

## **IV. CHALLENGES TO ALLOCATION OF WATER RESOURCES THROUGH THE DIVERSION ACT**

At the present time, the Diversion Permitting program is the Department's primary tool for management of water quantity. However, the effectiveness of the diversion permitting program as an allocation system is limited. These limitations result in delay and frustration for permit applicants, and hinder the Department's ability to balance an individual applicant's needs with the competing demands for water.

### **A. Diversion Act Is Only A Piece Of Allocation Framework**

As discussed, significant changes to the Diversion Act can be made to improve the permitting process. However, those changes alone cannot address all of the state's current water allocation problems. The diversion permit applications are considered on a first-come, first-serve basis within the context of existing permitted and registered diversions. The Diversion Act does not contain regulatory authority for prioritizing water among competing users, or for reserving a particular amount for specific future needs, or the environment. All of these other issues must also be addressed within a regulatory allocation framework.

In addition, some of the problems with the diversion program are symptoms of larger problems concerning comprehensive water resource planning. The State's Water Supply Planning Process (CGS §25-32d) requires individual water utilities to plan for existing and future water supply needs for their customers. The Coordinated Water System Plan (CGS§25-33h) ensures coordination and cooperation between water companies with respect to service areas. In these processes the integrity and capabilities of existing water supply sources are evaluated, future water uses are projected, and potential sources of supply are identified, all without the benefit of any environmental assessment. The focus of these processes is the water supply system, not impacts on the resource or other competing water uses. These plans are developed without the benefit of a comprehensive allocation framework, and without data on how much water is available for allocation within a particular basin. It is not until the water is needed and a Diversion Permit application is submitted, generally long after the Water Supply Plans have been developed, that the data necessary for a detailed environmental assessment on the potential

source of supply are collected. At this point in the process, the water company has usually invested considerable capital into a particular site, and it is too late to realistically evaluate alternatives to the proposed supply source. This gap between the water supply planning process and permitting of new water supplies is an on-going source of frustration for both water companies and the Department.

Finally, the water supply planning process applies only to the larger public water suppliers. There is no comparable process for other users. A planning process to consider the future requirements of other consumptive water users is needed.

It is highly recommended that the General Assembly undertake changes to the present diversion program, and develop a water allocation method. Connecticut will then be able to make better and more timely decisions, and to resolve problems cause by registered diversions. This will alleviate the high level of frustration currently experienced by permit applicants and the Department's staff in the length of time it takes to process permits.

## **B. Insulation of Registrations from Regulations**

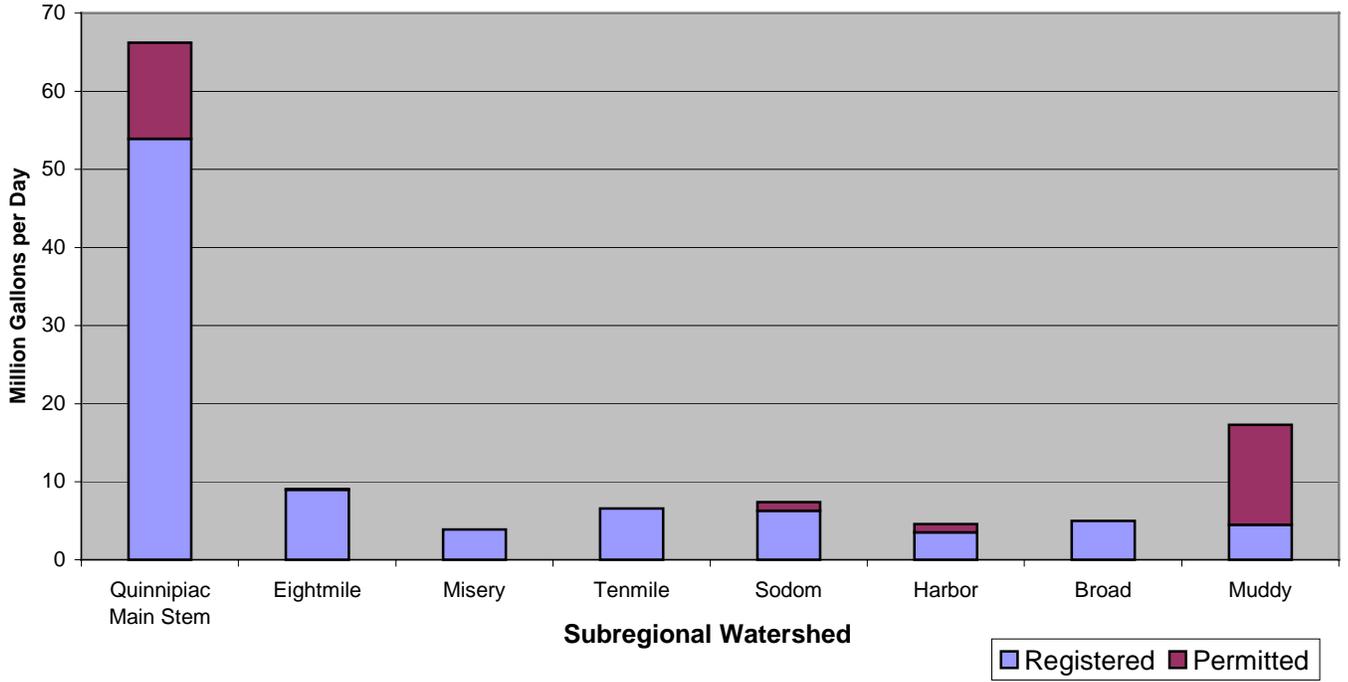
Under the Diversion Act, 1842 diversions were registered with the Department. Compared to **354** existing diversion permits, this means that over the vast majority of the water diverted in Connecticut is grandfathered and thus insulated from all regulation. Without the authority to place controls on the use and withdrawal of water taken pursuant to registered diversions, the State cannot implement a water allocation system. In addition, while the Department may be able to limit adverse impacts caused by permitted diversions, it is unable to do anything about the degradation of Connecticut's waters caused by registered diversions. There are currently many registered diversions that cause adverse environmental impacts, including impacts on aquatic life, waste assimilation, recreational activities, and other serious problems. The Department does not have the authority to prevent or stop a registered diverter from impacting or completely drying up a river, nor require registered diverters to avoid wasting water by metering, leak detection and repair, or other basic conservation measures. The Department also does not have the authorization to retire unused or defunct registrations, thus complicating the process of issuing new diversion permits.



*Bride Brook, East Lyme, CT, August, 1999. Historically, Bride Brook provided an important route for one of the largest migration runs in coastal streams of the alewife, a type of herring that are a significant forage fish for larger fish species and birds. However, registered ground water diversions from nearby public water supply wells contribute to dry stream conditions in the brook just downstream of Bride Lake, significantly decreasing the viability of this alewife breeding ground.*

A study of the Quinnipiac River watershed found that registered withdrawals account for the majority of the water diverted in the Quinnipiac watershed: 87% of the diversion sites and 77% of the diversion volume (Figure 2, next page) is authorized by diversion registrations rather than by diversion permits.

**Figure 2. Capacity of Diversions**  
Quinnipiac River Watershed



The water available for new diversions in a basin is limited by the amounts claimed by registered diversions. The Diversion Act allowed registrants to register the maximum withdrawal capacity of their diversion facility or system based on historic use records prior to July 1, 1982. Registrants are not required, however, to report on the amount of water that they actually use or plan to use. The Department thus may not have an accurate picture of how much water is available in a particular basin for allocation through the permitting process. In fact, the sum of the amounts of water that the registered diverters can legally take from a source is often more than the amount of water available in that source.

In short, through the permitting process, the Department is only nibbling at the edges of environmental impacts of water diversions. Without the authority to place controls on the use and withdrawal of water taken pursuant to registered diversions, the State cannot implement a comprehensive water allocation system.

### **C. Inadequate Diversion Program Staffing**

The diversion program has been hobbled for many years by inadequate funding for staff. Since 1986, the program has had no more than the equivalent of two full-time employees. This level of staffing severely limits the Department's ability to process applications, to provide much-needed pre-application assistance to regulated entities, and to engage in water planning. Unless staff resources are significantly augmented, permit applications will not be processed any quicker, the regulated community will continue to be frustrated with the program, and the goals of proper water management and long-term planning will not be met.

### **D. Permitting Conflicts With Federal Agencies**

In certain instances, the Department has worked closely with water companies to explore the potential to expand existing surface water reservoirs to meet future demands for potable water. This has been done to specifically avoid the development of new groundwater supplies, which would result in the diminution of surface water flows as a result of groundwater pumping. Optimization of existing surface water reservoirs may have other potential environmental

benefits including the isolation of water resource impacts to areas and resources where historically impacts have occurred as a result of the construction and operation of the original projects. Reservoir expansion projects may provide the ability for water companies to enhance downstream flow releases if that capacity is planned and built from the outset of the project. Such projects can also avoid the impacts of building new civil works and conveyance systems to service the new groundwater withdrawals, and can use existing infrastructure to distribute water to the service areas. While optimization in certain cases may also cause negative environmental impacts, only those projects where the overall impacts associated with optimization are judged to be positive are the subject of this discussion. Unfortunately, federal agencies whose permit authorities focus principally on direct wetland and watercourse impacts associated with the construction of a project do not have the authority to fully evaluate secondary impacts related to stream flow issues and the proliferation of water supply wells dispersed widely across Connecticut's landscape. Therefore, these federal agencies have far less regulatory concern with the effect of new groundwater withdrawals upon streamflow or related environmental impacts associated with new well construction or with the construction of new conveyance systems to service those wells. Federal agencies have effectively blocked reservoir expansions because of direct impacts to riparian wetlands and have largely ignored the broader environmental benefit derived from limiting the proliferation of new water supply wells.

Federal agencies are constrained by their specific permitting authorities and tend to look narrowly at the immediate impacts of a project rather than a more global perspective to view the entire spectrum of environmental benefits and impacts. Connecticut would benefit from an expedited system designed to address water supply conflicts with federal permitting agencies.

## **V. TOWARDS A METHOD OF ALLOCATING WATER**

A comprehensive water allocation system requires two things: (1) adequate scientific data to support a water allocation policy; and (2) adequate statutory authority to develop and implement such a system.