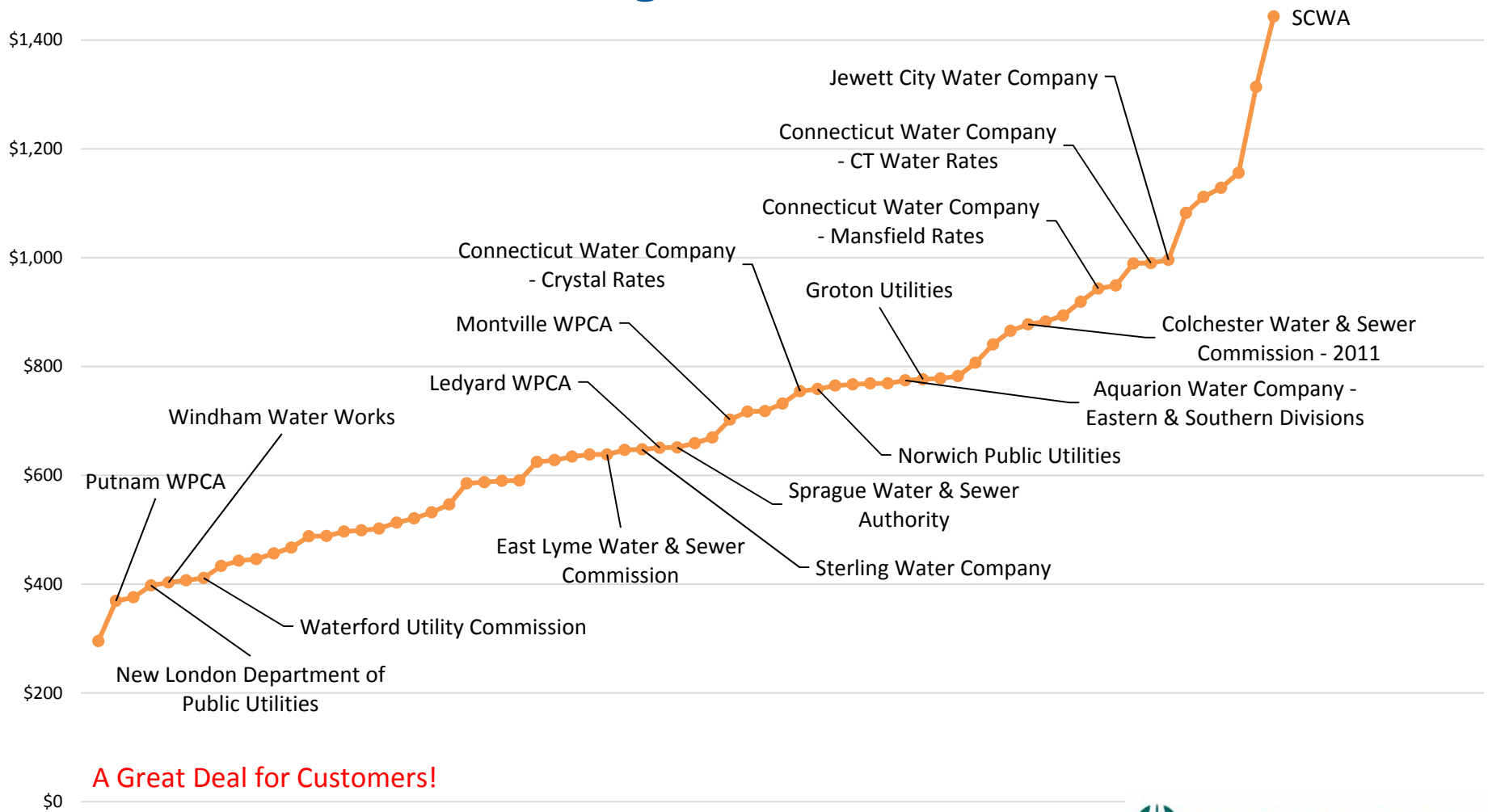


A Great Deal for Customers!

Module #2



Cost of Water to Family of Four at 75 gpcd – ESA-Holding Utilities Statewide



A Great Deal for Customers!

Module #2



Financial Considerations / Declining Revenues vs. Increasing Costs

- Many small residential systems, particularly condominiums and apartment complexes (Townesley, 2014), have reported problems with collections:
 - Difficult to shut water off for non-payment
 - Renters leave and bill cannot be transferred to owner
 - Causes difficulty in meeting regulatory requirements (e.g. water testing), which are often a significant portion of operating budget

Module #2



Financial Considerations / Declining Revenues vs. Increasing Costs

- For many TNC and NTNC systems, water is considered part of the cost of doing business – no separate revenue stream
- Many small community systems utilize flat rates, or rates are built in to another fee such as rent
- Townsley study (2014) found that:
 - Only 15% of small CWS respondents had applied for DWSRF funding; for those that had, nearly 70% indicated that they received a loan

Module #2



Financial Considerations / Declining Revenues vs. Increasing Costs

- Townsley study (2014) found that (Continued):
 - 81% of small CWS respondents indicated that they had sufficient revenues to meet daily financial needs; of those, nearly 50% said that they were unable to consistently fund escrow for future needs
 - For the 12,057 population served by respondents, 75% of the population would need a total capital infusion of \$1,000 per population served or less (55% at \$500 per capita or less)
 - Recommended identifying systems at risk to prioritize for heightened oversight and assistance (Capacity Assessment Tool)

Module #2



Revised Financial Considerations Questions

1. Describe the extent of metering in your system (production metering, customer metering, etc.). How often do you read your meters? What type (technology) of meter do you utilize (e.g. Advanced Metering Infrastructure [AMI] or Automatic Meter Reading [AMR], etc.)?
2. What metering improvements are you considering or planning?
3. Is your system financially self-sufficient, or does it rely on outside budgetary assistance or have its budget as part of a larger operations budget?
4. Is your rate structure inclining, declining, or flat? How many years do you typically wait between rate increases?

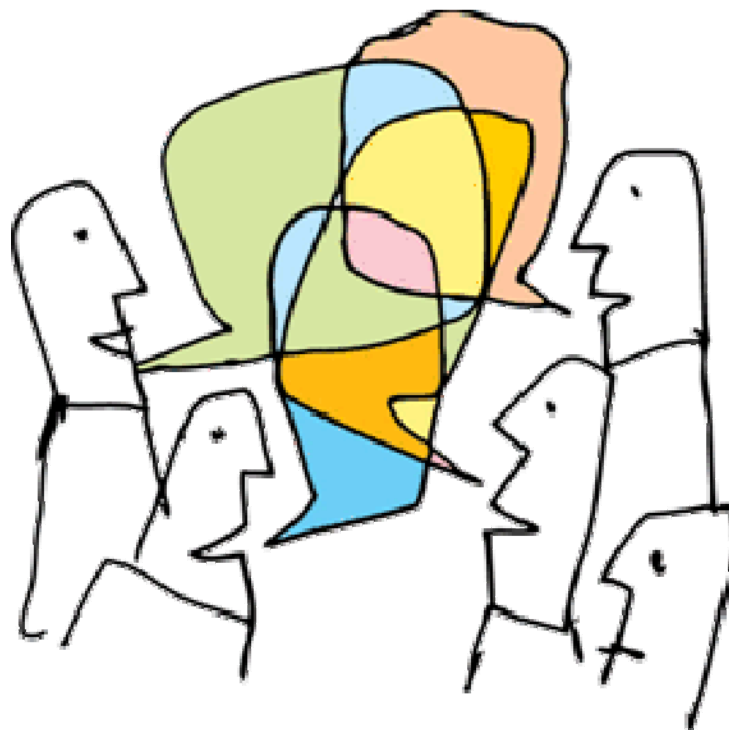
Module #2



Revised Financial Considerations Questions

5. Describe your system's general demand trends over the past five to ten years. Has your revenue generally increased or decreased in line with demand trends?
6. If revenue has been declining, how have you addressed it (or are planning to address it)? In which year did the decline in consumption begin to be noticeable? What impacts has the decline in revenue had on your ability to operate the system?
7. Have you received state or federal funding for past or ongoing projects? If so, please describe the type of funding received, the amount of funding, and the funding terms and conditions (both financial and administrative). Please share any lessons learned regarding applying for state or federal funding for water system projects.

Module #2 Discussion



Module #3



Coordination of Planning

- The WUCC planning process is directed at bridging the gap in coordinating planning:
 - between utilities; and
 - between utilities and entities at the local, regional, and state level
- Significant coordination efforts already exist between large utilities regarding mutual aid agreements and other forms of cooperation during emergencies (e.g., CTWARN)
- Following the 9/11/01 attack, water supply plans were protected from FOIA requests, making it more difficult for some local planners to access information

Module #3



Coordination of Planning

- FOIA restrictions may have caused misunderstanding about whether the plans could be researched or referenced for general planning purposes
- Local plans of conservation and development are updated on a 10-year cycle, while water supply plans are updated on a 6-9 year cycle
- While municipal utilities often have their water mains / hydrants / etc. in an online GIS database accessible to the public, private utilities typically do not make that information publically available in that manner

Module #3



Coordination of Planning – Discussion Questions

- How could communications and coordination be improved between utilities, small systems, and planners?
- How could the necessary information be obtained for planning purposes, while protecting security-critical information?

Module #3



Revised Coordination of Planning Questions

1. If you are a municipal utility, what mechanisms are in place for coordination with other municipal departments relative to water supply, such as during emergencies (drought, loss of electrical power, large storms, etc.)?
2. If you are not a municipal utility, describe your formal mechanism and frequency by which you communicate with the local governments for your service community(ies).
3. Describe your communications with surrounding water system representatives. To what extent do you coordinate (emergency planning, infrastructure planning, etc.)?

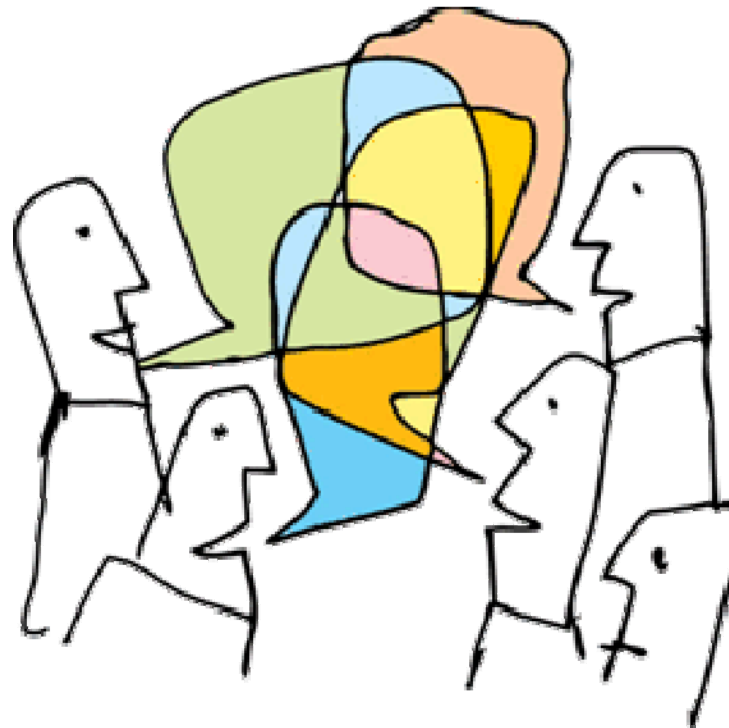
Module #3



Revised Coordination of Planning Questions

4. Do you have any specific suggestions as to how communication and coordination could be improved among water systems, municipal government, with State agencies, and within the region? How could the WUCC assist with communications between utilities and local governments (many of which are WUCC members)?
5. When you conduct reviews of local development plans within the watershed of your supply source or within your aquifer protection area, are your concerns given weight and addressed by regulatory agencies (i.e., how much clout does your utility have with local governments of municipalities in your source water area)?

Module #3 Discussion



Upcoming Modules



- Source Water Protection
- Joint Use, Management, or Ownership of Facilities; Shared Resources
- Fire Protection
- Water Conservation, Drought Planning, High Volume Users, and Increasing Peaking Ratios

10. Other Business

Potential August 9th Meeting Agenda



1. Welcome & Roll Call
2. Approval of July Meeting Minutes
3. Formal Correspondence
4. Public Comment Period
5. ESA Modifications Discussion/Update
6. Integrated Report Topics (Follow-up of Previous Modules, Source Water Protection, Shared Resources, Fire Protection, Water Conservation & Drought Planning)
7. Other Business