

STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

DRINKING WATER SECTION

WORKSHEET FOR DEMONSTRATION OF AVAILABLE WATER

Applicable Regulations:

Regulations of Connecticut State Agencies (RCSA) Section 25-32d-1a(4): "Available water" means the maximum amount of water a company can dependably supply, taking into account the following reductions applied to safe yield: any limitations imposed by hydraulics, treatment, well pump capabilities, reductions of well yield due to clogging that can be corrected with redevelopment, transmission mains, permit conditions, source construction limitations, approval limitations, or operational considerations; and the safe yield of active sources and water supplied according to contract, provided that the contract is not subject to cancellation or suspension and assures the availability of water throughout a period of drought and that the supply is reliable.

RCSA Section 25-32d-4(d): The reduction in safe yield imposed by any constraints such as hydraulic considerations, system losses, treatment limitations, or interference effects shall be considered in the calculation of available water for all active sources.

Background:

Water companies required to submit a water supply plan are required to provide an analysis of the relationship between available water and average daily demands per RCSA Section 25-32d-3(b)(7). This application will ensure a water company is accounting for all required limitations of the system that need to be deducted from a safe yield. The resulting available water quantity will be used to calculate a system's margin of safety for the five, twenty and fifty year planning periods. It is important that accurate and up to date safe yield data and accurate accounting of all system limitations are used to allow for proper planning of new sources to ensure a continuous pure and adequate supply to customers.

Instructions:

Provide the public water system (PWS) name, public water system identification number (PWSID), and primary town the water system is located. In the two far left columns, list the name and Water System Facility Identification (WSFID) for each active source of supply. The Water System Facility Identification (WSFID) numbers can be obtained from the water system's Water Quality Monitoring Schedule, which is available on the Drinking Water Section's website: <http://www.ct.gov/dph/publicdrinkingwater>. Sources of supply listed must include surface water sources, ground water sources and interconnections with other water companies. Please note, inactive sources of supply must not be included since available water calculations only account for active sources of supply that meet the definition of RCSA Section 25-32d-1a (a)(2). "Active source" means a department approved source of supply which meets state and federal water quality standards, with adequate department approved treatment facilities as needed, or for which compliance schedules are in place. An active source is one that is permanently connected to the system and may include, but need not be limited to, a seasonal or standby source of supply that may be used intermittently or on a partial year basis. Emergency interconnections must not be counted as a source of supply to be used for purposes of demonstrating available water.

A. Available water from sources of supply:

For each active source of supply, determine if a limiting factor exists that limits the safe yield and list the maximum volume of water that column "a" through "k". If the limiting factor in the column is not applicable to the source of supply listed then leave the field in the limiting factor column blank. In the far right column labeled "Available Water From Source", list the lowest value from columns "a" through "k", as this will be the maximum amount of water that can be delivered. Please list all values for maximum available water in gallons per day (GPD).

- a. List the safe yield listed for each active source of supply that was provided in the *Department of Public Health Drinking Water System Public Water System Application for Safe Yield*. For all ground water sources, a multiplier of seventy-five percent, equivalent to an eighteen hour pumping day, should be applied to the pumping test rate. Please note that safe yields are not applicable to sources of supply that are interconnections with other water companies; therefore this column should be left blank when the source of supply is an interconnection.
- b. If applicable, for each source of supply provide the maximum volume of water that can be supplied while accounting for any hydraulic limitations.
- c. If treatment is present, for each source of supply provide the maximum volume of water that can be supplied while accounting for any treatment limitations. If there are multiple treatment processes at a water treatment plant, then the treatment process with the lowest value must be used as the limiting factor.
- d. If the source of supply must be pumped for the water to reach the entry point to the distribution system, provide the maximum volume of water that the current pump(s) installed can supply. Do not account for any other limitation (i.e. permits) that may impact the volume of water the pump may be restricted to accommodate. This section should only account for the maximum design capacity of the pump(s) installed for each source of supply.

- e. If the source of supply is subject to clogging, provide the maximum volume of water that can be supplied from each active source of supply after redevelopment activities have been completed.
- f. For each source of supply, provide the maximum volume of water that can be delivered through the transmission mains from the source of supply to the point of entry to the distribution system. If the maximum volume of water is different due to segments of piping with different pipe sizes and flows, then use the lowest volume of the pipe segments associated with the source of supply since it is the limiting factor.
- g. For each source of supply that is subject to a permit, list the maximum capacity allowed by the permit in gallons per day. Permits may include but are not limited to: CT DEEP source registrations, CT DEEP source diversion permits, and CT DPH sale of excess water permits. If multiple permits exist for a single source of supply, use the lowest permitted value as this would be the limiting factor.
- h. If the source of supply is limited due to source construction, list the maximum volume of water that the source of supply can provide. For example, some sources of supply are pumped at a lower withdrawal rate to maintain the water column in the well above a known fracture zone that may contribute to poor water quality.
- i. If the source of supply is limited to an approved capacity, list the maximum approved capacity for each source of supply in gallons per day. An example of an approved capacity may be a well that has yield and pumping equipment capable of supplying greater than 50 gpm, but it restricted to 10-50 gpm because the well site location for the new well was approved at the lower rate to comply with separation distances to potential sources of pollution per RCSA Section 19-13-B51d.
- j. If the source of supply is limited due to operational considerations, list the maximum amount of water that can be delivered to the entry point of the distribution system. If there are two sources of supply that share common electrical controls and/or permits where only one source can be operated at any given time, then the value for one of the sources of supply must be 0 GPD. The available water from sources of supply that share operational limitations where only allow one source of supply can operate at any given time cannot be added together or both included in the available water calculation.
- k. If the source of supply is limited due to contractual agreements, list the maximum volume of water that can be delivered to the entry point of the distribution system.

After filling in the applicable values for each limiting factor for each source of supply, in the far right column that is labeled “Available Water from Source”, fill in the lowest value from each of the limiting factor columns “a” through “k”. The lowest value in the row associated with the source of supply is the available water for that source of supply. Next, add the values in the “Available Water From Source” column and put the total in bottom right hand corner of the spreadsheet. This value will be the “Total Available Water from Sources of Supply (GPD)”.

B. Water sold to other water companies through interconnections:

Next, the water sold to other water companies through interconnections must be subtracted from the available water from sources of supply. In the far left column, list the name of each interconnection and associated street where water is sold to another water company. In the far right column, list the volume of water sold in gallons per day for each interconnection. Add the values of “Volume of Water Sold (GPD)” for each interconnection and put a total in the far right hand corner of the spreadsheet. This value will be the “Total volume of water sold to other water companies”.

C. Available Water Calculation:

From the “Total Available Water from Sources of Supply (GPD)” (from section A of the application) subtract the “Total volume of water sold to other water companies (GPD)” (from section B of the application). Enter the total in the bottom right hand corner of the spreadsheet. This value will be the available water and the maximum amount of water a company can dependably supply while taking into account all limiting factors.

Certification of Information Submitted:

The public water system owner or administrative contact is requested to sign, date and print their name certifying the information submitted for demonstration of available water is accurate to the best of their knowledge and was determined in accordance with the applicable Regulations of Connecticut State Agencies.

STATE OF CONNECTICUT DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER SECTION

WORKSHEET FOR DEMONSTRATION OF AVAILABLE WATER

Public Water System Name: _____
 PWSID: _____
 Town: _____

A. Available water from sources of supply (GPD):

WSFID	Source of Supply Name	a Safe Yield	b Hydraulic Limits	c Treatment Limits	d Well Pump	e Screen Clogging	f Trans. Mains	g Permit Limits	h Source Const.	i Approval Limits	j Operation Limits	k Contract Limits	Available Water From Source

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A. Total Available Water from Sources of Supply (GPD):

B. Water sold to other water companies through interconnections:

Name of interconnection (Water Company name and street location):	Volume of Water Sold (GPD)

B. Total volume of water sold to other water companies (GPD):

C. Available Water Calculation:

Total Available Water from Sources of Supply (GPD) – from Section A of this application:	
Subtract the Total volume of water sold to other water companies (GPD) – from section B of this application:	-
Available Water (GPD):	

My signature below certifies that the information provided on this worksheet for determination of available water for the public water system and source(s) of supply indicated is accurate to the best of my knowledge and complies with the applicable Regulations of Connecticut State Agencies.

(Signature of public water system Owner or Administrative contact)

(Date)

(Print or type name)