

## Stream Flow

### Introduction

- ◆ Stream flow generally refers to the overall volume and velocity of water within a watercourse at a fixed point.
- ◆ Adequate flow is vital for an array of purposes, including public drinking supply, instream ecosystems, waste assimilation, industrial cooling, manufacturing, agriculture, irrigation, and recreation.
- ◆ Stream flow is part of a much broader water resource management system and cannot be examined in isolation.
- ◆ A multi-agency Water Planning Council was established by the legislature in 2001 to study selected issues regarding water resource management in the state. The council was made a permanent body in 2002.

### Water Planning Council

The legislature established the statewide Water Planning Council as a permanent body to examine key issues regarding overall water resource management. The council, served by agency staff and stakeholders, has made tremendous progress in meeting its mission, but has limitations. (Multiple recommendations made throughout the report address the council.)

- 1) **The Water Planning Council should develop a comprehensive, master strategic approach and plan for identifying, analyzing, synthesizing, and implementing the various findings and recommendations set forth in the council's annual report, subcommittee reports, workgroup reports, Advisory Group report, and staff-developed work plan.**
- 2) **The Water Planning Council should identify the administrative resources necessary to ensure the overall efficiency and effectiveness of its processes and procedures. Formal requests for any necessary staff or budget resources should be made through the Office of Policy and Management. The council should also include a summary of such resources in its annual reports to the legislature.**

## **Overall Water Resource Planning and Allocation**

Two key components to a cohesive water resource system include proper planning and a structured allocation system based on such planning. Water resource planning occurs in the state, but to a limited degree with no comprehensive statewide plan in place. State law has also developed a process for evaluating water resources from a quantity perspective, yet the state lacks a fully comprehensive system based on sound planning to allocate water resources among the multitude of users. A thorough examination by the Water Planning Council as to the proper governing structure for water resource management is also necessary.

- 3) C.G.S Sec. 22a-352 shall be amended to require the Water Planning Council develop and approve the long-range statewide water resource plan required by law. The council shall integrate individual Water Utility Coordinating Committee plans, the state's Plan of Conservation and Development, and any other planning documents currently available and deemed necessary to develop a statewide plan. Such plan shall include short- and long-range objectives and strategies for achieving those objectives. The initial plan shall be developed by July 1, 2005, and formally updated every five years thereafter. Each plan shall be approved by a unanimous vote of the council. Multi-stakeholder involvement in developing the statewide water resource plan shall be solicited as deemed appropriate by the council. The Water Planning Council shall include a summary of the water resource plan and implementation progress in its annual reports to the legislature.**
  
- 4) The Water Planning Council should continue to explore ways to fully integrate comprehensive water resource planning on a statewide basis, taking into account overall water supply and demand. This process should include establishing a more functional regional water resource planning structure than the Water Utility Coordinating Committee system currently in place. The council should further examine whether the current Water Utility Coordinating Committee structure is the most efficient and effective for public drinking water supply planning on a regional basis.**
  
- 5) The Departments of Environmental Protection and Public Health should work jointly to determine whether the statutorily-required individual water supply plans and Water Utility Coordinating Committees' integrated water plans include sufficient information to adequately plan for and implement the state's water diversion program within the Department of Environmental Protection, as well as for overall water resource management. The agencies shall convene an initial meeting by July 1, 2004, to begin discussing possible changes. Following the initial meeting, and any subsequent meetings, the agencies shall work cooperatively to implement any agreed upon changes. The Water Planning Council shall be informed of any changes agreed to by the agencies.**

- 6) **C.G.S. Sec. 25-33o shall be amended to require the Water Planning Council to develop, operationalize, and oversee implementation of a structured approach for water resource planning and allocation on a comprehensive statewide basis. Such a system shall authorize the Water Planning Council to identify stream flow goals based on proper planning and scientifically quantifiable data, prioritize/apportion water among users, and oversee an efficient water diversion permitting process to effectively allocate water resources.**
- 7) **The Water Planning Council shall establish a multi-stakeholder group by July 1, 2004, to begin developing short- and long-term strategies for implementing a comprehensive water allocation planning process. The council shall prioritize the steps necessary to implement a water allocation system, outline the resources required to fulfill those steps, and formulate/submit any requisite legislation and funding requests. The council shall describe its progress in its annual reports to the legislature.**
- 8) **The Water Planning Council should establish a multi-stakeholder workgroup by July 1, 2004, to study the issue of increased interagency coordination regarding water resource management and planning, as recommended in the council's January 2003 report to the General Assembly and the November 2003 report of the council's advisory group. At minimum, the workgroup shall, with advice from the council, address and make recommendations for establishing a revised management structure to oversee and coordinate water resource matters, including stream flow. The group should also identify any statutory language, regulatory changes, and resources necessary for proper implementation. The workgroup should make a report to the council by October 1, 2004. The Water Planning Council should detail the workgroup's findings, recommendations, and rationale in its January 2006 annual report to the legislature.**

## **Diversions**

The state has devised a process for “allocating” water resources whereby specific diversions from watercourses must first be reviewed by the Department of Environmental Protection before operation. The process is based on a first-come, first-served principle rather than a formal allocation process established through sound planning, data collection, and analysis. The state has also established a two-tiered diversion structure. Diversions existing prior to 1983 and “registered” with DEP are exempt from the requirements of the state’s water diversion act with limited state oversight. Diversions not registered at that time, and falling within specific statutory and regulatory conditions, must be reviewed by DEP and issued a state permit. Also, DEP does not have statutory or regulatory authority to retire unused or unwanted registered diversions.

- 9) **The Water Diversion and Policy Act shall be amended to require any person or entity maintaining a lawfully registered water diversion to periodically file with DEP diversion information the department deems necessary for proper planning/allocation purposes and, to the extent feasible, in a compatible electronic format determined by the department. The information shall at least include water withdrawal quantities by time of year and the purpose of the diversion.**
  
- 10) **The Water Diversion and Policy Act shall be amended to require DEP, in conjunction with other appropriate state agencies, to annually report on the status of all water diversions statewide. Such report shall be submitted to the legislative committees of cognizance and the Water Planning Council each January 1. DEP shall also develop key performance measures for its water diversion program and report its progress in meeting such measures.**
  
- 11) **The Water Diversion and Policy Act shall be amended to require registered diversion operators to periodically re-register their diversions with DEP through a process developed by the department. A registration fee shall also be required as part of the re-registration process. Failure to submit the fee shall result in forfeiture of the diversion's registered status, requiring a DEP-issued diversion permit. Fees collected through the re-registration process shall be deposited into a fund managed by the Water Planning Council and dedicated for water resource planning and program purposes. Registrations shall be considered renewed immediately upon receipt of payment.**
  
- 12) **The Water Diversion and Policy Act shall be amended to allow for unused or unwanted water diversion registrations to be retired through a process established by DEP.**

### **Minimum Stream Flow**

A major issue among competing interests for water resources is how much water is actually needed for "proper" stream flow to meet instream and out-of-stream demands. The state has minimum stream flow standards required by regulation, but they only apply to watercourses DEP stocks with fish. DEP considers the current minimum flow standards of limited value and use, and does not proactively enforce them.

There are no uniform stream flow standards in place for all watercourses statewide. The comprehensive planning and allocation system necessary to develop such standards currently does not exist in the state. The Water Planning Council has not been able to thoroughly complete its review of the minimum stream flow issue due to various factors, including the complexity of devising minimum flow standards.

- 13) **The Water Planning Council should adopt an interim stream flow methodology by July 1, 2005, that can be used for all months of the year for planning, environmental analyses, and permitting purposes.**
- 14) **DEP shall convene a representative workgroup, as recommended by the Water Planning Council, to examine revising minimum stream flow regulations (and establishing a long-range stream flow protocol consistent with the WPC stream flow subcommittee's recommendation and the council-endorsed water allocation planning model.) As part of this process, the Department of Public Health shall prepare a report by January 1, 2005, identifying the overall effects on margin of safety and safe yield levels of all impoundments used for public drinking water purposes statewide if the stream flow rates identified in the Apse methodology were applied as regulatory standards. DEP shall use the report, and any other information it deems appropriate, to devise any recommended changes to minimum stream flow regulations. (Such changes shall include minimum flow release cutback amounts based on various drought triggers.) DEP shall report its findings and recommendations to the Water Planning Council by January 1, 2006. The council shall use the information to propose any revised interim regulatory minimum stream flow standards it deems necessary and begin the process to having such regulations modified.**
- 15) **The Water Planning Council, state agencies, and various stakeholders shall continue to work towards developing long-term stream flow rates for all months of the year. Any long-term stream flow standards applied through such methodology shall be developed through scientifically-defensible means and thorough data collection for a better understanding of the relationship between stream flow, water resource demands, and ecological value. This work should be coordinated with development and implementation of the water resource allocation model devised by the council.**
- 16) **Any revised stream flow rates developed through the Water Planning Council, or any other state agency, and specified in state law or regulation as standards, shall be applicable to all watercourses throughout the state regardless of whether or not they are stocked with fish by the Department of Environmental Protection.**
- 17) **By July 1, 2004, the Water Planning Council shall convene a workgroup to plan an optimal strategic stream gauge network. The optimal system, devised by the workgroup by October 1, 2005, shall be compared with the current system to identify gaps and resource needs. The Water Planning Council shall then develop an appropriate plan to begin implementing the optimal stream gauging network, including any necessary legislative requests. The relevant components of the plan shall be included in the council's January 2006 annual report to the legislature.**

- 18) C.G.S Sec. 26-141 shall be amended to require diversion operators subject to minimum stream flow release regulations regularly submit release data to DEP showing whether the flow regulations are met on a consistent basis. The data requirements shall be determined by DEP.**
  
- 19) DEP shall develop and maintain an appropriate database for minimum stream flow release information and begin a proactive enforcement process to ensure full compliance with minimum stream flow release amounts based in part on information received from water purveyors.**