

State of Connecticut  
Water Planning Council



Annual Report to the General Assembly  
and Work Plan for 2013

January, 2013

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Department of Public  
Health



Department of Energy &  
Environmental Protection  
and  
Public Utility Regulatory  
Authority



Office of Policy and  
Management



January, 2013

Chairmen and Members of the Energy and Technology Committee  
Chairmen and Members of the Environment Committee  
Chairmen and Members of the Public Health Committee

Subject: Report on Water Planning Council Activities and Work Plan for 2013

Dear Chairmen and Ranking Members:

Attached please find the 2013 Annual Report of the Water Planning Council (WPC), pursuant to [Section 25-33o\(d\) of the General Statutes](#). The WPC is comprised of the [Department of Energy and Environmental Protection \(DEEP\)](#), [Department of Public Health \(DPH\)](#), [Office of Policy & Management \(OPM\)](#) and [Public Utilities Regulatory Authority \(PURA\)](#). This report describes the WPC's activities in 2012 and plans for 2013.

The WPC believes that prudent protection and allocation of the state's waters is essential to public health and for the state's economic, environmental and social well being. The state's waters and water systems face a number of long-developing stresses, but many people, including staff of WPC agencies, members of the WPC Advisory Group and its workgroups, are dedicated to solving these challenges. Broad participation and support will be vital to this effort.

In the last three years, we faced two severe tropical storms and a heavy early snow that also caused extensive damage. We had a year with a drought advisory, followed by a year of record high precipitation, then a year of record warmth with parts of the state having a precipitation shortfall of more than 12". Our system of water supply must handle such events and people's response to weather can amplify the effects. Some utilities struggled to meet record water demands in 2010, when hot and dry conditions coincided with the period of peak lawn watering. The following year, some water utilities struggled through cash flow deficits as outdoor water use fell short of expectations due to the summer's abundant rain.

Water resources and water utilities also face long-term stresses, in part due to a changing climate and potential effects on water supply reliability and demands. Some utilities also must overcome decades of deferred maintenance, because many water systems have never collected the full cost of the service they provide. Maintenance and replacement work cannot be deferred forever but, as water rates rise to recover the full cost of service, basic water needs must remain affordable.

At the same time, we are discovering the threat posed by emerging contaminants originating from pharmaceuticals and personal care products discharged in domestic wastewater. Unlike 48 other states, public water supplies here do not use surface waters that receive wastewater discharges. Our reliance on and protection of pristine waters is a crucial public health safeguard. The state's most pristine waters, however, are also important aquatic habitats and recreation resources, so managing the demands placed on them and preventing the degradation of current and future water sources are vital.

The supply of water for domestic, commercial and industrial uses is crucial for the health and well-being of the state. Our water supply cannot function without 1) water sources; 2) physical infrastructure to collect, store, treat and distribute water; 3) the operational and managerial capacity of utilities; 4) customers who conserve and pay the full cost of water and 5) effective government actions and policies. The WPC and its agencies will continue to concentrate on these factors.

All WPC reports and other documents related to WPC activities are available on the Public Utility Regulatory Authority's website [http://www.dpuc.state.ct.us/DPUCINFO.nsf/\\$FormWaterPlanningView?OpenForm](http://www.dpuc.state.ct.us/DPUCINFO.nsf/$FormWaterPlanningView?OpenForm). If you have any questions or concerns, please contact Bruce Wittchen at the Office of Policy and Management at 860-418-6323.

Sincerely,

Vice Chairman John W. Betkoski III (PURA)  
On behalf of the other members of the Water Planning Council,  
Bureau Chief Ellen Blaschinski (DPH)  
Acting Under Secretary W. David LeVasseur (OPM)  
Bureau Chief Betsey Wingfield (CT DEEP)



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## Executive Summary

### Background

The Water Planning Council (WPC) was established pursuant to [Public Act 01-177](#) “to address issues involving the water companies, water resources and state policies regarding the future of the state’s drinking water supply.”

The WPC is comprised of the commissioner, or designee, of the [Department of Public Health](#) (DPH); two designees from the [Department of Energy & Environmental Protection](#) (CT DEEP), one representing the [Public Utilities Regulatory Authority](#) (PURA) and one representing [CT DEEP’s Environmental Quality Branch](#); and the Secretary, or designee, of the [Office of Policy and Management](#) (OPM).

The WPC identified 26 Action Items during its initial meetings in 2001 and twelve of these Action Items have been completed. Many of the remaining Action Items are of a permanent, ongoing nature and the WPC continues to meet monthly. The list of Action Items describes the issue, notes the group that will act upon the issue as well as the year the action was initiated and a summary of action to date (see [Attachment A](#)). The items that have been completed or require no further action are shown on [Attachment B](#).

The Water Allocation Policy Planning Model (See [Attachment C](#)) developed by the Water Resource Allocation subcommittee in 2002 and the remaining Action Items continue to be the foundation for the WPC's 2011 and future work plans. The first steps outlined in Boxes A through C and 1.0 of the Water Allocation Policy Model are consistent with the mandates of [Public Act \(PA\) 03-141](#) and the WPC will continue to proceed accordingly (see Attachment D).

The model adopted in 2002, appropriately notes, “To succeed, water allocation plan will need high level support, adequate funding and identification of appropriate people to design and implement the Plan. The process must start

### Mission Statement

The Water Planning Council will identify issues and strategies which bridge the gap between the water supply planning process and water resources management in order that water can be appropriately allocated to balance competing needs while protecting the health, safety and welfare of the people of Connecticut and minimizing adverse economic and environmental effects.

with a clear water resource management policy established by the state legislature. The recommendations should include an administrative structure for water planning and allocation that will effectively carry out the various tasks proposed in this report.” The WPC reaffirms its support of the Model adopted in 2002, and the needs which are appropriately stated in this quote.

The WPC established the Water Planning Council Advisory Group (WPCAG), pursuant to [PA 07-4, Section 2\(c\) of June Special Session](#), for the purpose of assisting it in researching and analyzing water industry issues. The WPCAG has seventeen members representing a variety of water resources interests and meets monthly throughout the year.

The [members of the WPCAG](#) serve on a voluntary basis, for which the WPC is very appreciative. The WPCAG receives assignments from the WPC regarding certain water industry issues to research and report on. When necessary, the group forms specific workgroups to research and analyze certain issues. Upon completion of the research, a report, including recommendations, is compiled and submitted to the WPC. The WPC would like to take this opportunity to thank the WPCAG for its diligence in performing the tasks assigned to it by the WPC.

The WPCAG’s members represent the following points of view: environmental; large investor owned water company; small investor owned water company; municipal water utility; business and



industry; academic – streamflow and ecology; green industry; power generation; regional water authority; regional water planning; recreation; agriculture; fisheries; wastewater and the Office of Consumer Counsel. All but one of the categories currently has a representative. The members of the WPC and the WPCAG are listed on Attachment F.

Section 3 of Public Act 07-4 directs the Office of Policy and Management to conduct a study relative to the WPC to include a host of items regarding the activities of the WPC and measures to further promote water resource planning and water conservation goals. The next report is due February 1, 2013.

## Stream Flow Standards and Regulations

[Streamflow Standards and Regulations \(Sec. 26-141b-1 through 26-141b-8, inclusive, of the Regulations of Connecticut State Agencies\)](#), were promulgated by CT DEEP in 2011 and became effective December 12, 2011.

The key provisions of the regulations include:

- Rules governing the release of water from dams, including those at 60 major public water supply reservoirs. These rules will help ensure sufficient water – at all times of the year – to protect the health of overall stream ecology while providing for human uses.
- A public process to assign rivers to one of four classes, ranging from “natural” – characterized as having natural flows – to those where development and other factors have significantly altered the natural stream flow. Each class will require a different balancing of human and ecological needs.
- Several special provisions to help balance human and ecological needs, including exemptions and variances. These include specific drought “off ramps” that will allow water companies to release less water downstream during

critical drought conditions and to meet critical supply needs subject to water conservation provisions.

The first step in implementation of the regulations is to classify the streams as detailed in Sec. 26-141b-5 of the regulations. CT DEEP has begun the classification process, starting with the Thames, Southeast Coast and Pawcatuck Regional Basins. CT DEEP is preparing a draft classification map for those basins. After consultation with the Department of Public Health, the map of proposed classifications will then be public noticed for comment. Upon consideration of the comments received, consultation with appropriate state agencies, and revisions as necessary, the final classifications will be adopted. Adoption of final classifications for these basins will then establish timeframes for compliance with the regulations for owners or operators of dams in these basins.

CT DEEP is nearing finalization of the initial draft classifications and anticipates consultation with DPH in December, 2012 or January, 2013.

A link to more information on the regulations is available on the CT DEEP website at [www.ct.gov/deep/streamflow](http://www.ct.gov/deep/streamflow).

### Highest Quality Water Supply Sources

DPH, pursuant to Connecticut General Statute (CGS) [CGS 25-33q](#), is required to draft a list designating current and potential water supply sources requiring protection to ensure the provision of the highest quality water for human consumption now and into the future. Unlike 48 other states, Connecticut does not allow surface waters receiving wastewater discharges to be used for public water supply, reducing our potential exposure to a number of potential threats. This public health safeguard, however, requires us to be vigilant in protecting other current and potential water sources.

We are increasingly aware of emerging contaminants in the environment, including pharmaceuticals, personal care products, and other compounds in domestic wastewater discharges. Little is known about their effects and there is little testing for them, but many are biologically active at



extremely low concentrations and are not removed by conventional drinking water and wastewater treatment processes.

[DPH Drinking Water Section](#) (DWS) staff prepared the Highest Quality Source (HQS) list in accordance with the requirements of [PA 11-242](#) and considered the following materials in developing the list:

- Individual utility water supply plans as required under [CGS 25-32d](#) including:
  - the last DPH approved individual utility water supply plan for all water companies, and
  - any newly submitted individual utility water supply plans which have yet to receive DPH approval
- [Water Utility Coordinating Committee](#) (WUCC) coordinated plans as required under [CGS 25-33h](#) including:
  - [Southeastern](#) Connecticut, the only DPH approved regional coordinated plan to date, and
  - the [Housatonic](#), [Upper Connecticut River](#), and [South Central Connecticut](#)
- Connecticut’s “Long Range Plan for Management of Water Resources” as required under [CGS 22a-352](#)
- Current and historic Office of Policy and Management (OPM) [State Conservation & Development plans](#)
- “Protecting Connecticut’s Water-Supply Watersheds: A Guide for Local Officials”
- DPH sanitary surveys for each water company that prepares a water supply plan as required under [CGS 25-32d](#)

DPH shared the draft list with the WPC in November, 2011 and requested that WPC members submit any comments by January 15, 2012. DEEP provided comments and concerns for several specific sources cited in the original list; DPH reviewed and addressed the DEEP

concerns which can also be reviewed further at a future date as DPH intends to update the list at least annually. The HQS list was then finalized, approved by DPH Commissioner Mullen, and submitted to the Department of Administrative Services (DAS). DAS is now responsible, in a role previously held by the former Department of Public Works, for determining whether the list, in part or in its entirety, can be made public and posted on the DPH website. DAS determined the list can be made public following deletion of the published expected safe yield capacities of all individual current and proposed future public water supply sources.

### **Individual Water Supply Planning**

The drinking water industry, working with the DPH, passed [PA 09-220](#) to address concerns with the process for updates to long term water supply plans as well as to add a new section focusing on underground infrastructure. DPH work items due to PA 09-220 include developing a new schedule for water supply plan submission and development of a new technical guidance document to simplify water supply plan submissions. The schedules will coincide with periodic sanitary surveys performed by engineering staff of the DPH. DPH believes that investment in water industry infrastructure is underfunded and needs to be a point of emphasis in individual and regional plans as well as capital budgets.

### **Community Public Water Systems and Power Loss**

2011’s Tropical Storm Irene and October snow storm disrupted power to broad areas of the state, including many community public water systems (CPWS). In response to problems encountered in the aftermath of those storms, DPH has established three objectives to help limit the extent of such problems in the future:

- provide current and accurate large system status shared across WebEOC (emergency operations center),
- develop mechanisms to prioritize restoration of street power to CPWS, and
- assure that small community public water systems are well prepared to proactively address emergency situations.



The two storms affected the state in different ways, but the power outages resulting from each affected small satellite CPWS in similar ways. An average of 130 smaller water systems lost system pressure due to power outages after each storm and required boil water advisories. That was approximately one-fourth of the 500 systems that serve fewer than 1,000 people. Many small CPWS were ill prepared, lacked planning, and lacked adequate direct assistance to deal with an extended loss of power.

The State's 96 large CPWS, on the other hand, had the capacity to supply water and sustain system pressures because of their emergency power generation capacity. This capacity included emergency power generators not only in place for sources of supply and treatment systems, but also in place for pump stations in remote areas of their system. Nevertheless, some stations and surface water treatment plants remained on generators for more than a week and some systems were informed that they are not considered a priority for power restoration.

All community public water systems should have the capacity to maintain water service through an extended power disruption and avoid burdening their customers with boil water advisory. Even small CPWS should have an emergency plan and have back-up power capacity, avoiding potential negative impacts to water quality, lengthy boil water advisories and unnecessary increased risk to public health. Currently there is no requirement for small systems to have such a plan or emergency power generation capability.

Even large CPWS experienced some difficulty gaining the recognition of local and state emergency management staff that they should be prioritized for power restoration. Adding a water system status component to the state's WebEOC can help avoid such problems in the future.

Based on the experience of 2011, DPH proposes to:

- require that all CPWS have emergency power capacity
- develop and provide for subsidized loans to assist small CPWS in purchasing generators
- require that all CPWS develop an emergency plan
- provide workshops to assist small CPWS in developing emergency plan
- modify WebEOC to include the status of large CPWS, similar to that of hospitals
- work with large CPWS to develop appropriate WebEOC templates
- work with DEMAS and the water industry to promote water systems as a priority for the restoration of power

DPH has drafted emergency regulations to require emergency power capacity and emergency plans to be developed in 2012. DPH received 50 applications in December, 2011 for loans to assist small systems in acquiring generators. DPH has also initiated work on WebEOC template design and plans to move forward as quickly as possible in 2012 to incorporate large CPWS into WebEOC.

### **Funding of the Streamgage Network**

In the summer of 2010, the USGS announced that, due to state funding cuts, data at the following stream gage and water-quality sites would be discontinued and collection at all groundwater-level sites would be reduced.

Pequabuck R. at Forestville	stream gage
Connecticut R. at Hartford	water quality
Connecticut R. at East Haddam	water quality
Connecticut R. at Old Lyme	tide gage
Quinnipiac R. near Meriden	water quality
ground water level sites	reduced to 10x/yr

The three water quality monitoring sites and the tide gage each had a 34-year or longer record of monitoring and the Pequabuck River stream gage had a 68-year record. Monitoring sites with uninterrupted long-term records are invaluable for water resources management and planning.

Level funding was provided for the 2011-2012 fiscal year and, initially, for 2012-2013. However,



HB 7001, passed in special session on 12/26/2012, reduced CT DEEP's funding by \$28,531 across three USGS line items. The network must be reduced in response, but specific details are yet to be determined. State budgeting will remain a challenge for the foreseeable future.

### **Water Utility Coordinating Committees**

DPH seeks to ensure statewide consistency in the Water Utility Coordinating Committee (WUCC) process and has created a WUCC Chairs Advisory Committee to help improve the WUCC and water supply planning processes. WUCCs can have a central role in identifying regional water supply needs and prioritizing regional and statewide drinking water supply projects. Doing so can assist the WPC in advancing the Policy Planning Model and the WUCC initiatives are consistent with WPC recommendations.

A prominent ongoing effort is the potential consolidation of two WUCCs. The Upper CT River and the South Central CT WUCCs have proposed a merger and held a joint meeting in Middletown in 10/2010. The WUCCs also discussed the possibility of adding neighboring municipalities and expressed their concern over the lack of DPH approval of current WUCC plans. The joint membership asked DPH to convene the WUCC Chairs Advisory Committee to investigate broader consolidation issue.

The WUCC Chairs Advisory Committee met in 11/2010 and agreed that a statewide review of WUCC management areas is warranted because of changing demographics, water company consolidations and new statewide data DPH compiled during stream flow regulation development.

DPH provided statewide data and maps to the Committee for discussion at a second meeting, held in 8/2011. Members said the WUCC process merits salvaging, albeit with major changes and more extensive municipal input into technical discussions and the decision

making process. Three points of general agreement were:

- Exclusive service areas (ESAs) approved by WUCCs can have significant financial value, but many water companies do not invest in systems as expected when granted an ESA;
- Communications between water companies and the municipalities they serve must improve and there should be more municipal involvement in the WUCC process; and
- Prior to DPH awarding an ESA, the water company should demonstrate it has an adequate plan for serving the entire area claimed as an ESA.

WUCC chairs also concurred regard DPH's draft statewide consolidation maps. They asked if the current Housatonic, Upper CT River and South Central WUCC plans would be approved prior to consolidation, but DPH believes it is not appropriate to approve those plans because supply data is inaccurate and the plans do not identify solutions to current problems. Consequently, it would be counterproductive to approve the plans and recommended ESAs at this point.

WUCC Chairs Committee members agree that DPH lacks the resources, including staff and funding, necessary to develop up-to-date plans for each WUCC. The committee recommended that DPH continue to identify possible WUCC process improvements and to evaluate individual supplies. DPH continues to do so and has made significant progress in the review of utilities in the Upper CT River and Southeast WUCCs.

When water supply adequacy evaluations have been completed statewide and coordinated plans are updated and approved, it would be prudent to compile a single plan establishing approved ESA providers statewide. Such a statewide plan, done correctly, could be overseen by an appointed council and updated on a periodic basis and have an implementation component.

### **Drought & Model Water Use Restriction**

The WPC completed and adopted the State of Connecticut [Model Water Use Restriction](#)



[Ordinance](#) (Model Ordinance) in 2008. The Model Ordinance was provided to all municipalities and is available on the state's Water Status website (<http://www.ct.gov/waterstatus/site/default.asp>).

Communities wishing to establish enforceable limitations on the use of water during emergencies and temporary periods of high water demand can use the Model Ordinance as a starting point. As requested by the WPC, the WPCAG formed a workgroup in 2009 to review the state [Drought Plan](#) and to evaluate and refine the Model Water Use Ordinance. The workgroup identified a number of deficiencies in the plan that limit coordination and communication during droughts events and the group's initial report was submitted to and approved by the WPCAG and forwarded to the WPC.

The workgroup will continue its work in 2013, identifying possible changes to the plan and model water use ordinance and recommending how best to promote adoption of the ordinance in local communities and provide greater consistency regarding when water use restrictions are imposed and improve the communication and enforcement of such restrictions.

## Infrastructure

[CGS 16-262w](#) was enacted in 2007. This legislation is an important step forward in highlighting the issue of aging infrastructure and providing a mechanism for private water companies to more proactively address their infrastructure needs. The legislation required the DPUC (now PURA) to initiate a generic docket ([Docket No. 07-09-09](#)) to determine the contents of a utility's individual infrastructure assessment report (IAR), annual reconciliation reports, and the criteria for determining priority of eligible projects. A final decision in this docket was issued on April 30, 2008 and is available on PURA's website <http://www.ct.gov/pura>. The decision introduced a program entitled, "Water Infrastructure Conservation Adjustment"

(WICA) and explains in detail, the necessary criteria for companies to meet that apply for use of the WICA program. In short, an approved WICA project allows a company to recover costs expended for infrastructure improvements by placing a surcharge on customer's bills. To date, four private water companies in Connecticut, Aquarion Water Company (AWC) and Connecticut Water Company (CWC), United Water Connecticut (UWC) and The Torrington Water Company (TWC), have initiated their use of the WICA program by submitting their respective infrastructure assessment reports.

To date, AWC and CWC have submitted semi-annual filing reports to substantiate the WICA-eligible projects that have been completed, and to calculate the surcharges needed to recover costs associated with the completed projects. Under the program, AWC has replaced 54,213 feet of water main at a cost of \$13,428,349 and CWC has replaced 57,763 feet of water main at a cost of \$9,917,978. UWC and TWC have filed and received approval for their IAR's but have yet to file for recovery of projects under the WICA program.

## UConn Water Management

To address the environmental concerns regarding the Fenton River, the University of Connecticut (UConn) and DEP, DPH, DPUC and OPM, acting as the WPC entered into a Memorandum of Agreement (MOA) on November 6, 2006. Although not considered a water company and, therefore, not required to do so, UConn has regularly submitted water supply plans for its water supply systems for DPH review.

UConn made commitments in the MOA regarding the operation and management of the university's drinking water systems and its use of the Fenton River and Willimantic River Well Fields. The WPC accepted the strategic plan at its June 4, 2007 meeting.

UConn has made a number of operational changes and system improvements to implement conservation on campus and incorporate water conservation into future facility planning. Conservation measures include installing more



efficient fixtures in campus housing and academic buildings, encouraging student involvement in conservation efforts, metering off campus customers, implementing leak detection programs and making necessary repairs, as well as managing demands at the cogeneration facility.

At this time at the end of 2012, a new reclaimed water facility nears completion at UConn. This facility will lower the demand on existing supply sources by as much as 1 million gallons per day by using treated reclaimed water for significant users such as the cogeneration facility.

Recent efforts by UConn have included the evaluation of new groundwater supplies and the feasibility of interconnections with other public and private water utilities in the region to assist UConn in meeting future anticipated demands. UConn has prepared an Environmental Impact Evaluation (EIE) under the Connecticut Environmental Policy Act to evaluate potential sources of additional water supply to meet University and Town of Mansfield potable water demands through 2060.

The four major options evaluated in the EIE include (1) a “no-build” or do-nothing scenario; (2) relocation of Fenton Well A; (3) interconnections with another existing water supply system, including Windham Water Works; CT Water Company or the Metropolitan District Commission; and (4) developing new ground water supplies along the Willimantic River and in the vicinity of Mansfield Hollow Lake. The EIE was released in November, 2012, and is under review by the state agencies. It is publically available on the CT CEQ Environmental Monitor or at [www.envpolicy.uconn.edu/eie.html](http://www.envpolicy.uconn.edu/eie.html).

DPH staff conducted full in-depth supply adequacy reviews of UConn, Willimantic Water Works, Tolland Water Department, Metropolitan District Commission (MDC), and the Connecticut Water Company-Northern Region to assist UConn in assessing its

interconnection options. UConn continues to work towards developing a comprehensive Water Supply Strategy and to address the Memorandum of Agreement.

## **Drinking Water Quality Management Plan**

In January 2008, pursuant to Special Act 06-6, DPH, working with a broad based group, provided \$200,000 to produce a [Drinking Water Quality Management Plan](#) (DWQMP) for the Groton Utilities (GU) public drinking water supply reservoir watershed. Working with eight towns and others in the southeast area, a grass roots community based plan was finalized in 2009 to address drinking water quality and specifically conservation and development of the GU watershed. Staff from DPH played a leadership role in the process by working with GU, municipal leaders and others. DPH, within existing resources continues to promote this planning mechanism in other parts of the state in order to recognize the importance of protecting drinking water quality of the states’ public drinking water watersheds. DPH is working to finalize its report to the legislature concerning this process. This plan also contains a model drinking water quality management plan that may be used for the state of Connecticut in the protection of drinking water quality.

In 2012, DPH continued internal research to determine the feasibility of implementing this type of plan statewide by individual drinking water watershed areas. Initial research has focused on convening commissions for each drinking water watershed and investigating funding sources for these commissions.

## **“Water Boot Camp” Course**

[CT Section AWWA](#) and Portland High School conducted an intensive week-long “Water Boot Camp” course for selected students from two high schools: The [Academy of Engineering & Green Technology](#) in Hartford and the [Connecticut River Academy](#) in East Hartford. Ten students participated in the course, held from 8/13/2012 through 8/17/2012 at the MDC Reservoir 6 Water



Treatment Plant in Bloomfield. Students were guided through water filter exercises, environmental management, treatment & pumping, distribution operations, safety, water quality monitoring, and source water protection. Funding for this event was provided by EPA Region 1 and CT DPH grants. Further, the Regional Water Authority held their own Water Boot Camp event for a second year in the greater New Haven area.



## Water Planning Council Advisory Group

The Water Planning Council Advisory Group (WPCAG) continued their work this year through the previously established workgroups. The WPCAG scheduled monthly meetings to discuss the progress of the workgroups and their recommendations in the following areas.

### Water Company Lands

The Water Company Lands workgroup was established to review and determine the adequacy of current statutory/regulatory provisions to protect public water supplies and maintain Class I and II lands. The group had concluded their work in 2011 by submitting a request to the WPC to have the DPH review and provide further information on two issues to which the DPH has since provide a response as follows:

- under CGS Section 25-32(d) and (e), the sale of Class II water company land to a municipality, state agency or another water company, is there a general requirement that the parcel of land being sold must contain Class III land?

*DPH replied that they interpret this section of the statute to clearly require the sale of any Class II land to a municipality, the state or another water company must include Class III land in the same parcel.*

- a request for DPH to provide the WPCAG with guidance on possible approaches and potential legal or policy changes (including tax policy) that the WPCAG could explore to improve DPH's ability to protect drinking-water watershed lands that are not owned by a water company; a goal that is sought by DPH.

*DPH provided a concept paper based on their research on ways to protect drinking water watershed lands not owned by a water company. Ideas include developing watershed management areas locally, similar to inland wetland protection and aquifer protection and noted that further developing concepts for future implementation is valuable.*

The workgroup is reconvening, with expanded membership, to further review those and determine the feasibility for implementation.

### Water Rates and Conservation

A group was formed to explore water rates and how to create incentives to promote conservation. They demonstrated how the current ratemaking structure, which ties revenues to demands and relies on historic demands to project demands in a rate case, can be a disincentive for water utilities to promote or achieve conservation.

The group recognized there is growing interest in water conservation as it pertains to traditional water resource issues, particularly with the adoption of streamflow regulations in 2012 that rely on conservation to mitigate impacts on streams and to reduce demands both during dry periods and on an ongoing basis. They further noted the importance of conservation as it relates to the water energy nexus as it is inextricably linked to the state's goals to reduce energy demands.

Given these growing expectations for conservation, it is essential that appropriate rate design policies be developed that provide appropriate price signals to encourage customers to conserve while at the same protecting the water utility revenues and viability.

The workgroup prepared and submitted a final report which was approved by the WPCAG and forwarded to the WPC. The report identified options and potential approaches that utilities may choose to pursue, fully recognizing that circumstances and needs can vary considerably among utilities and that would drive an individual organization's decisions regarding water conservation and rates.

At the March 6, 2012 meeting, the WPC approved the workgroup's report. Key concepts in the report that would support rates that promote conservation were reflected in legislation proposed by DEEP in the 2012 legislative session. The WPC went on record at the legislature in support of the proposed legislation. The legislation was not adopted in the 2012 session but the concepts were reflected in the draft of the Governor's Energy Strategy and it is



expected there will be further efforts to advance these issues in the 2013 legislative session.

### **Conservation Measures and Education**

The group focused on outdoor use, best management practices from the green industry, and ways to communicate information on plantings and outdoor water use to residents. There was significant progress by the agriculture and green industry team members to develop best management practices (BMPs) for the following:

- BMP for everyday water use by agriculture and nurseries/greenhouses
- BMP for water use in drought periods by agriculture and nurseries/greenhouses
- BMP for residential and commercial property owners for everyday water use in their landscapes
- BMP for residential and commercial property owners for efficient, conserving water use during drought periods.

These BMPs will be considered in the application of the streamflow regulations and it will be important to establish the relationship between these BMPs and generally accepted agricultural practices, as referenced in the regulations' exemption for agricultural operations.

### **Drought Plan and Model Water Use Ordinance**

The WPCAG formed a workgroup on the Drought Plan and Model Water Use Ordinance to explore possible changes to the model water use ordinance and recommend how best to promote adoption of the ordinance in local communities. It also considered possible changes to the drought plan that would provide greater consistency regarding when water use restrictions are imposed and improve the communication and enforcement of such restrictions.

The workgroup submitted their report which was approved by the WPCAG and forwarded to the WPC. A number of items were identified with the top priorities to (1) improve criteria for drought declarations to be more responsive to the most critical factors and to regional variations; (2) incorporate private wells into the state Drought Plan; (3) better define roles of state agencies, municipalities and water utilities in the Drought Plan and develop mechanisms to foster better coordination; and (4) better define roles of various agencies in the implementation and enforcement of water use restrictions. The group anticipated that the top four recommendations could be reasonably expected to be achieved quickly to be in place and prepared to respond to events in the near term with other measures identified for further consideration and implementation. The WPC requested the WPCAG, through the workgroup, to further develop measures to address the priority recommendations in 2013.

The WPCAG and the WPC followed closely the efforts to adopt the model water use ordinance in Southbury, with the efforts led by the James Belden and the Pomperaug River Watershed Coalition. The WPCAG provided background information and the WPCAG and WPC provided formal letters of support in the local public hearing process. They will continue to support the efforts and are prepared to work with other organizations that may seek assistance in getting a local ordinance adopted.

### **Freedom of Information (FOI) Exemptions**

As a result of recurring questions and recent FOI decisions regarding exemptions from Freedom of Information requirements for information in water supply planning documents, a group was formed to look at this issue. The group sought to better understand the existing requirements and determine whether changes are necessary. Some have argued that a legislative remedy is necessary while others suggest that problems may be resolved without changing the law.

The law provides that information in a water supply plan or other water-utility document or derived from information in such documents may be exempt from FOI requirements. Such information cannot



be made public without a review to determine what information should be withheld from the public on grounds of security. Which state agency makes the determination depends on whether the request for information is made to a state agency or if the request for information is made to a municipal, district or regional agency. It was clear to all that the current process is time consuming, burdensome and can lead to inconsistency.

While the group was successful in seeking input from state agency personnel and other stakeholders to determine the process, they were not able to agree on recommendations. Two interim reports were submitted to the Water Planning Council, divided between what are generally considered the points of view of the water industry and of environmental organizations, although these certainly are not the only points of view and there are diverse opinions even among those groups.

The lack of consensus within the WPCAG illustrates the significance and sensitivity of the FOI exemptions. The WPC has considered the two workgroup reports and has urged the workgroup to reconvene in 2013. The workgroup will do so, with additional members as necessary, to continue towards the WPC's goals of protecting vulnerable components of public water systems, making information available for effective water resources planning and reducing the burdens created by current FOI review procedures.



## Attachment A: Open Action Items, Status 2012

Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
I	<p>The WPC will evaluate and address the capacity of the state's existing authorities to develop and implement the recommended water allocation-planning model.</p> <p>Accordingly, the WPC shall review with appropriate stakeholder representation current water resource management programs and consider possible changes to the water planning and permitting functions, including adjustments to existing authorities, program functions or organization as may be deemed appropriate. [WPC Report 1/03 Page 7]</p>	CT DEEP/DPH	2003	<p>The agencies' staff meet to coordinate programs regulating public drinking water supplies and waste-water discharge systems. Legislation proposed in 2006 to amend the WUCC process failed and work continues to streamline the Water Supply Planning process. P.A. 09-220 allows water companies to submit water supply plan updates on either a six or nine year basis, depending upon their current compliance with water supply obligations, and those plans will address system infrastructure concerns.</p> <p><b>DPH recently worked to streamline the water supply plan review process to focus on priority items such as accurate Safe Yield, Available water and Margin of Safety. The streamlined reviews also clarify which DPH comments need to be addressed immediately and which can be addressed in the future.</b> DPH is also integrating water supply plan information into the sanitary survey process. Water supply plan submittals will coincide with sanitary surveys. Processes for certificate application and review have been enhanced to address ownership and capacity issues in a proactive manner. In accordance with CGS 25-33q, the Commissioner of DPH, in consultation with the WPC, is to prepare a list designating sources or potential sources of water that require protection so that the highest quality sources of water are available to provide water for human consumption. The commissioner shall update the list annually or more frequently as the commissioner deems necessary and OPM must consider this list when revising the 5-year State plan of C &amp; D. The list has been completed, <b>approved, reviewed by DAS for security purposes, and will be made public with the exception of individual source safe yield.</b> <b>DPH technical staff are conducting detailed supply adequacy reviews for CT's largest public water systems.</b> DPH also is no longer required to consult with CT DEEP and OPM when making a decision about the abandonment of a water supply well having a safe yield of less than 10 gpm and poor water quality.</p>



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
2	Recruit a select workgroup to more fully describe (in detail) the procedures that are necessary for implementation of a Water Allocation Policy Planning Model. [WPC Report 1/03 Page 7]	WPCAG	2005 Open	The WPCAG formed the Water Allocation Policy Planning Model (WAPPM) Implementation Workgroup that focused on development of a statewide Basin Screening process and submitted a report dated 9/16/05. In 2005, the CT Institute of Water Resources (CIWR) allocated funds for a proposal to develop a statewide basin screening process through its competitive grant process. In 2006, Spec. Act 06-9, AAC Water Basins, was enacted. The Act, which directs the CIWR to undertake certain studies intended to advance water allocation policy and planning modeling efforts in the state, received an appropriation in 2007 of \$200,000. At the September, 2008 WPC meeting, Sandy Prisloe of UCONN gave a presentation entitled, "Development of a Digital Geospatial Database to Support the Connecticut Water Allocation Policy Planning Model", prepared by the UCONN Center for Land use Education and Research (CLEAR). This set of data is a concept tool and is not meant to be used for analysis purposes at this point.
3	The WPC will assign a select workgroup of stakeholders previously involved in WPC subcommittees to identify methods and mechanisms to adequately fund the proposed statewide water allocation planning process. [WPC Report 1/03 Page 7]	WPCAG	2005 Open	Potential funding options are noted in the WAPPM report of 9/16/05. Thorough evaluation of funding alternatives was not discussed nor were any specific sources endorsed in the report. No further action on this item, save the appropriation granted for Action Item No. 2.



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
4	Each state agency represented on the WPC will report on the requirements necessary to create a comprehensive database that identifies all potential future sources of supply cited in Water Supply Plans, WUCC Plans and any other planning documents. [WPC Report 1/03 Page 8]	All Agencies	2005 Open	<b>CGS Section 25-33q requires the DPH Commissioner, in conjunction with the Water Planning Council (WPC), to prepare a list designating sources or potential sources of water that require protection so that the highest quality sources of water are available to provide water for human consumption. The list must be updated annually and CGS Section 16-27a now requires State Conservation &amp; Development plans take into consideration state water supply and resource policies established in CGS sections 22a-380 and 25-33c, and the HQS list. The initial list has been completed and approved for publication.</b>
5	CT DEEP will draft & present back to the Council a legislative proposal for the 2004 session that will implement the following Water Allocation subcommittee recommendations regarding registered diversions: retire unused registered diversions with no plans for future use, adopt standard methods for measuring flow from registered diversions, adopt a requirement for annual reporting of monthly cumulative withdrawal data, & require annual (or other frequency) fees for registered diversions. [WPC Report 1/03 Page 8]	CT DEEP	2004	Legislation proposed by CT DEEP in 2004 failed. Further action deferred while resources are focused on development of stream flow regulations. CT DEEP expects the stream flow regulation development process will shed more light on the registrations issues, changes, and directions. See comments on development of stream flow regulations in Item #11.
9	WPC will recruit a workgroup to investigate a potential mechanism and to conduct a land use inventory of land within water supply watersheds and aquifer protection areas. [WPC Report 1/03 Page 10]	WPC	2003/ 2006 Open	Land use Inventory Workgroup submitted a report including recommendations, dated 10/24/03, to WPC on 12/10/03. GIS Council established as a formal body in July 2005. In letter dated 1/27/06, the WPC sent the report & recommendations to the GIS Council. Further action deferred pending available resources.



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
12	WPC will recruit a working group (Feb 2003) to evaluate the cost and feasibility of maintaining a scientifically defensible stream gaging network. The workgroup will report on findings and recommendations to the WPC by January 2004. [WPC Report Page 11]	Stream gage Network Workgroup chaired by CT DEEP	2003 Open	<p>Report submitted to WPC on 10/27/03. Workgroup recommendations include further statistical analytical studies be conducted. CT DEEP is currently (2006) using federal grant monies of the Clean Water Act 604(b) grant program to work with the U.S. Geological Survey to update low flow statistics. WPC discussed funding an evaluation of the groundwater gage network to implement Workgroup recommendations at July meeting. Further discussion by the WPC on this proposal is needed.</p> <p>Significant cuts in funding for stream gages have been proposed in the past as the legislature struggled with budget deficits. Funding was later restored at previous levels as legislators were educated on the importance of maintaining our stream gage network. In 2010, the USGS announced that, due to funding cuts, it must discontinue data collection at some stream gage and water-quality sites and must reduce the frequency of monitoring at all groundwater-level sites.</p> <p>Monitoring sites with uninterrupted long-term records are invaluable for water resources management and planning, but maintaining funding of remaining monitoring sites will be a challenge as the legislature continues to struggle with budget deficits.</p>



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
13	WPC directs the Multiple Agency Drought Committee to proceed with work on the draft Drought Management Plan with WPC Subcommittees to finalize a Drought Management Plan with all deliberate speed. The Draft Drought Management Plan was released for public comment on January 6, 2003 with comments due on February 7, 2003. [WPC Report 1/03 Page 12]	OPM Interagency Drought Committee	2003 Open	<p>The Connecticut Drought Preparedness and Response Plan (drought plan), which was accepted by the WPC in August 2003, has been implemented and evaluated on several occasions during periods of prolonged dry conditions or localized water supply concerns.</p> <p>Governor Rell issued a Drought Advisory in October 2007 and the Advisory was lifted in January 2008, based on the recommendation of the Interagency Drought Workgroup. The Workgroup actively monitored conditions for several months thereafter until all drought indicator criteria returned to normal levels.</p> <p>In 2008, the WPC completed the State of Connecticut Model Water Use Restriction Ordinance. The Model Ordinance has been provided to all municipalities and is available on the state's Water Status website (<a href="http://www.ct.gov/waterstatus">www.ct.gov/waterstatus</a>).</p> <p>The Interagency Drought Workgroup began meeting in July of 2010 and, based on the workgroup's recommendation, Governor Rell issued a Drought Advisory in August. The group continued to meet regularly and advise the Governor until October, when the Drought Advisory was lifted.</p> <p><b>The Interagency Drought Workgroup monitored CT's excessively dry conditions for eight months beginning in early 2012, but a drought advisory was not required.</b></p>
15	PURA shall host an annual educational water symposium, incorporating rate cases and conservation issues, beginning in 2003. [WPC Report 1/03 Page 13]	PURA	2003 Open	<p>PURA participated in the 2009 NE NAWC conference "Meeting the Challenges for Sustainable Water Utilities in Connecticut's Regulatory Structure". No activity was scheduled in 2011 or 2012 because of funding limitations, but the WPC intends to <b>participate in a water event in May, 2013 to coincide with National Safe Drinking Water Week and activities being organized by the water industry.</b></p>



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
16	WPC shall establish a workgroup to specifically investigate and consider the development of a water conservation rebate program similar to the Energy Star Program. [WPC Report 1/03 Page 13]	PURA Water Conservation Workgroup	2003/2006 Open	<p>Water Conservation Workgroup submitted a report to the WPC on 10/27/03.</p> <p>The WPCAG's indoor and outdoor conservation workgroup continues to assess EPA's WaterSense program to determine its potential in Connecticut. The WPCAG's Water Conservation Rates &amp; Incentives workgroup recognizes that promoting water conservation is not supported by traditional ratemaking models. Accordingly, this workgroup is focusing on identifying options and potential approaches for developing rate design policies that would mutually provide appropriate price signals to encourage conservation by customers and protect utility revenues and viability. This group has also looked into the possibility of adapting certain conservation programs and incentives presently offered by the electric industry in Connecticut. Ongoing discussion and consideration of other areas with potential conservation consequences have included decoupling proposals and mechanisms for revenue adjustment. <b>The workgroup prepared and submitted a final report which was approved by the WPCAG and forwarded to the WPC. At the March 6, 2012 meeting, the WPC approved the report. Key concepts in the report that would support rates promoting conservation were reflected in legislation proposed by DEEP in the 2012 legislative session. The WPC went on record at the legislature in support of the proposed legislation. The legislation was not adopted in the 2012 session, but is expected there will be further efforts to advance these issues in the 2013 session.</b></p>



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
19	The WPC assigns the DPH to make available viability models, both existing and pending, during the Sanitary Survey process.	DPH	2006 Open	<p><b>DPH in 2012 has completed the integration of the Electronic Sanitary Survey (ESS) into the new version of SDWIS, which encompasses the minimum survey elements that are presented in the EPA Sanitary Survey Guidance Manual and incorporates the water supply planning information.</b></p> <p>Once fully implemented, the ESS will orient the DPH engineers to evaluate in a consistent manner the technical, managerial and to limited extent, the financial viability of the public water system and generates reports with recommended corrective action. In fact, the ESS is the compilation of protocols/models that serve to assess the systems' technical and managerial viability. The ESS tool, coupled with the EPA asset management worksheets and the EPA software known as CUPSS (i.e. Check Up Program for Small Systems), a model to assist systems' managers in identifying assets and methods to finance infrastructure improvements, will insure the availability of viability models for all aspects of the systems' long term capacity. In addition, DPH has finalized a standard operating procedure (SOP) that will establish consistency in determining the interim measures in response to an emergency, or an acute water quality violation as well as an SOP for the Sanitary Survey process.</p>



Action Number	Action Item	Agency/ Workgroup	Year Initiated	Summary of Action
26	<p>The WPC recognizes the considerable comments and interest focused on the Water Utility Committee (WUCC). The Council will have relevant existing legislation and regulations reviewed with public participation for the purpose of proposing constructive changes in both the WUCC and associated Certificate of Public Convenience and Necessity processes for potential legislation in 2004. [WPC Report 1/03 Page 17].</p>	DPH	2004/ 2005/ 2006 Open	<p><b>DPH continues its efforts to improve the WUCC process. The WUCC Chairs Advisory Committee recommends the system be maintained, but with significant changes, including more local input. The committee identified current problems, including 1) Exclusive service areas (ESAs) can have significant financial value and water companies have often been more willing to gain the value of holding an ESA than to make system investments expected of an ESA holder; 2) water companies need to improve communication with the municipalities served and there should be more municipal involvement in the WUCC process and; 3) water companies should demonstrate they have an adequate water supply or plan to serve the entire area claimed as an ESA prior to DPH awarding the ESA. The committee recommended DPH continue its efforts to improve the process, particularly regarding the adequacy of supplies and to ensure that service is provided in a cost-effective and timely manner when needed.</b></p> <p><b>DPH recognizes that timely and accurate data are required so the WUCC process can effectively address water supply needs. DPH is conducting detailed adequacy reviews of large systems and has made significant progress for utilities in the Upper CT River and Southeast WUCCs. It is critical that elected officials, health directors and water utilities work together, especially for larger water supply projects, because of the technical challenges and the magnitude of financial commitments required. That is why the WUCC process, as originally envisioned, seeks public engagement to develop solutions to water supply problems having regional implications. That is done through representation on the WUCC.</b></p> <p><b>DPH is continuing its statewide supply adequacy/MOS evaluations and is ensuring that Sale of Excess Water (SEW) permits have been obtained. Once all adequacy evaluations have been completed and WUCC coordinated plans have been updated and approved, CT will have a statewide system of approved ESA providers. At that time, it could be prudent to compile one statewide plan which, done correctly, could be updated periodically and implementation overseen by an appointed council.</b></p>

## Attachment B: Completed Action Items

Action Number	Action Item	Agency/ Workgroup	Years Initiated & Completed	Summary of Action
6	CT DEEP will draft a legislative proposal consistent with consensus of the subcommittee report that will implement recommendations regarding modifications to the CT DEEP's General Permit for Consumptive Diversions. [WPC Report 1/03 Page 8]	CT DEEP	2007 Action Item Complete	Legislation passed in 2003 to streamline GP process. In March 2007 DEP adopted 4 General Permits to streamline the general permit renewal process. The streamlining effort proved to be a great success. CT DEEP completed processing all applications in November 2007. Average processing time was reduced to approximately 50 days. The new general permits issued will expire in 10 years.
7	WPC supports the continuation of the Source Water Assessment Program (SWAP). To assure continued protection of the state's high quality drinking waters, the WPC will request continued funding from EPA SDWA for SWAP. [WPC Report 1/03 Page 9]	WPC	2003 Action Item Completed	No reply to letter sent to EPA in 2004.
8	WPC recommends CT DEEP move forward with the adoption of the Aquifer Protection Land Use Regulations. In addition, the WPC recommends CT DEEP proceed with adoption of revisions to the Level A Mapping regulations to incorporate more accurate modeling of well fields which will establish more accurately mapped boundaries in accordance with advice from technical experts. [WPC Report 1/03 Page 9]	CT DEEP	2004/2005 Action Item Completed	CT DEEP Aquifer Protection Regulations adopted 1/27/04. Level A Mapping Regulations amended in 2005.



Action Number	Action Item	Agency/ Workgroup	Years Initiated & Completed	Summary of Action
10	CT DEEP will convene a working group consisting of other state agencies, the scientific community, and affected stakeholders to develop a framework for establishing an interim approach for regulating minimum stream flows. The goal of the working group is to develop interim approaches to address instream flow issues and revision of the minimum stream flow regulations. [WPC Report 1/03 Page 11]	CT DEEP Streamflow Advisory Group & Stream Flow Policy Group	2003 Complete	<b>(DEEP 2012): CT DEEP has promulgated streamflow Standards and Regulations (RCSA Section 26141b-1 through 26-141b-8, inclusive), effective December 12, 2011. CT DEEP is beginning classification of streams in the Thames, Pawcatuck and Southeast Regional Basins in accordance with the regulations.</b>
11	CT DEEP will continue to work with a broad range of stakeholders to develop a long-term instream flow protocol consistent with the WPC's endorsed water allocation model and including an assessment of cost and feasibility of implementation. [WPC Report 1/03 Page 11}	CT DEEP	2004 Action Item Completed	<b>CT DEEP promulgated Streamflow Standards and Regulations, effective December 12, 2011 (R.C.S.A Sec 26-141b-1 through Sec 26-141b-8, inclusive</b>
14	PURA shall propose legislation requiring all new lawn irrigation systems to be installed with rain detectors.	PURA	2003 Action Item Completed	PA 03-175 required that automatic sprinkler systems installed by state agencies and businesses on or after October 1, 2003, to be equipped with rain detectors. Further legislation was proposed in 2007 and failed to pass. PA 09-32 added language requiring rain detectors on systems installed on residential property on or after July 1, 2010.



Action Number	Action Item	Agency/ Workgroup	Years Initiated & Completed	Summary of Action
17	PURA shall begin initiating the filing of Water Company annual reports and actual 5-year debt retirements electronically. The WPC further directs PURA to enhance enforcement of violators. [WPC Report 1/03 Page 13]	PURA	2003 Action Item Completed	The Annual Report forms for Class A and Class B and Class C water companies are available on the PURA website for electronic filing.
18	The WPC assigns PURA to study and revise the existing Enhanced Financial Viability Model (EFVM) or consider the development of an entirely new EFVM. [WPC Report Page 13]	PURA	2006 Action Item Completed	PURA has researched the usage of this Model as well as the development of a new Model and has concluded that viability of a company can be evaluated on a case by case basis using currently available resources.
20	The WPC shall create a workgroup to review the procedures for the purchasing and/or takeover of small water systems to eliminate any perception that an unfair price is being paid. Specifically, determination of what level of oversight PURA should be granted on a takeover or purchase that involves a regulated company and an unregulated company. [WPC Report 1/03 Page 14]	WPC Advisory Group	2005 Action Item Completed	The Advisory group researched this issue and determined the current statutory language provides protections & review for the purchase of small water systems. Existing methods of determining purchase price provide the necessary regulatory oversight.
21	The WPC will establish a work group to explore relaxation of ex parte communication restrictions. [WPC Report 1/03 Page 14]	PURA Chair Small Water Systems Workgroup	2003 Action Item Completed	Small Water Systems workgroup submitted a report to the WPC on 10/1/03. The workgroup concluded ex parte regulations do not need revision relative to using the FITB rate application process.



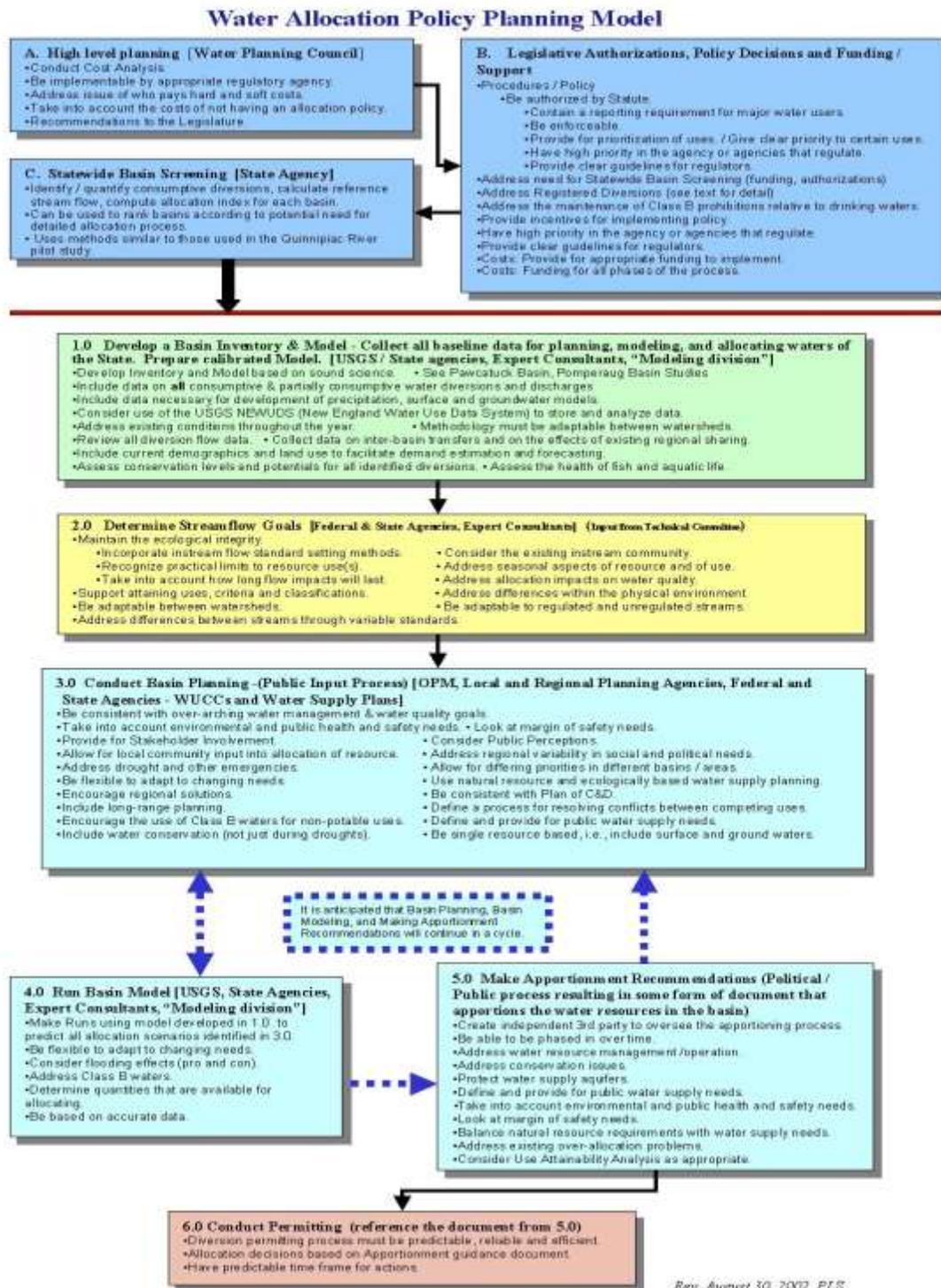
Action Number	Action Item	Agency/ Workgroup	Years Initiated & Completed	Summary of Action
22	The WPC assigns DPH to investigate creating a list of approved vendors and contractors. [WPC Report 1/03 Page 14]	DELETED	N/A	N/A
23	OPM, CT DEEP, DPH and PURA will recommend to the State's Congressional delegation and EPA the need for revision of the SRF loan fund application process and eligibility requirements to enable easier access by small water companies. [WPC Report 1/03 Page 15]	DPH	2009 Action Item Completed	<b>In 2011, the DPH Drinking Water Section introduced a Small System Emergency Power Generator Program within the DWSRF to provide subsidized low interest loans to small public water systems to finance the purchase and installation of back-up electrical power systems costing less than \$100,000. The loan application process, loan agreement, and generator system purchase and installation procurement requirements were all simplified to reduce the cost and complexity of acquiring these loans. The DWS received approximately 61 DWSRF applications from eligible public water systems during 2011 under this program. These projects are expected to be undertaken in 2012-2013. The program will be evaluated during 2013 to determine if elements can be incorporated into other low cost infrastructure improvement projects undertaken by small water companies.</b>



Action Number	Action Item	Agency/ Workgroup	Years Initiated & Completed	Summary of Action
24	The WPC assigns the DPH and PURA to jointly develop a protocol requiring supply side production master metering on sources and within distribution especially for companies seeking additional sources of supply and diversion permits. This shall be investigated and considered for the 2004 legislative session. [WPC Report 1/03 Page 15]	PURA/DPH	2009 Action Item Completed	This item was previously identified as completed, but the DPH Planning Unit, through its water supply plans reviews and the Water Supply Planning Technical Advisory Committee, is emphasizing the necessity and importance of metering all sources, interconnections, and customers. Discussions will also be initiated with PURA regarding ensuring full metering of PURA regulated private water companies through ties to future rate cases. Through rate case proceedings, the PURA continues to investigate the feasibility of metering any remaining non-metered customers of regulated private water companies. During system acquisition proceedings, the PURA and DPH continue to place emphasis on advancing meter conversion of non-metered customers of the acquired systems.
25	PURA shall investigate and consider for the 2004 legislative session, the development of a surcharge for infrastructure improvements, similar to the construction work in progress surcharge that is used for safe drinking water act mandated projects, for class B and C companies. [WPC Report 1/03 Page 15]	PURA/ WPC Advisory Group	2007 Action Item Completed	Public Act 07-139, AAC Water Company Infrastructure Projects was enacted on June 19, 2007. In September 2007, PURA opened Docket No. 07-09-09 to review and investigate the requirements for the implementation of a water infrastructure and conservation adjustment for private water companies. A final decision for this docket was issued on April 30, 2008. The decision introduces a program entitled, "Water Infrastructure Conservation Adjustment" (WICA) and explains, in detail, the necessary criteria for companies to meet in applying to PURA for use of the WICA program for an infrastructure project. An approved WICA project allows a company to recover costs expended for infrastructure improvement project by placing a surcharge on customer's bills. Many of the recommendations included in the WPCAG's Water Infrastructure Workgroup Report dated September 4, 2007, were incorporated in the criteria of the WICA Program outlined in the Decision in Docket No. 07-09-09.



# Attachment C: Water Allocation Policy Planning Model



## **Attachment D: Explanation of Water Allocation Policy Planning Model**

### **A. High Level Planning**

To succeed, a water allocation plan will need high level support, adequate funding and identification of appropriate people to design and implement the Plan. The process must start with a clear water resource management policy established by the State Legislature. The recommendations should include an administrative structure for water planning and allocation that will effectively carry out the various tasks proposed in this report.

Other Water Planning Council Subcommittees have discussed various options for administrative structures that will streamline the water resource planning and permitting processes. This Subcommittee has not evaluated the alternatives sufficiently to make recommendations on any one option. However, an administrative structure that unifies the various planning, permitting and other functions is believed critical to the ultimate success of any allocation and management scheme.

A rational, integrated, effective allocation process will require adequate funding. We recommend that the Water Planning Council (WPC) conduct a cost analysis of the various phases of the allocation process as well as the costs of not having an adequate allocation policy. Recommendations from the WPC about options available to achieve a stable source of funding would be highly desirable.

### **B. Legislative Authorizations, Policy Decisions and Funding/Support**

This section of the flow chart emphasizes the need to establish the necessary statutory framework for all elements of the allocation process model to be fully authorized and implementable.

The Subcommittee agreed it is essential to secure a stable funding source to support a water allocation process. Specifically, appropriate staffing levels must be maintained and not be

subject to the political process of approving a budget. An adequate budget is needed to; Develop an Inventory and Model of Basins in the state (Box 1.0), screen the 350 to 400 sub-basins in the State (Box C), fund all the steps that need to be taken to develop a usable stream flow method (Box 2.0), and to build and run a Basin Model based on sound science (Boxes 1.0 & 4.0).

### **C. Statewide Basin Screening**

The screening would serve as a statewide assessment of potential water allocation needs, and would rank basins according to potential need for the detailed investigations proposed in Box 1.0 entitled “Develop an Inventory (by Basin)”. The statewide screening would assess every Connecticut drainage basin’s potential need for water allocation based on estimates of existing water withdrawals and stream flows.

For each basin, the screening assessment would identify and quantify consumptive diversions within the basin, and would calculate an estimated reference stream flow for that basin. This screening can be done with existing CT DEEP Geographic Information System (GIS) data layers, existing CT DEEP program information and data, and established methods for estimating stream flows. The screening assessment would utilize the best available information, with particular consideration given to data on registered diversions reported in response to Public Act 02-102.

Connecticut’s hydrography consists of a total of 335 Subregional drainage basins. The screening assessment would examine each of these Subregional basins. Some main stem Subregional basins would need to be subdivided into sections. Also, some relatively large and complex Local drainage basins would be assessed individually. The total number of basins to be assessed is estimated to be between 350 and 400.

The ratio of the basin’s quantified diversions to the basin’s estimated reference stream flow could be used to develop an “allocation index”. Using this approach, basins with no existing diversions would have an index



of zero. Basins with withdrawals exceeding the calculated reference stream flow would have an index greater than 1.0. Assessed basins could then be ranked according to the magnitude of this index. The higher ranking basins would be given priority consideration for detailed investigations proposed in Box 1.0 entitled “Develop Basin Inventory and Model.”

A more detailed discussion of a basin screening methodology is presented in Appendix D [of the Water Allocation Subcommittee Report].

## **D. Develop Basin Inventory and Model**

The purpose of the inventory is to collect and assess water resource data that is needed to support the water allocation process. The Inventory would start with a delineation of the basin and its water resources. The Inventory would compile existing information and data, and would include the development of a mass balance type computer simulation. New information and data would be collected as necessary to fill in gaps. All the data could be stored in a centralized database format such the USGS New England Water Use Data System. The basin model is conceived to be a comprehensive computer simulation, or “mass balance”, of different water inputs and outputs in a given basin. Examples of inputs are precipitation and the transfer of water into a

basin from another basin. Examples of outputs are evaporation and withdrawals from reservoirs, streams, and groundwater.

The statewide screening assessment of basins (Box C) ranks basins according to potential need for water allocation. Basins will be selected for the Inventory based on their screening assessment rankings. Certain basins may also be selected for the Inventory based on administrative priorities such as applications for new diversion permits or applications for renewals of diversion permits.

The Water Allocation Subcommittee has roughly defined the scope of the inventory and model in the time available. Experts in hydrology, aquatic ecology, fisheries biology, water supply management, and related fields should be consulted to refine the scope of the Inventory. Modeling would be done either by a cooperative effort of Federal agencies, State agencies, local input, and expert modeling consultants, or by an adequately staffed agency “modeling division”. Once developed, calibrated and verified, basin models should be publicly owned and all coding/inputs subject to Freedom of Information Act requests.

The water model and inventory will be guided by the principle of sound science to ensure that the ultimate goal of Apportionment Recommendations is supported by information and data that is complete and accurate.



## **Attachment E: WPC and WPCAG Membership**

### **Water Planning Council Members**

John W. Betkoski III, Vice Chairman (PURA) – Council Chairman  
Ellen Blaschinski, Branch Chief (DPH)  
W. David LeVasseur, Acting Under Secretary (OPM)  
Betsey Wingfield, Bureau Chief (CT DEEP)

### **Water Planning Council Advisory Group Members**

Margaret Miner (Co-Chair): Rivers Alliance of Connecticut – Environmental  
Maureen Westbrook (Co-Chair): Connecticut Water Company – Large Investor Owned Water Utility  
James Belden: Pomperaug River Watershed Association – Recreation  
Gil Bligh: New Britain Water Department – Municipal Water Utility  
Eric Brown: CBIA – Business & Industry  
Karen Burnaska: The Endangered Lands Coalition/CFE – Environmental  
Virginia de Lima: USGS and University of Hartford – Academic: streamflow and ecology  
Bob Heffernan: Connecticut Nursery & Landscape Association – Green Industry  
John Hudak: South Central CT Regional Water Authority – Regional Water Authority  
Greg C. Leonard: Southeastern Conn. Water Authority – Regional Water Planning  
Vincent Ringrose: Chair, DEP Fisheries Advisory Council – Fisheries  
Denise Savageau: Town of Greenwich – Municipal  
Robert Silvestri: PSEG, Inc. – Power Generation  
Richard Sobolewski: Office of Consumer Counsel – Consumer Advocate  
Henry Talmage: Connecticut Farm Bureau – Agriculture  
Robert Young: Middletown Water & Sewer Dept. – Wastewater  
vacant - Small Investor Owned Water Utility

