Western Connecticut
COUNCIL OF GOVERNMENTS

WEST COG

WATER SUPPLY RESOURCES IN GREATER DANBURY, CT

This copy 11/2015

BETHEL, BRIDGEWATER, BROOKFIELD
DANBURY, NEW FAIRFIELD, NEW MILFORD
NEWTOWN, REDDING, RIDGEFIELD AND SHERMAN

A. WATER SUPPLY RESOURCES BY MUNICIPALITY

B. POTENTIAL INTERCONNECTIONS TO DANBURY

C. POTENTIAL WATER SUPPLY WATERSHEDS

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WATER SUPPLY RESOURCES IN CONNECTICUT'S HOUSATONIC VALLEY REGION

WITHIN TOWN OF BETHEL, CT

WITHIN TOWN OF BRIDGEWATER, CT

WITHIN TOWN OF BROOKFIELD, CT

WITHIN CITY OF DANBURY, CT

WITHIN TOWN OF NEW FAIRFIELD, CT

WITHIN TOWN OF NEW MILFORD, CT

WITHIN TOWN OF NEWTOWN, CT

WITHIN TOWN OF REDDING, CT

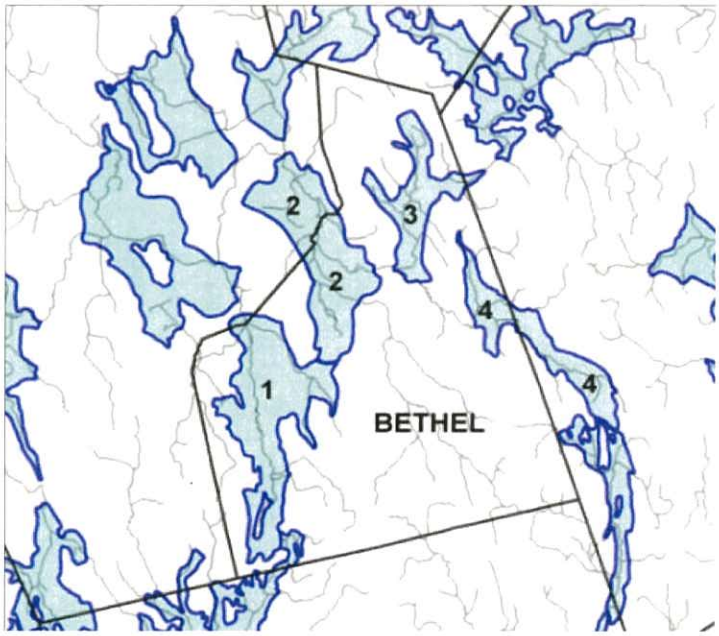
WITHIN TOWN OF RIDGEFIELD, CT

WITHIN TOWN OF SHERMAN, CT

Bethel, CT Water Supply Resource Inventory

BETHEL, CT WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers. **Bethel's and the other nine** have been copied and placed into one regional file to facilitate comparisons.



1) Sympaug Brook Aquifer: This aquifer is within the basin of northward draining Sympaug Brook in western Bethel. This gentle valley contains the **Sympaug Brook Aquifer**, of about 1110 acres (this and aquifer acreages below indicate the area of saturated thickness of ten feet or greater).

This large aquifer is generally centered along the railroad line, with its best deposits south of the Downtown Area. There is a small extension of the Sympaug Brook Aquifer westerly into Danbury along Route 53.

2) East Swamp Aquifer: Then starting just to the northeast of Downtown Bethel at about Milwaukee Avenue, continuing north along Maple Avenue and Plumtrees Road, continuing north to Meckauer Park and then into Danbury just east of Shelter Rock, will be found the **East Swamp Aquifer**. The area is about 870 acres.

This water supply resource lies along the valley of northward flowing East Swamp Brook to Limekiln Brook, and then northerly along Limekiln Brook.

3) Dibbles's Brook Aquifer: In the Stony Hill section generally to the east of Old Hawleyville Road is found the **Dibble's Brook Aquifer**, sized at 540 acres. Beginning along Weed Road it follows the south flowing brook of that name. It including a slight extension into Newtown south of Walnut Hill Road.

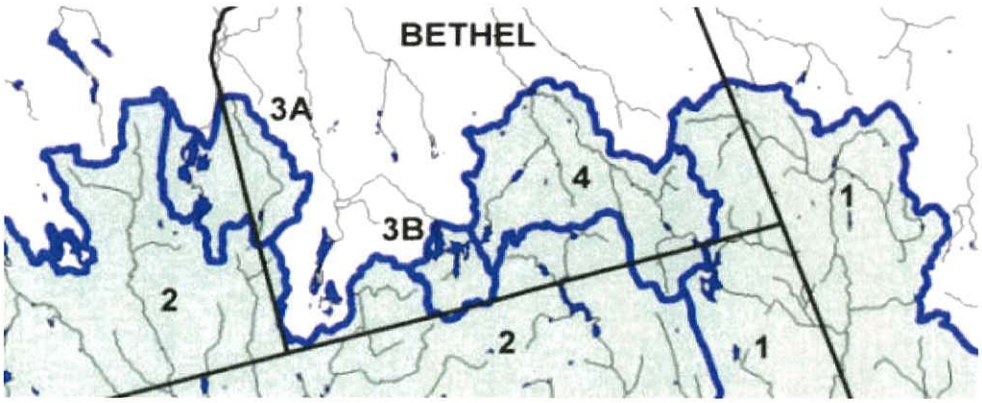
4) Limekiln Brook Aquifer: Then further east, to the east of Old Hawleyville Road before it intersects with Route 302, is found the **Limekiln Brook Aquifer**. with 390 acres of saturated thickness of ten feet or greater. This aquifer then extends along Limekiln Brook into the Dodgingtown section of Newtown, between Flat Swamp Road and Hattertown Road.

BETHEL, CT
EXISTING AND POTENTIAL
WATER SUPPLY WATERSHEDS

About 26% of Bethel's total land area, approximately 2,837 acres in the southern part of the municipality, is classified by CT DEP as existing or potential water supply watershed land.

The CT Department of Public Health has recommended enactment of an overlay protection zone for these fragile areas, and this **HVCEO report provides the details**.

That draining to the south is used by the Aquarion Water Company. The water draining northerly from these lands is used (or in the case of number 4 on the map, Wolf Pit Brook, may potentially be used) as water supply for central Bethel, which has had a municipal water supply since 1878.



1) Aspetuck River Watershed: Water draining southward from about 430 acres in the southeastern most tip of Bethel in the Aspetuck River Watershed flows thru Redding to the Aspetuck Reservoir and then Hemlock Reservoir in Easton and Fairfield. Some of this drinking water is then pumped back up gradient into the Region, to Ridgefield, CT.

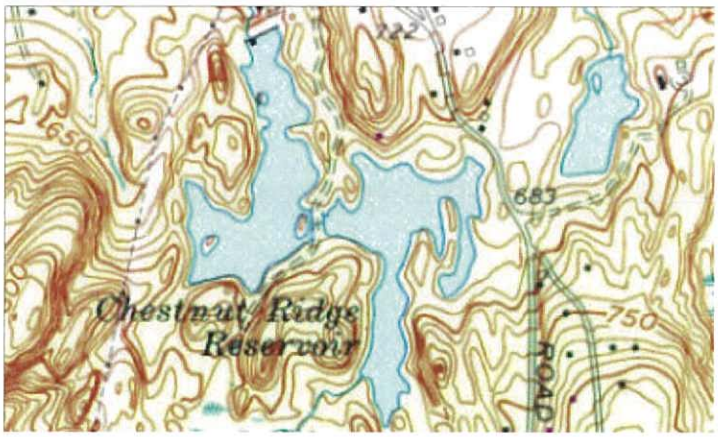
2) Saugatuck River Watershed: Water draining southward from three separate areas totaling to about 550 acres along the Bethel-Danbury and Bethel-Redding Town Lines are part of the Saugatuck River Watershed.

These drainage patterns are via a) the west side of Bogus Mountain draining to Bogus Mountain Brook, b) an unnamed brook east of Route 53 flowing into Redding and c) both east and west of Route 58 draining to Putnam Park Pond and then the Little River, then continuing south into the Saugatuck Reservoir in Redding.

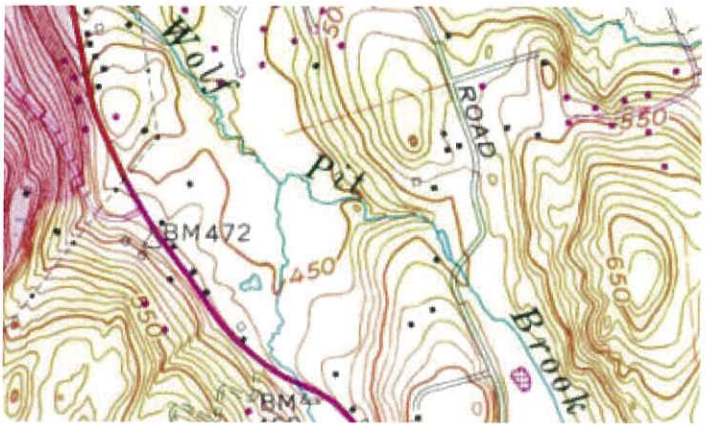
3) Sympaug Brook Watershed: Two parts of the **Sympaug Brook Watershed** are used for drinking supply purposes, both northerly in their orientation.

3A) The first is from about 230 acres northeast of the F. P. Clarke Industrial Park near the Danbury City Line flowing into Murphy's Brook, which is an emergency supply source for the Bethel Water Department.

Note that Bethel is served by the Eureka Reservoir and Mountain Pond Reservoir. These are owned by Bethel but are located to the west of the town line, in a part of the Sympaug Brook Watershed located in adjacent Danbury. See also the CT Department of Public Health's **assessment report for the Chestnut Ridge and Eureka Lake Reservoirs**.



3B) The second includes the waters from about 250 acres starting at the Redding Town Line and flowing north into Bethel's Chestnut Ridge Reservoir.



4) Wolf Pit Brook Watershed: This Brook is in southern Bethel and parallels Route 58 on its eastern side. The size of the watershed in Bethel is about 1,277 acres. The 2004 - 2009 Connecticut Conservation and Development Policies Plan for Connecticut designates the **Wolf Pit Brook Watershed** as a potential future water supply source.

RELATIONSHIPS BETWEEN RESOURCES

The safe yield for Bethel's two surface water sources combined is .50 million gallons per day. According to the 2006 Bethel Water Supply Plan "The Eureka Lake supply has taste and odor problems that the existing treatment plant cannot mitigate. The Chestnut Ridge supply is reliant on an aged treatment plant in poor condition.

Of the two plants, the Chestnut Ridge plant presents the more difficult situation. As the lone source of supply for the High Service Area it must be kept in operation continuously, however there is no available space to build a new plant without removing the existing one. Therefore, whether the Bethel Water Department decided to replace the plant or abandon the source, additional supply development is essential."

Continuing, "The Bethel Water Department has been actively pursuing the development of additional wells behind the Police Station in the East Swamp Aquifer. Water quality and groundwater withdrawal potential has been evaluated and the area deemed a suitable supply development site. Diversion permit applications are currently underway.

Once the additional supply source is developed, an evaluation will need to be made to determine the long term costs of pumping from the East Swamp Aquifer to the High Service Area versus the replacement cost of the Chestnut Ridge Treatment Plant."

BETHEL, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connections to Danbury: As shown in this 2006 study, there are potential **interconnections for Northern Bethel** and also **interconnections for Central Bethel**.

CT DEP CLASSIFICATION OF STREAMS IN BETHEL

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

The DEP seeks to bring every water body in the State to a minimum classification of "B" or better, which would not be suitable for human consumption without treatment, but could be suitable for recreational use, fish and wildlife habitat, agricultural and industrial supply, and other legitimate uses.

There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to Bethel is summarized below:

Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

Class A: Designated uses is potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges severely restricted. No reclassification of A or AA allowed down to B.

Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. **Aspetuck Reservoir** tributaries reaching north into Bethel from Redding and Newtown: AA/AA.
2. **Bethel Reservoir Brook** from west of Hudson Street north to the Danbury City Line: B/A.
3. **Chestnut Ridge Reservoir** and its tributaries: AA/AA.
4. **Murphy Brook** (a.k.a. Braunies Brook) from source in Danbury to pump station at Reservoir Street: AA/AA.
5. **Saugatuck Reservoir** tributaries reaching north into Bethel from Danbury and Redding: AA/AA.
6. **Sympaug Brook** from Sympaug Pond and the old Bethel Landfill flowing north to just north of railroad bridge: B/A. Sympaug Brook continuing, from just north of railroad bridge north to Danbury City Line: B/B.
7. **Wolf Pit Brook** and tributaries that are upstream of a point just north of the intersection of Route 58 with Hoyts Hill Road: A/AA.
8. **All other streams in Bethel** such as Chestnut Brook, Dibble's Brook, East Swamp Brook, Limekiln Brook, etc: A/A.

Bridgewater, CT Water Supply Resource Inventory

BRIDGEWATER, CT
WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers. **Bridgewater's and the other nine** have been copied and placed into one regional file to facilitate comparisons.

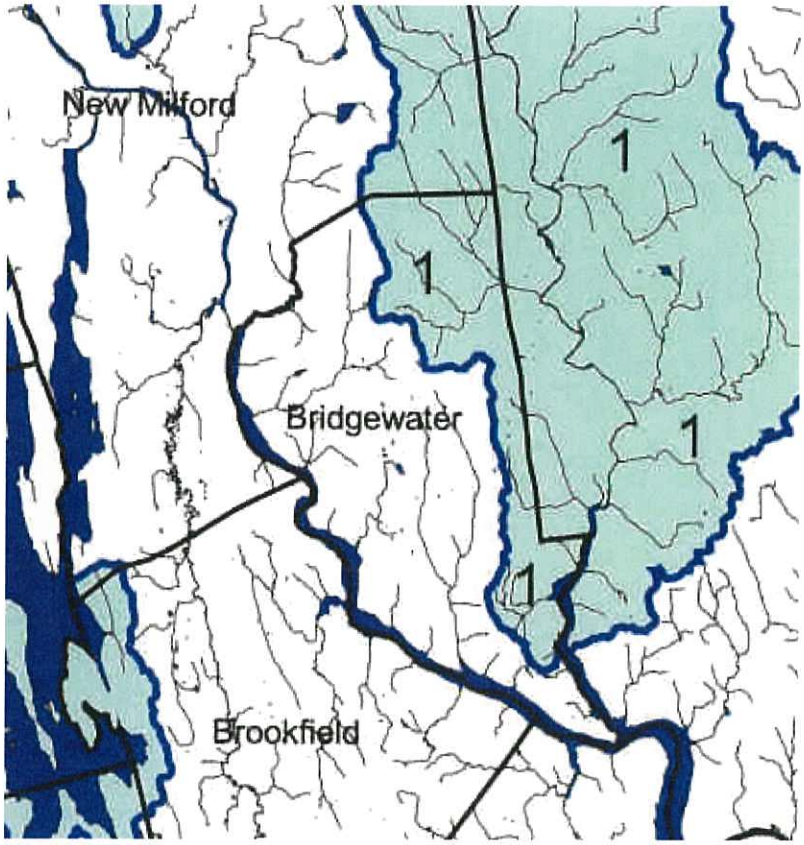
1) Minor Aquifers: There are only **minor aquifers** in Bridgewater, scattered around the Town. These include the Hitchcock Mill Brook, Clatter Valley, Iron Ore Hill Road, Second Hill Brook and Shepaug River shoreland areas.

BRIDGEWATER, CT POTENTIAL
WATER SUPPLY WATERSHED

1) Shepaug River Watershed: At present there are no active water supply watersheds in Bridgewater. However, much of the eastern section of the municipality is within the **Shepaug River Watershed** which is designated by the state as a potential future water supply source.

This watershed gets special recognition as to the need for its protection in the 2001 Town Plan, First , the 2001 Plan recommended the implementation of additional buffer zones along Lake Lillinonah and the Shepaug River.

Then as a second step, the additional buffers are proposed to extend inland, to all of the watercourses and wetlands comprising the Shepaug River Watershed in Bridgewater.



CT DEP CLASSIFICATION OF STREAMS IN BRIDGEWATER

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

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There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to Bridgewater is summarized below:

Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

Class A: Designated uses is potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges severely restricted. No reclassification of A or AA allowed down to B.

Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Housatonic River forming western boundary of Bridgewater (as Lake Lillinonah): D/B. The severe D rating is due to PCB contaminated bottom sediments.

2. Shepaug River tributaries reaching westerly into Bridgewater such as Hop Brook, Second Hill Brook, etc: A/AA.

3. All other streams in Bridgewater such as Clapboard Oak Brook, Hitchcock Mill Brook, Wewaka Brook, etc: A/A.

Brookfield, CT Water Supply Resource Inventory

PLAN OF DEVELOPMENT

According to the 2001 Brookfield Plan of Conservation and Development "Brookfield needs a coordinated overall public water supply system since the current system in Brookfield is poorly configured to meet community needs. The key water supply issue is the lack of an overall water system in the community and the dispersed nature of water supply providers. Water quality is also a continuing issue."

See also the more recent 2/2008 "**Preliminary Water System Analysis and Report to Southern Brookfield**" by CCA LLC.

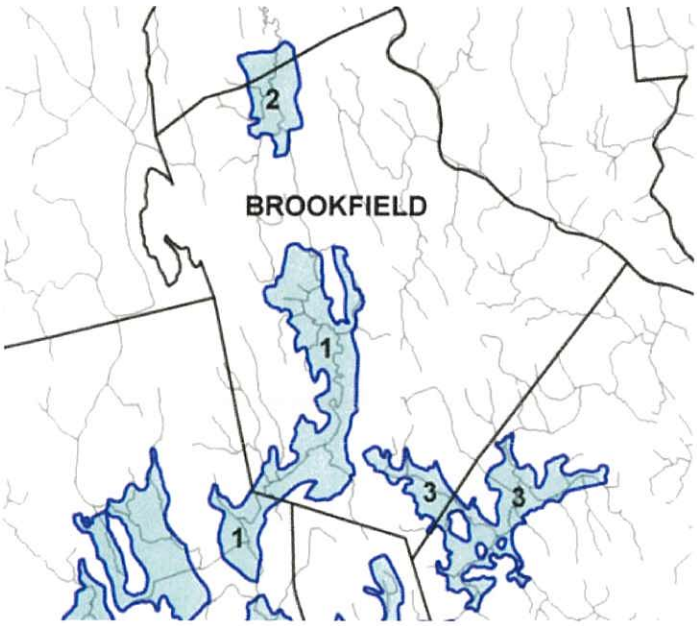
BROOKFIELD, CT
WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers and water supply watersheds. **Brookfield's and the other nine** have been copied and placed into one regional file to facilitate comparisons.

An early regional leader in protecting groundwater, by late 1977 Brookfield had completed a report entitled "Natural Resource Considerations for Land Use Planning and Zoning, General Purpose Zone, Brookfield, CT." A 1980 Town commissioned report on the Gallows Hill aquifer followed.

Regional research in 1980 for Brookfield focused in the northern, or Gallows Hill Aquifer. At first protection was accomplished by adding regulatory text to each separate zoning district.

Then in 1987 the protection zone boundary created by HVCEO for the Gallows Hill Aquifer and an additional boundary created by Brookfield for the southern or Still River Middle Aquifer were made part of the local regulations.



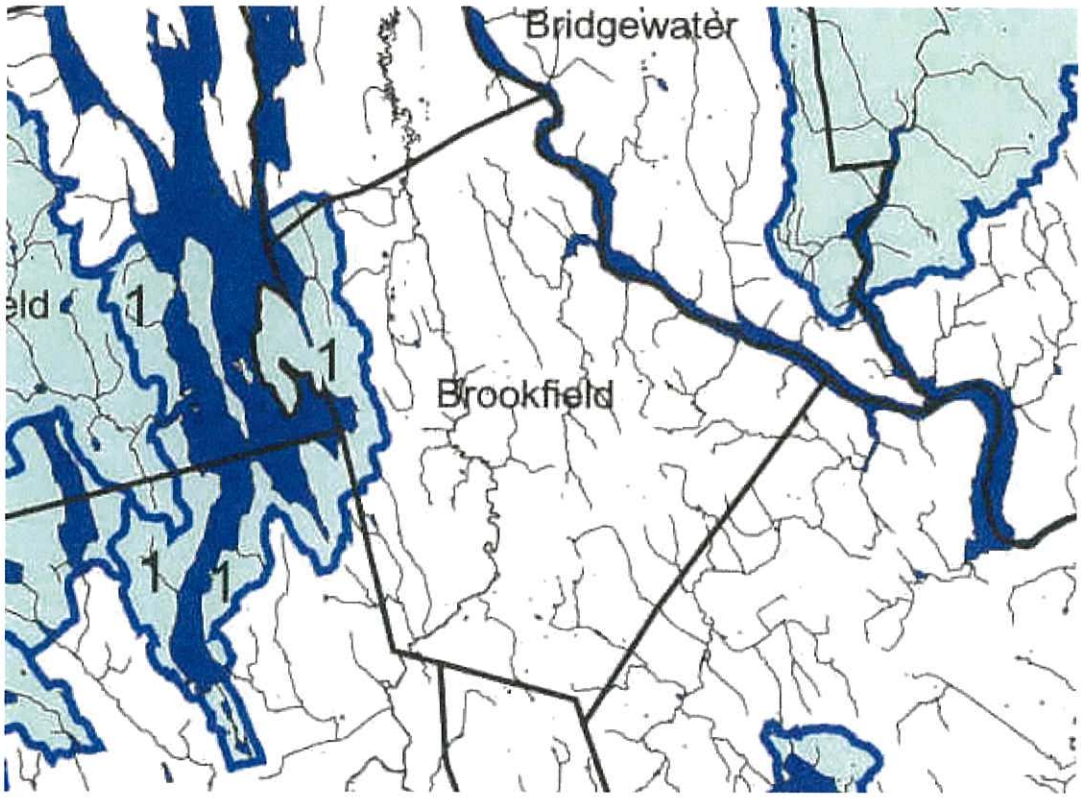
1) Still River Middle Aquifer: The **Still River Middle Aquifer**, occupying much of central Brookfield. Entering from Danbury to the south, it extends northerly along the north flowing Still River and ends after crossing Silvermine Road. This resource includes an area of 1260 acres of saturated thickness of ten feet or greater.

2) Gallows Hill Aquifer: Then continuing northerly up the Still River Valley, beginning near the confluence of Limekiln Brook with the Still River, the **Gallows Hill Aquifer** is found. It continues north and crosses the municipal boundary into neighboring New Milford.

3) Pond Brook Aquifer: In the southeast corner of Brookfield is an arm of the **Pond Brook Aquifer**. This extends along the railroad right of way into Newtown where the remainder of the aquifer is located. This resource includes an area of 500 acres of saturated thickness of ten feet or greater.

BROOKFIELD, CT POTENTIAL WATER SUPPLY WATERSHED

1) Candlewood Lake Watershed: Water resource planning in Brookfield should make note of the fact that the **Candlewood Lake Watershed** may be a future water supply source for Danbury..



The reason is that if it is ever used by Danbury for water supply purposes (and possibly then thru Danbury to Brookfield or other towns), then the extreme western portions of the Town draining to Candlewood Lake will be regulated by CT DEP and CT DPH as a water supply watershed.

BROOKFIELD, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connections to Danbury: As shown in this 2006 study, there are potential **interconnections for Southern Brookfield** and also to **reach New Milford thru Brookfield**.

CT DEP CLASSIFICATION OF STREAMS IN BROOKFIELD

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

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Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

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Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Candlewood Lake due to wastewater pumped up from the Housatonic River: B/B.

2. Housatonic River forming eastern boundary of Brookfield (as Lake Lillinonah): D/B. The severe D rating is due to PCB contaminated bottom sediments.

3. Still River from Danbury Line north to the New Milford Line: C/B.

4. All other streams in Brookfield such as Dingle Brook, Hop Brook, Merwin Brook, Limekiln Brook, etc: A/A

Danbury, CT Water Supply Resource Inventory

DANBURY, CT WATER SUPPLY AQUIFERS

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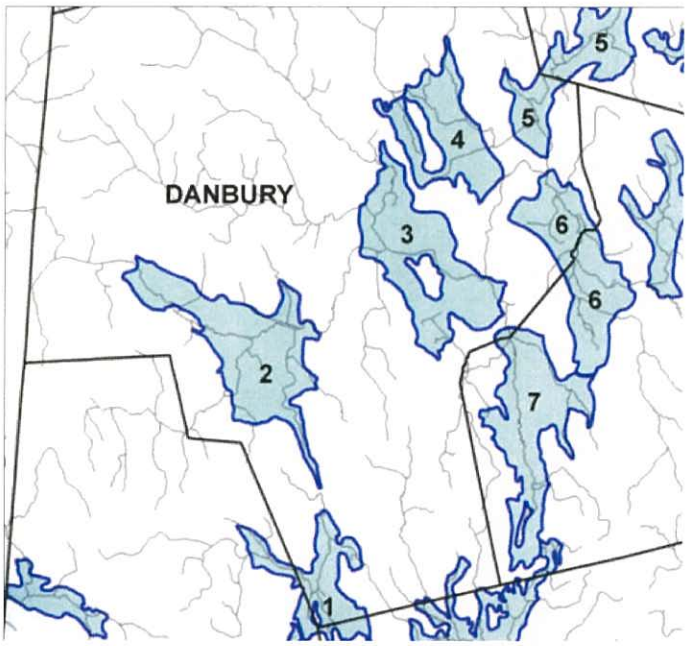


1) Sugar Hollow Aquifer: In the southernmost section of Danbury, primarily to the east of Route 7 and shared with Ridgefield and Redding, is located the **Sugar Hollow Aquifer**. This resource includes an area of 310 acres of saturated thickness of ten feet or greater. (All acreages below represent this same variable).

Pond over Danbury's Sugar Hollow Aquifer.
Photo courtesy of Rick Gottschalk.

2) Kenosia Aquifer: Moving north up Route 7 and located under the Danbury Airport and Danbury Fair Mall is the large **Kenosia Aquifer**, 1,640 acres, extending to the north side of Lake Kenosia and then westerly along I-84 to the intersection of Route 6 and Aunt Hack Road.

3) Still River West Aquifer: The next aquifer in Danbury is in the center of the City. This is the 1,120 acre **Still River West Aquifer**. Centered on White Street, it extends north on the east side of Main Street to I-84. On its south side it follows Main Street into Rogers Park, also continuing easterly along the railroad right of way and along Shelter Rock Road.

4) Great Plain Aquifer: Then due north is the **Great Plain Aquifer**, with an area of saturated thickness of ten feet or greater of about 290 acres. Its location is along the relatively level land along Great Plain Road, east of Danbury Town Park and north of I-84.

5) Still River Middle Aquifer: To the east of this resource is the **Still River Middle Aquifer**. This aquifer begins in the I-84 & Route 7 interchange area and extends northeasterly along the Still River between Federal Road and Route 7.

6) East Swamp Aquifer: Turning to the south along the Danbury - Bethel border, the **East Swamp Aquifer** enters from Bethel. It follows Limekiln Brook and extends north to Newtown Road and almost reaches I-84 Exit 8. There are 870 acres of saturated area of ten feet or greater.

7) Sympaug Brook Aquifer: To the south, a very small portion of the **Sympaug Brook Aquifer** crosses over from Bethel along Route 53.

DANBURY, CT EXISTING AND POTENTIAL WATER SUPPLY WATERSHEDS

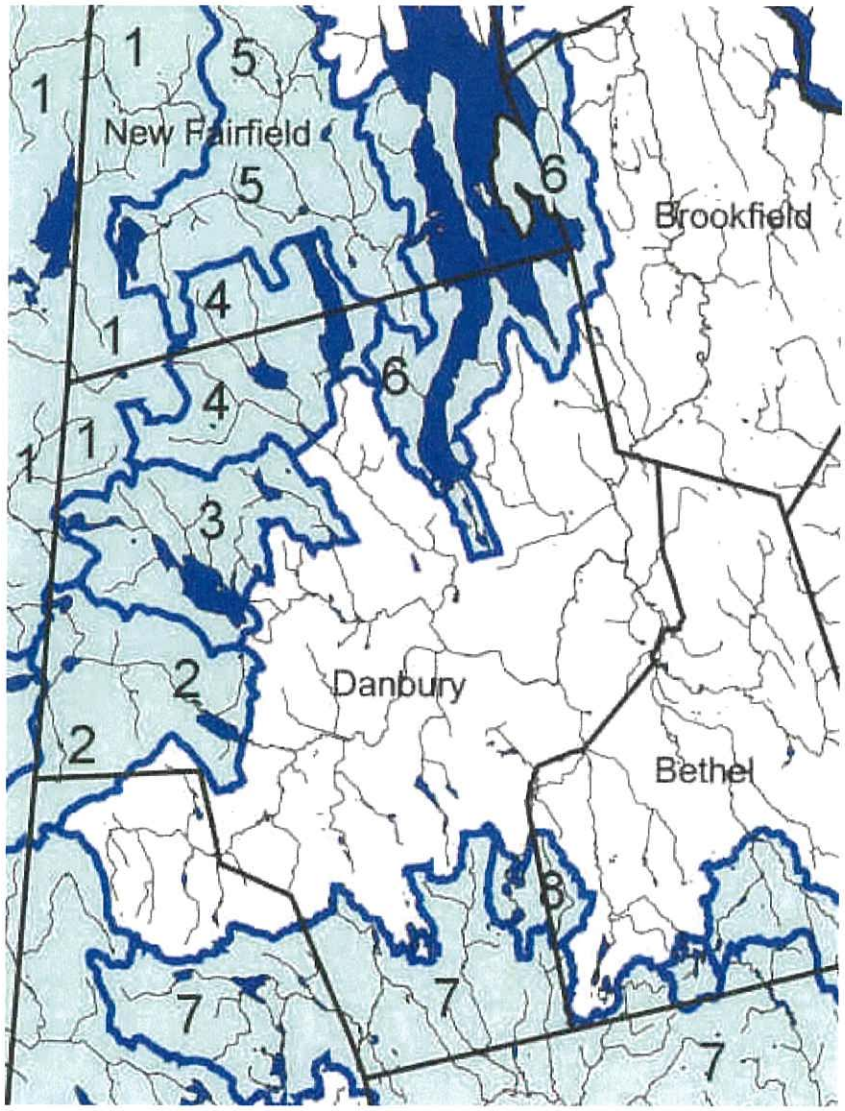
Almost 42% of Danbury's total land area is in use as public water supply watershed. This includes both Danbury's own substantial watersheds and those in use for other communities. Some of the water drained from these lands is used as water supply within Danbury and some drains out of the town and is used elsewhere.

While Danbury has its own well defined internal **need for additional water supply**, its supply system may also be a source for other communities, as **shown in this 2006 HVCEO report**.

Danbury, the Housatonic Valley Region's central city, ranks third of the ten municipalities in the region in terms of total land area used for water supply drainage, following Redding's 87% and then Ridgefield at 62%.

Danbury's zoning regulations maintain a protective overlay zone for the existing water supply watersheds within the City. Not just Danbury's own water supply watersheds are covered but those of Bethel, New York City and the Aquarion Water Company as well.

As a result, development applications and permits are subject to some limitations and additional scrutiny. A citywide hazardous substance management ordinance complements the zoning overlay.



1) Croton River Watershed: The extreme northwestern corner of the City, about 1,000 acres of land, drains westward towards the East Branch of the Croton River in Town of Southeast, N.Y. This is part of the Croton River Watershed.

The East Branch Reservoir in nearby New York State.

Water from this area flows to the **East Branch Reservoir** and from there to the Croton Reservoir for consumption in New York City and environs. This use of Danbury's water by New York City for water supply purposes began back in 1842.

2) Kenosia Watershed: The Kenosia Watershed in western Danbury is centered along the I-84 corridor. This supply shed designation dates from 1984 when Danbury added piping to make it possible to use surface water in Lake Kenosia for supplemental water supply, pumping it only on rare occasions northward to the West Lake Reservoir.

The Lake Kenosia diversion is designed as a flood skimming operation and therefore Lake Kenosia storage is not utilized in the calculations of safe yield. The pump station has the capacity to divert up to 9 million gallons per day from Lake Kenosia to West Lake Reservoir, but only during the non-swimming season, and only when West Lake Reservoir does not fill from other water supply watersheds.

The area of Lake Kenosia water supply watershed in Danbury is about 3,020 acres. Additional upland acreages for this watershed are located to the southwest, within adjacent Ridgefield, CT and in adjacent New York State.

In 1997 an important state policy change was made regarding the status of the Kenosia Water Supply Watershed. Rather than identifying on the State Plan Map that area's remaining vacant lands along I-84 as in the Conservation Category, these would now be classified as part of the Urban Growth Category, thereby allowing state support for more intensive development than if Conservation.

OPM staff notes from 1997 identify the following summary of public comment on the issue and resulting OPM recommendation:

"Issue: Change the Lake Kenosia, Class II public water supply area in western Danbury along I-84 from Conservation to a Growth Area. The Housatonic Valley Economic Development Partnership has designated this section of Danbury as the area of greatest economic development importance within the region. Lake Kenosia can only be used in a water supply emergency. Withdrawal is limited to the winter months and the water supply has not been used since it was first designated in 1981.

The City has enacted strict controls on the type of development that may take place in the watershed of Lake Kenosia. Stormwater drainage requires pretreatment. A maximum of 50% of a lot may be developed if there are environmentally sensitive areas on the lot. A watershed management plan is in preparation. If Lake Kenosia is permanently lost as an emergency water supply source, there are other sources within the region that may be substituted in the future."

The OPM staff record continuing, "Recommendation: It is recommended that the Class II type lands within the Lake Kenosia watershed between the water body and the New York border be changed from Conservation to Growth because: 1) this area is of the very highest importance to the region's economic health; 2) the very low marginal value of the water resources for drinking water purposes; 3) adopted water supply plans call for expanding drinking water resources in other areas, and 4) extensive implementation of local regulations that focus on the continued protection of water resources from the impacts of new development."

3) Kohanza Brook Watershed: The Kohanza Brook Watershed (West Lake Reservoir system) occupies much of western and northwestern Danbury. The best landmark to serve as a dividing line with the Padanaram Brook Watershed (Margerie System) is the ridge along which runs Route 39. The Boggs Pond Reservoir, feeding into West Lake Reservoir, dates from 1905.

Danbury's West Lake Reservoir.
Photo courtesy of Rick Gottschalk.

According to the Danbury Water Department's 6/2003 Water Supply Plan, "The safe yield of the West Lake System is 4.9 million gallons per day. The West Lake System consists of West Lake Reservoir, Boggs Pond, Upper and Lower Kohanza Reservoirs, Lake Kenosia Diversion, and the Kenosia Well Field."

4) Padanaram Brook Watershed: The Padanaram Brook Watershed (Margerie Reservoir System**)** occupies much of western and northwestern Danbury. Margerie Reservoir itself was built in 1935 and went into operation in 1937.

According to the Danbury Water Department's 6/2003 Water Supply Plan, "The safe yield of the Margerie surface water supply system is 3.3 million gallons per day. The Margerie system consists of Margerie Reservoir, King Street Diversion, East Lake Reservoir, and Padanaram Reservoir. The proposed Ball Pond Brook and Lake Candlewood Diversions would be included in this system in the future."

See also the CT Department of Public Health's **assessment report** for the Kohanza Brook and Padanaram Brook Watersheds.

5) Ball Pond Brook Watershed: Ball Pond Brook runs easterly through New Fairfield to Candlewood Lake. Its drainage area includes Short Woods Brook as a major tributary. The entire **Ball Pond Brook Watershed** occupies a large central

portion of New Fairfield but only about 125 acres in Danbury. This is along Bear Mountain Road near the New Fairfield Town Line.

For many years the waters of Ball Pond Brook have been under consideration as a future supplemental source for Danbury's nearby Margerie Reservoir.

6) Candlewood Lake Watershed: If Danbury ever taps Candlewood Lake as a water supply source then that part of the **Candlewood Lake Watershed** that lies within Danbury, primarily the vicinity of Danbury Bay, would also become existing, rather than potential, water supply watershed.

7) Saugatuck River Watershed: All of the land in the southern panhandle of Danbury, on the south side of the divide from the City's Still River Watershed, is part of the Saugatuck River Watershed draining to the Saugatuck Reservoir in Redding. The total land area in Danbury drained south to the Saugatuck Reservoir is about 2,780 acres.

8) Sympaug Brook Watershed: Also in southern Danbury, on the Still River side of the drainage divide and near the Bethel Line, are found Mountain Pond, draining down to Eureka Lake, and their associated water supply watershed areas. These small reservoirs in the **Sympaug Brook Watershed** are owned by the Bethel Water Department and contribute water to the Town of Bethel to the east.

Their drainage area occupies only about 400 acres of southeastern Danbury. Some additional acreage right on the Danbury-Bethel Line is part of the Murphy's Brook drainage area, a reserve supply on occasion pumped from the Brook up to Eureka Lake.

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As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

The DEP seeks to bring every water body in the State to a minimum classification of "B" or better, which would not be suitable for human consumption without treatment, but could be suitable for recreational use, fish and wildlife habitat, agricultural and industrial supply, and other legitimate uses.

There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to Danbury is summarized below:

Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

Class A: Designated uses is potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges severely restricted. No reclassification of A or AA allowed down to B.

Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. **Candlewood Lake** due to wastewater pumped up from the Housatonic River: B/B.

2. **Eureka Lake** and tributaries: AA/AA.

3. **Hudson River** tributaries reaching into northwestern Danbury from New York State: AA/AA.

4. **Kohanza Reservoir** and upstream tributaries: AA/AA.

5. **Kenosia Lake** tributaries: AA/AA.

6. Limekiln Brook flowing from the Bethel Line northerly to the Still River: C/B. Also an unnamed tributary stream on the west side of old Danbury landfill flowing northerly to Limekiln Brook: B/B .

7. Margerie Reservoir and tributaries: AA/AA .

8. Padanaram Brook and tributaries north of Padanaram Reservoir: AA/AA. Then Padanaram Brook from Margerie Reservoir Brook south to Patch Street: B/A, and third Padanaram Brook from Patch Street south to the Still River: B/B.

9. Saugatuck Reservoir tributaries reaching north from Redding into Danbury: AA/AA.

10. Still River from Lake Kenosia easterly to Padanaram Brook: B/A. Then the Still River from Padanaram Brook easterly to Limekiln Brook: B/B. And next the Still River from Limekiln Brook (where Danbury Sewer Treatment Plant effluent enters) north to the Brookfield Line: C/B.

11. Sympaug Brook flowing from the Bethel Line north to the Still River: B/B.

12. West Lake Reservoir and tributaries: AA/AA.

13. Unnamed brook in Rogers Park flowing south into Bethel to join Reservoir Brook: B/A.

14. All other streams in Danbury such as Great Plain Brook, Miry Brook, Parks Pond Brook, etc: A/A.

New Fairfield, CT Water Supply Resource Inventory

PLAN OF DEVELOPMENT

The 2003 New Fairfield Plan of Conservation and Development states that "during the planning period, New Fairfield should consider alternative ways to provide for a public water supply to the Town Center area to address water quality concerns in this area. A detailed study of the potential for a water supply should be conducted."

The view from 2009 finds a portion of the Dunham Pond Condominiums bedrock well supply piped south to serve the new New Fairfield Senior Center, and the potential for a further extension south to replace polluted bedrock supply sources in nearby New Fairfield Center.

NEW FAIRFIELD, CT WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers and water supply watersheds. **New Fairfield's and the other nine** have been copied and placed into one regional file to facilitate comparisons.

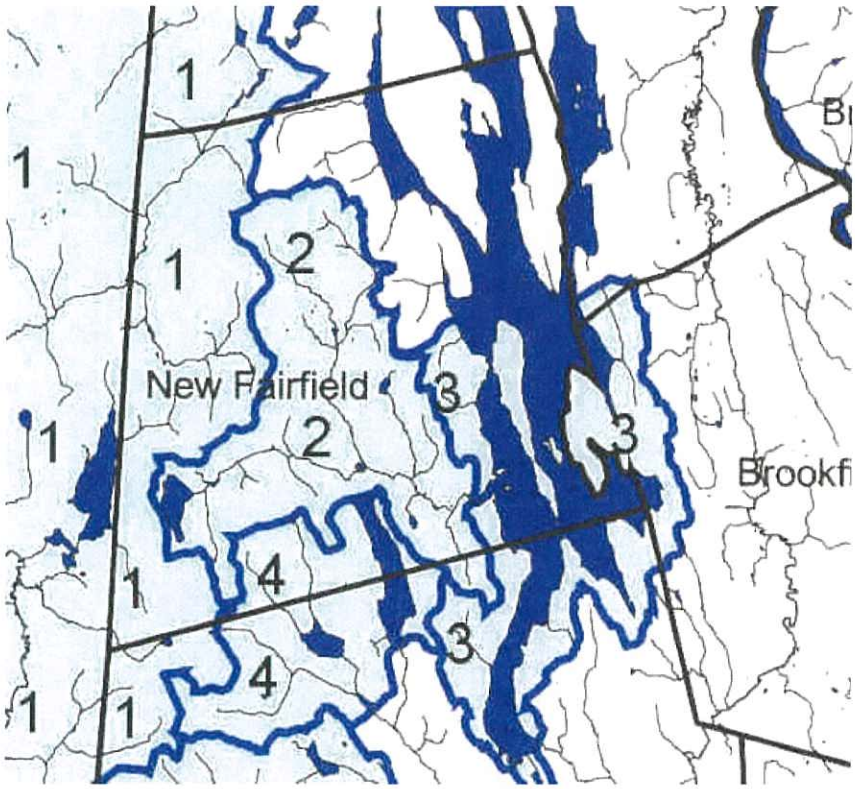
1) Short Woods Brook Aquifer: The only major aquifer in New Fairfield is the **Short Woods Brook Aquifer** north of the Town Center. Following Short Woods Brook it begins near Beaver Bog Road and follows that watercourse south to the Town Center. This resource includes an area of 110 acres of saturated thickness of ten feet or greater.

View of New Fairfield's Short Woods Brook Aquifer near Shaws. Photo courtesy of Rick Gottschalk.

NEW FAIRFIELD, CT EXISTING AND POTENTIAL WATER SUPPLY WATERSHEDS

Almost 30% of New Fairfield's total land area is already in use as water supply watershed serving other communities. This is the fourth highest percentage of the ten community in the region. None of the water drained from these lands is used as water supply within New Fairfield.

These watersheds are existing resource designations that will not change. What is of interest is that the entire remaining land area of New Fairfield is designated by either HVCEO or state agencies as potential water supply watershed.



According to the 2003 New Fairfield Plan of Conservation and Development "New Fairfield is unique since all of its land area is either watershed of an active public water supply (such as New York City and Danbury) or is in a watershed that has been designated as a potential future public water supply. For this reason, protecting water quality is an important issue in the Plan."

1) East Branch Croton River Watershed: All of western New Fairfield adjacent to New York State, approximately 3,750 acres of the community, drains westerly toward the East Branch of the Croton River in Town of Southeast, N.Y.

The East Branch Reservoir in New York State is recharged in part by waters from western New Fairfield, CT

This area is part of the East Branch Croton River Watershed. The East Branch then drains into the East Branch Reservoir in Southeast, NY, and from there to the Croton Reservoir for consumption in New York City and environs. This use of New Fairfield's water by New York City for water supply began long ago, in 1842

2) Ball Pond Brook Watershed: The CT OPM Conservation and Development Policies Plan has designated the **Ball Pond Brook Watershed** as a potential future water supply resource. In contrast HVCEO has so designated the entire Candlewood Lake Watershed, which includes the entire Ball Pond Brook watershed as a subarea.

3) Candlewood Lake Watershed: If Danbury ever taps Candlewood Lake as a water supply source then that part of the **Candlewood Lake Watershed** that lies within Danbury, primarily the vicinity of Danbury Bay, would also become existing, rather than potential, water supply watershed.

4) Padanaram Brook Watershed: About 980 acres along New Fairfield's border with Danbury is part of the Padanaram Brook Watershed. The drainage is southerly into Margerie Reservoir and East Lake Reservoir, both important parts of Danbury's water supply system.

Landmarks denoting this section of New Fairfield include Williams Road, Old Farm Road, Barnum Road and most associated side streets.

NEW FAIRFIELD, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connections to New Fairfield: As shown in this 2006 study, there is a potential **interconnection for the New Fairfield Town Center area**.

CT DEP CLASSIFICATION OF STREAMS IN NEW FAIRFIELD

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

The DEP seeks to bring every water body in the State to a minimum classification of "B" or better, which would not be suitable for human consumption without treatment, but could be suitable for recreational use, fish and wildlife habitat, agricultural and industrial supply, and other legitimate uses.

There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to New Fairfield is summarized below:

Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

Class A: Designated uses is potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges severely restricted. No reclassification of A or AA allowed down to B.

Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Ball Pond Brook flowing from Ball Pond easterly to just past New Fairfield Center: B/AA. Ball Pond Brook continuing from just past New Fairfield Center easterly to Candlewood Lake: B/A.

2. Candlewood Lake due to wastewater pumped up from the Housatonic River: B/B.

3. East Lake Reservoir tributaries reaching north from Danbury into New Fairfield: AA/AA.

4. Hudson River tributaries reaching into New Fairfield from New York State, except Gerow Brook: AA/AA. Gerow Brook from its source at the old New Fairfield Landfill flowing northwesterly into New York State: B/AA.

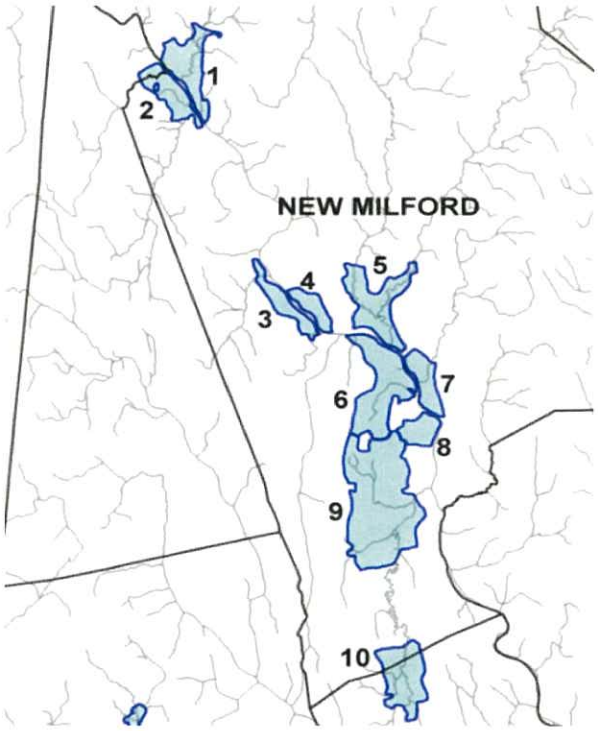
5. Margerie Reservoir and tributaries: AA/AA.

6. All other streams in New Fairfield: A/A.

New Milford, CT Water Supply Resource Inventory

NEW MILFORD, CT
WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers and water supply watersheds. **New Milford's and the other nine** have been copied and placed into one regional file to facilitate comparisons.



According to the United Water Company's 12/2002 Water Supply Plan "No expansion of sources for the New Milford system is currently being planned, due to an adequate margin of safety."

1) Merwinsville Aquifer: The northernmost aquifer in New Milford is the **Merwinsville Aquifer**, on the east bank of the Housatonic River. It starts north of the intersection of Route 55 with Route 7 and extends southeasterly to the confluence with Morrissey Brook.

2) Gaylordsville Aquifer: Then on the opposite bank of the Housatonic River is found the **Gaylordsville Aquifer**. It extends along the River from near the Route 7 Bridge southeasterly to a point across from Morrissey Brook, then also to the northeast up Womanshenuk Brook, to the point where Brown's Forge Road ends near the railroad tracks.

3) Kent Road Aquifer: Further down the Housatonic is the **Kent Road Aquifer**. This long thin riverside resource starts near the intersection of Route 7 with Route 37, then follows Route 7 southeasterly to the Rocky River.

4) Boardman Road Aquifer: Across the Housatonic River from the Kent road Aquifer is the **Boardman Road Aquifer**. This aquifer is centered on Boardman Road and begins at Boardman Bridge and proceeds southeasterly to approximately the railroad overpass. The Nestle Company and ball fields characterize this area.

5) East Aspetuck Aquifer: Proceeding southeasterly we encounter the **East Aspetuck Aquifer**, bordered on its south side by the confluence of the East Aspetuck and Housatonic Rivers. This aquifer extends on both sides of the plain bisected by Aspetuck Ridge Road, from the railroad track spurs to the Century Enterprise Center southeasterly to the railroad bridge over Housatonic Avenue.

6) Indian Field Aquifer: Crossing the Housatonic to its south side we find the **Indian Field Aquifer**. It starts near the intersection of Candlewood Lake Road and Route 7 and continuing along the riverbank past Veterans Bridge to about Sunny Valley Road. An interior arm of this aquifer follows the north-south section of Sunny Valley Road southerly to about the point where sunny Valley Road meets Sunny Valley Lane.

7) New Milford Center Aquifer: Proceeding southeast and again crossing the River, next is encountered the **New Milford Center Aquifer**. This resource lies primarily south of Bridge Street and extends along the Housatonic River southward until the railroad bridge crossing that water body.

8) Pickett District Aquifer: Crossing the Housatonic yet again, on the opposite bank is the **Pickett District Aquifer**, located to the east of the Kimberly Clark Corporation.

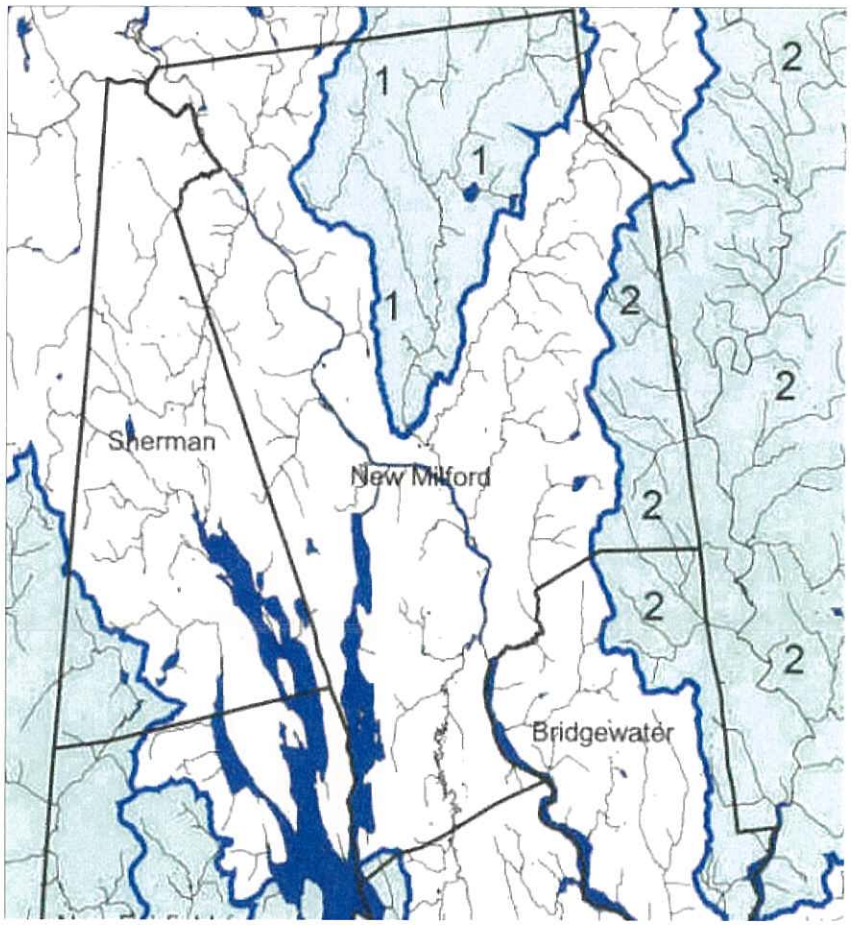
9) Lanesville Aquifer: Moving inland from the Housatonic River, in southern New Milford along Route 7 is the large **Lanesville Aquifer**. This is bounded on the north by Kimberly CLark and on the south by Larson Road.

10) Gallows Hill Aquifer: Also of note, along Route 7 there is a small segment of the **Gallows Hill Aquifer**, which extends into and is primarily located within neighboring Brookfield.

NEW MILFORD, CT POTENTIAL WATER SUPPLY WATERSHEDS

There are no water supply watersheds currently in use for local consumption. A small reservoir system providing water to central parts of New Milford and draining about 1,020 acres east of Downtown was decommissioned some years ago. All supply needs in New Milford are now met by groundwater.

A long range water supply issue facing New Milford concerns the future use of the two drainage basins designated by state regulation and planning as potentially suitable for water supply purposes; the West Aspetuck River Watershed and the Shepaug River Watershed. Also, the Candlewood Lake Watershed designated as a potential future source by HVCEO.



1) West Aspetuck River Watershed: The **West Aspetuck River Watershed** is a large drainage basin located in central New Milford. It continues well beyond New Milford northerly up into Kent. Its southern discharge point is on the Housatonic River.

2) Shepaug River Watershed: The **Shepaug River Watershed** drainage area is located along the eastern edge of New Milford near the Washington and Roxbury Town Lines.

NEW MILFORD, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connections to Danbury: As shown in this 2006 study, there is a potential **interconnection into New Milford thru Brookfield**.

UNITED WATER COMPANY SERVING NEW MILFORD

Proceed to the report of the United Water Company **concerning service to New Milford**.

CT DEP CLASSIFICATION OF STREAMS IN NEW MILFORD

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Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Aspetuck River East Branch from the Washington Line south to the Housatonic River: B/A.

2. Aspetuck River West Branch and tributaries from the Kent Line to south of Wells Road: A/AA. Then the Aspetuck River West Branch from south of Wells Road south to the old brass mill: A/A. The Aspetuck River West Branch continuing from the old brass mill south to the Housatonic River: B/A.

3. Candlewood Lake due to wastewater pumped up from the Housatonic River: B/B.

4. Cross Brook from Cross Brook Road flowing west to Great Brook: B/A.

5. Great Brook from south of Park Lane East flowing south to the Housatonic River: B/A.

6. Housatonic River bisecting New Milford: D/B. The severe D rating is due to PCB contaminated bottom sediments.

7. Little Brook from near Sunny Valley Lane north and then east to Housatonic River: B/A.

8. Still River from Brookfield Line north to the Housatonic River (as Lake Lillinonah): C/B.

9. Unnamed stream from the old Waste Management Landfill west of Blue Bonnet Knoll easterly to the Still River: B/A.

10. All other streams in New Milford such as Bullymuck Brook, Morrissey Brook, Town Farm Brook, Womenshenuk Brook, etc: A/A.

Newtown, CT Water Supply Resource Inventory

NEWTOWN, CT
WATER SUPPLY AQUIFERS

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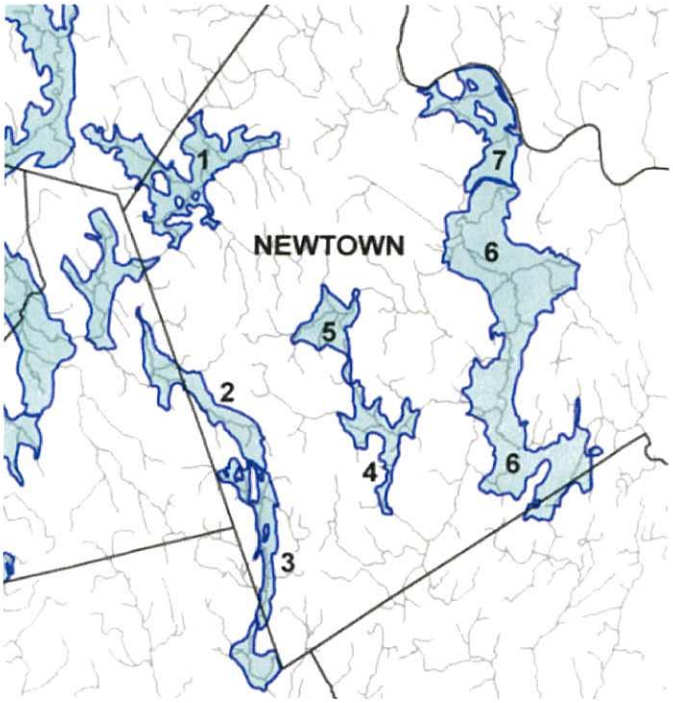


According to the United Water Company's 12/2002 Water Supply Plan "In the previous plan, United Water mentioned considering Turkey Hill Road/Toddy Hill Road {north of the current well field} as a site for a proposed future source of water supply. This area, however, is known to be contaminated with volatile organic chemicals.

United Water is presently looking in the Sandy Hook area {the Newtown at Housatonic Aquifer} for distant future use unless the need arises sooner. Another option is an interconnection with the Aquarion Water Company at the Monroe Town Line that would be used for emergency supply."

1) Pond Brook Aquifer: Along the western edge of Newtown is the **Pond Brook Aquifer** in the Hawleyville section. This aquifer extends from I-84 Exit 9 north to Currituck Road and includes an extension into Brookfield.

2) Limekiln Brook Aquifer: Then well to to the south along Route 302 in the Dodgingtown section is found the **Limekiln Brook Aquifer** extending into Bethel.

3) Upper Aspetuck Aquifer: Further to the south, in the southwest corner of Newtown along the Redding line is the **Upper Aspetuck Aquifer**, following the Aspetuck River along Poverty Hollow Road.

4) North Branch Pootatuck Aquifer: Moving easterly to central Newtown is found the small **North Branch Pootatuck Aquifer**, under a level area adjacent to the North Branch of the Pootatuck River. This resource is bounded on the south by Palestine Road and Platts Hill Road and is crossed by both Beaver Dam Road and Brushy Hill Road.

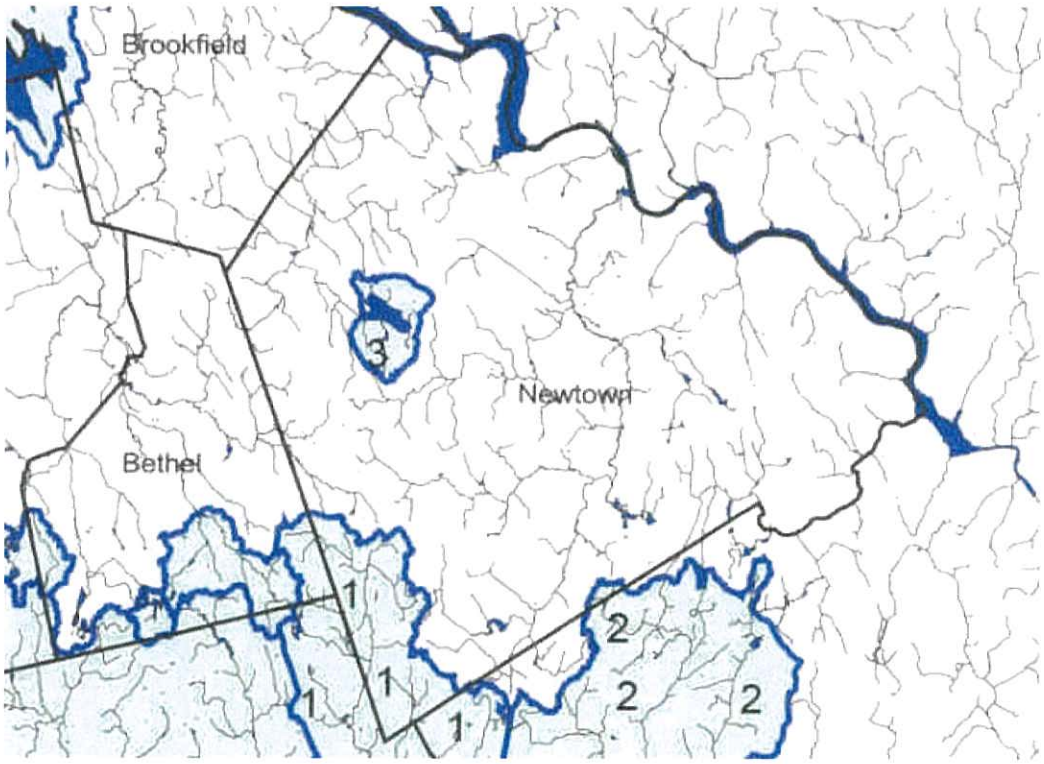
5) Deep Brook Aquifer: The next Newtown aquifer is nearly due north, the **Deep Brook Aquifer**. It lies along wetlands on Route 302 starting near Head of Meadow Road.

6) Pootatuck Aquifer: We then proceed east to the very large and important **Pootatuck Aquifer**, following the south to north river valley of that name. It extends from the intersection of Botsford Hill Road and Route 25 on the south northerly along the Pootatuck to the Sandy Hook section north of I-84.

7) Newtown at Housatonic Aquifer: The remaining aquifer in Newtown is the smaller **Newtown at Housatonic Aquifer**, located on the west shore of the Housatonic River just upstream from its confluence with the Pootatuck River, under the level area east of Walnut Tree Hill Road.

NEWTOWN, CT EXISTING WATER SUPPLY WATERSHEDS

Town residents and business rely entirely upon groundwater for their supply needs, and no surface supplies are used. The only water supply watershed area is in the southernmost section of Newtown. But of historical note, there was once a small water supply reservoir, Taunton Pond, with a drainage area of about 830 acres, that was decommissioned some years ago.



1) Aspetuck River Watershed: Approximately 2,060 acres of land in the southwestern most section of Newtown, part of the Aspetuck River Watershed along Poverty Hollow Road, drains thru Redding to the Aquarion Company's Aspetuck Reservoir in Easton and Fairfield. Some of this drinking water is then pumped back up gradient into the Region, to Ridgefield, CT.

2) Pequonnock River Watershed: About 80 acres of land, near Lantern Drive west of Route 25 along the border with Monroe, is in the Pequonnock River Watershed. This water supply watershed at first tributary to the West Branch of the Pequonnock River but then diverted in Monroe to the Easton Reservoir, which is part of the Aquarion Company's resources.

3) Pond Brook Watershed: this small drainage area feeding into Taunton Pond served as the Borough's water supply for many years. But due to quality concerns and low yield it was eliminated as a supply source in the early 1980's, replaced with wells in the Pootatuck Aquifer.

While not cost-effective for rehabilitation by today's standards, this area could be recognized years ahead as a potential water supply watershed if a local water shortage becomes acute.

NEWTOWN, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connections to Danbury: As shown in this 2006 study, there is a potential **interconnection with Danbury thru northern Bethel**.

UNITED WATER COMPANY SERVING NEWTOWN

Proceed to the report of the United Water Company **concerning service to Newtown**.

CT DEP CLASSIFICATION OF STREAMS IN NEWTOWN

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Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Aspetuck Reservoir tributaries north of its confluence with an unnamed tributary flowing into the Aspetuck River from the north end of the old Redding Landfill: AA/AA. Then the Aspetuck River from the same unnamed tributary south to the Redding Line: B/AA.

2. Deep Brook from east of Route 25 at Park Lane flowing north then east around the old hospital campus to the Pootatuck River: B/A. Also, an unnamed tributary to Deep Brook near Grand Place flowing easterly to Deep Brook: B/A.

3. Housatonic River forming eastern boundary of Newtown (as Lake Lillinonah and then Lake Zoar): D/B. The severe D rating is due to PCB contaminated bottom sediments.

4. Pequonnock River tributary reaching north into Newtown from Monroe: AA/AA.

5. Pootatuck River from the Monroe Line north to Deep Brook just south of I-84: B/A. Also, Cold Spring Brook from west of the railroad tracks flowing northwesterly to join the Pootatuck River: B/A. Then the Pootatuck River from the confluence with Deep Brook flowing north to the Housatonic River as Lake Zoar: B/B.

6. Taunton Pond: B/A.

7. All other streams in Newtown such as Gelding Brook, Halfway River, Limekiln Brook, North Branch Pootatuck, Pond Brook, etc: A/A.

Redding, CT Water Supply Resource Inventory

REDDING, CT WATER SUPPLY AQUIFERS

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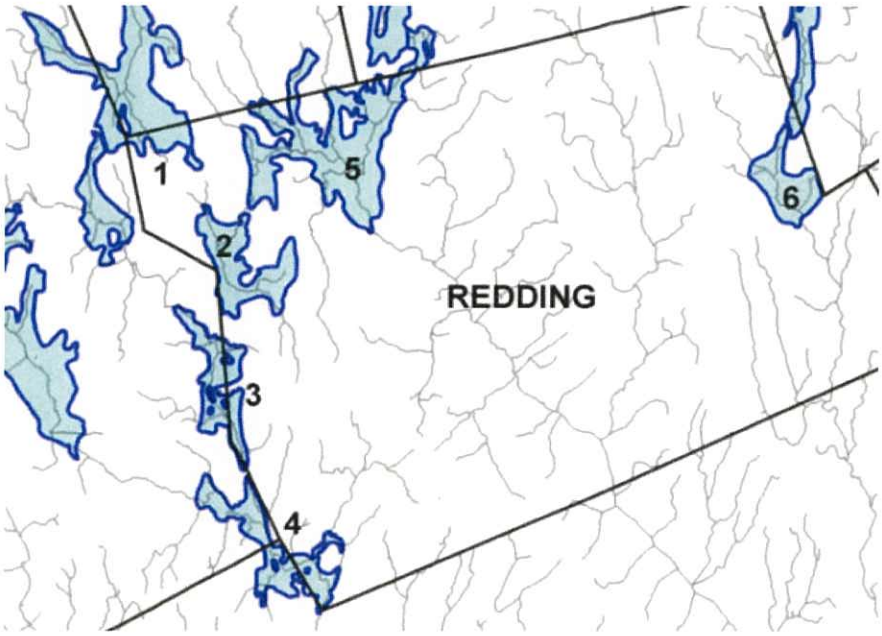


1) Sugar Hollow Aquifer: At the very northwesternmost corner of Redding is a small part of the **Sugar Hollow Aquifer**, the bulk of which lies east of Route 7 within Danbury and a lesser portion within Ridgefield.

2) Umpawaug Pond Aquifer: Then to the south and bordering Ridgefield is the **Umpawaug Pond Aquifer**, north of Topstone Road and and east of Simpaug Turnpike.

3) Simpaug Aquifer: Continuing south down Route 7 is the **Simpaug Aquifer**. It is centered on the intersection of Route 7 with Simpaug Turnpike in Ridgefield, with parts extending easterly into Redding.

4) Branchville Aquifer: Then further to the south, in the Georgetown Area, is found the **Branchville Aquifer**, shared with Ridgefield and Wilton.

5) Upper Saugatuck Aquifer: Along the Saugatuck River and Route 53, just east of West Redding Center, is the **Upper Saugatuck Aquifer.**

6) Aspetuck Valley Aquifer: On the eastern edge of Redding near Newtown, crossed by Valley Road and near the Aspetuck River, is the **Aspetuck Valley Aquifer**.

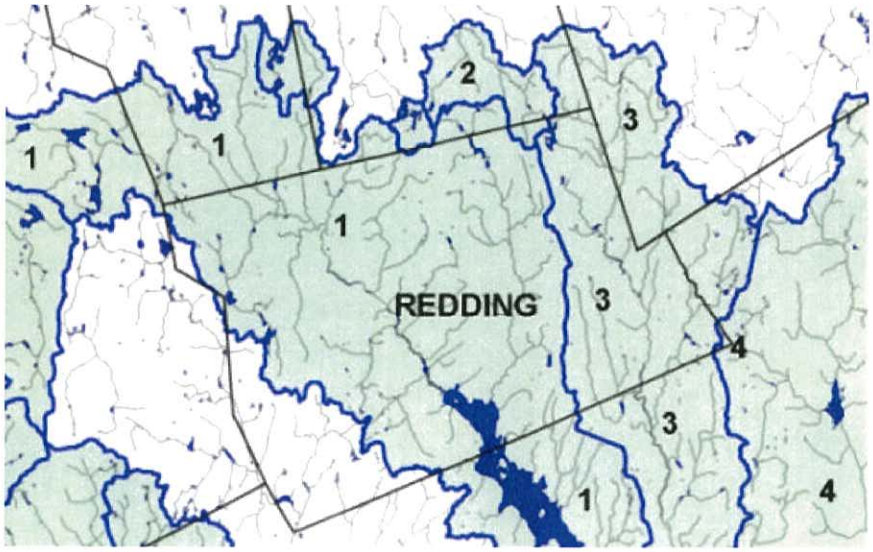
REDDING, CT EXISTING AND POTENTIAL WATER SUPPLY WATERSHEDS

Whereas 25% of the Region's total land area lies within existing water supply watersheds, 87% of the Town of Redding is so designated. This is the highest municipal percentage in the Region, followed by 62% of the land area of Ridgefield and 42% of Danbury.

The southward runoff from Redding's water supply watersheds contributes greatly to the safe yield of the Aquarion Water Company. note that the Norwalk River Watershed in western Redding also flows south, but that there are no plans to convert it to water supply use. However, some **historic discussion** of that option has been preserved. A **map of the entire Norwalk River Watershed** from the Norwalk River Watershed Initiative group is available, showing its relationship to western Redding.

The sole public water supply in Redding arrives from the south via a regional pipeline. A 12/8/2000 CT DEP diversion of water application reads: "The applicant proposed to construct a pipeline and pump station to divert a maximum of 1.9 million gallons of water per day from the BHC Main System to the Georgetown section of Redding and Ridgefield for the purpose of providing public water supply.

The diversion will supply up to a maximum of 1.15 million gallons of water per day to Ridgefield and a maximum of 0.24 million gallons of water per day to the Georgetown section of Redding. The proposed activity will affect the Saugatuck, Aspetuck, and Mill Rivers, and Clicker Brook."



According to Redding's 1998 Town Plan "The runoff from about nine-tenths of Redding's land and water surface either directly or potentially recharges public drinking water supplies. The Saugatuck, Aspetuck and Hemlock Reservoirs, which receive streamflow directly from Redding (as well as Easton and Weston) and store over 16 billion gallons, supply about half of the total water consumed in the populous coastal towns to the south."

1) Saugatuck River Watershed: All of the Saugatuck River Watershed, except for a small portion tributary to the West Branch, flows to the Saugatuck Reservoir straddling the Redding-Weston line. This area totals to about 13,600 acres, or about 75% of Redding's land area.

Route 53 bridge over the Saugatuck River

The **highly scenic** Saugatuck Reservoir became operational in 1942 and is owned by the Aquarion Water Company.

2) Wolf Pit Brook Watershed: State policy identifies the northward running Wolf Pit Brook Watershed into Bethel as a potential future source. The **Wolf Pit Brook Watershed** has only a very minor presence in Redding and flows northward from the Sunset Hill Road area.

3) Aspetuck River Watershed: All of the Aspetuck River Watershed in Redding, the easternmost quadrant of the Town, drains south to the Aspetuck Reservoir in Easton and Fairfield. Some of this drinking water is then pumped back up gradient into the Region, to Ridgefield, CT.

4) Mill River Watershed: The southeastern tip of Redding, only about 45 acres, is located in the Mill River Watershed flowing toward the Easton Reservoir in Easton. Landmarks are small sections of North Park Avenue and Rock House Road at the Easton Town Line.

CT DEP CLASSIFICATION OF STREAMS IN REDDING

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As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

The DEP seeks to bring every water body in the State to a minimum classification of "B" or better, which would not be suitable for human consumption without treatment, but could be suitable for recreational use, fish and wildlife habitat, agricultural and industrial supply, and other legitimate uses.

There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to Redding is summarized below:

Class AA: Designated uses are existing or proposed drinking water supply, fish and wildlife habitat, some recreational use, agricultural and industrial supply. Discharges severely restricted.

Class A: Designated uses is potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges severely restricted. No reclassification of A or AA allowed down to B.

Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Aspetuck River tributary that is unnamed and flowing from the north end of the old Redding Landfill entering Newtown easterly towards the Aspetuck River: B/AA.

Then the main stem of the Aspetuck River from this point south to the Easton Line (including two small tributaries, from south the end of old Redding Landfill, and from the Newtown Line southwesterly to east of Valley Road #2): B/AA.

Also, a tributary that joins the Aspetuck in Easton that cuts through easternmost Redding via Lyons Swamp north to the old Easton Landfill: B/AA.

2. Chestnut Ridge Reservoir tributary reaching south into Redding from Bethel: AA/AA.

3. Mill River tributary entering from Easton: AA/AA.

4. Norwalk River in the Georgetown Area, entering from Wilton and flowing south to again cross the Wilton Line: B/B.

5. Saugatuck River and tributaries: AA/AA.

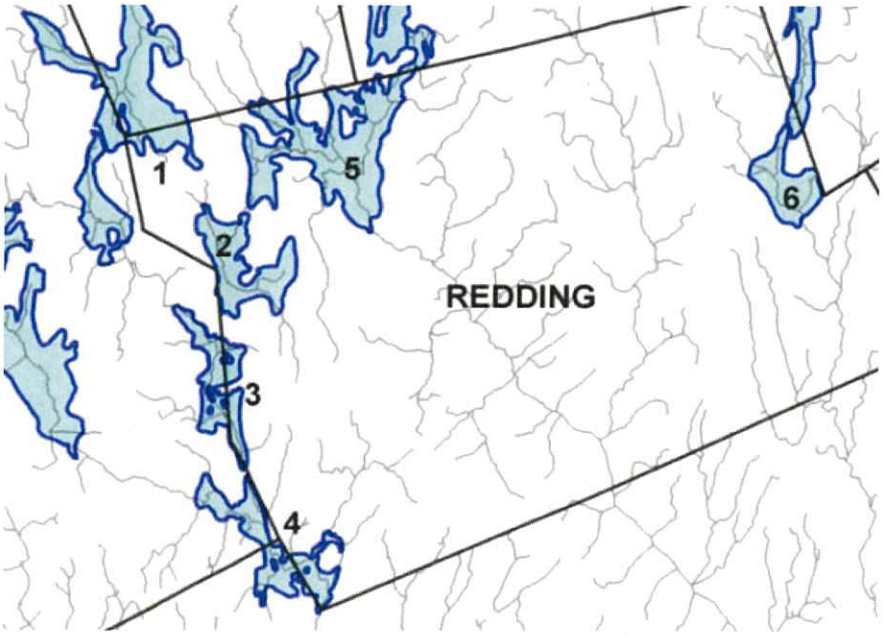
6. Wolf Pit Brook and tributaries reaching south into Redding from Bethel: A/AA.

7. All other streams in Redding such as Gilbert Bennett Brook, West Branch Saugatuck River, etc: A/A.

Redding, CT Water Supply Resource Inventory

REDDING, CT WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers and water supply watersheds. **Redding's and the other nine** have been copied and placed into one regional file to facilitate comparisons.



1) Sugar Hollow Aquifer: At the very northwesternmost corner of Redding is a small part of the **Sugar Hollow Aquifer**, the bulk of which lies east of Route 7 within Danbury and a lesser portion within Ridgefield.

2) Umpawaug Pond Aquifer: Then to the south and bordering Ridgefield is the **Umpawaug Pond Aquifer**, north of Topstone Road and and east of Simpaug Turnpike.

3) Simpaug Aquifer: Continuing south down Route 7 is the **Simpaug Aquifer**. It is centered on the intersection of Route 7 with Simpaug Turnpike in Ridgefield, with parts extending easterly into Redding.

4) Branchville Aquifer: Then further to the south, in the Georgetown Area, is found the **Branchville Aquifer**, shared with Ridgefield and Wilton.

5) Upper Saugatuck Aquifer: Along the Saugatuck River and Route 53, just east of West Redding Center, is the **Upper Saugatuck Aquifer.**

6) Aspetuck Valley Aquifer: On the eastern edge of Redding near Newtown, crossed by Valley Road and near the Aspetuck River, is the **Aspetuck Valley Aquifer**.

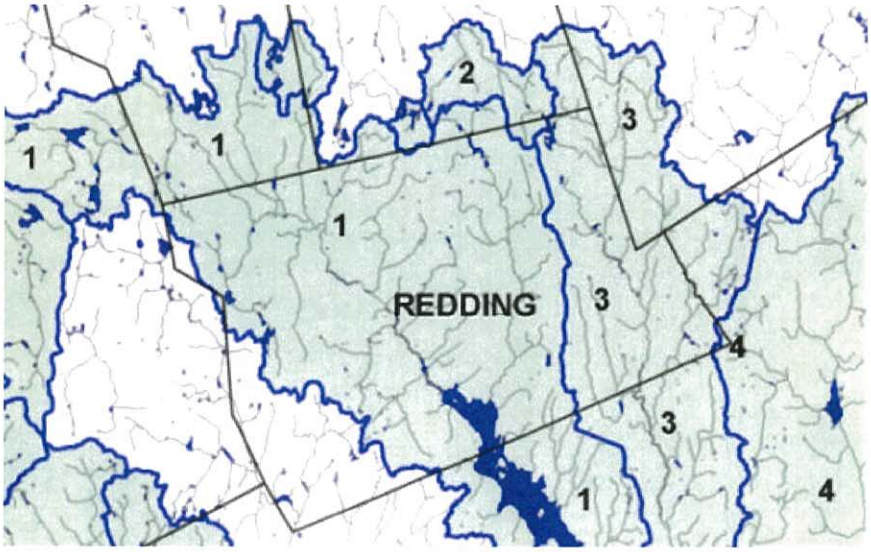
REDDING, CT EXISTING AND POTENTIAL WATER SUPPLY WATERSHEDS

Whereas 25% of the Region's total land area lies within existing water supply watersheds, 87% of the Town of Redding is so designated. This is the highest municipal percentage in the Region, followed by 62% of the land area of Ridgefield and 42% of Danbury.

The southward runoff from Redding's water supply watersheds contributes greatly to the safe yield of the Aquarion Water Company. note that the Norwalk River Watershed in western Redding also flows south, but that there are no plans to convert it to water supply use. However, some **historic discussion** of that option has been preserved. A **map of the entire Norwalk River Watershed** from the Norwalk River Watershed Initiative group is available, showing its relationship to western Redding.

The sole public water supply in Redding arrives from the south via a regional pipeline. A 12/8/2000 CT DEP diversion of water application reads: "The applicant proposed to construct a pipeline and pump station to divert a maximum of 1.9 million gallons of water per day from the BHC Main System to the Georgetown section of Redding and Ridgefield for the purpose of providing public water supply.

The diversion will supply up to a maximum of 1.15 million gallons of water per day to Ridgefield and a maximum of 0.24 million gallons of water per day to the Georgetown section of Redding. The proposed activity will affect the Saugatuck, Aspetuck, and Mill Rivers, and Clicker Brook."



According to Redding's 1998 Town Plan "The runoff from about nine-tenths of Redding's land and water surface either directly or potentially recharges public drinking water supplies. The Saugatuck, Aspetuck and Hemlock Reservoirs, which receive streamflow directly from Redding (as well as Easton and Weston) and store over 16 billion gallons, supply about half of the total water consumed in the populous coastal towns to the south."

1) Saugatuck River Watershed: All of the Saugatuck River Watershed, except for a small portion tributary to the West Branch, flows to the Saugatuck Reservoir straddling the Redding-Weston line. This area totals to about 13,600 acres, or about 75% of Redding's land area.

Route 53 bridge over the Saugatuck River

The **highly scenic** Saugatuck Reservoir became operational in 1942 and is owned by the Aquarion Water Company.

2) Wolf Pit Brook Watershed: State policy identifies the northward running Wolf Pit Brook Watershed into Bethel as a potential future source. The **Wolf Pit Brook Watershed** has only a very minor presence in Redding and flows northward from the Sunset Hill Road area.

3) Aspetuck River Watershed: All of the Aspetuck River Watershed in Redding, the easternmost quadrant of the Town, drains south to the Aspetuck Reservoir in Easton and Fairfield. Some of this drinking water is then pumped back up gradient into the Region, to Ridgefield, CT.

4) Mill River Watershed: The southeastern tip of Redding, only about 45 acres, is located in the Mill River Watershed flowing toward the Easton Reservoir in Easton. Landmarks are small sections of North Park Avenue and Rock House Road at the Easton Town Line.

CT DEP CLASSIFICATION OF STREAMS IN REDDING

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

The DEP seeks to bring every water body in the State to a minimum classification of "B" or better, which would not be suitable for human consumption without treatment, but could be suitable for recreational use, fish and wildlife habitat, agricultural and industrial supply, and other legitimate uses.

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1. Aspetuck River tributary that is unnamed and flowing from the north end of the old Redding Landfill entering Newtown easterly towards the Aspetuck River: B/AA.

Then the main stem of the Aspetuck River from this point south to the Easton Line (including two small tributaries, from south the end of old Redding Landfill, and from the Newtown Line southwesterly to east of Valley Road #2): B/AA.

Also, a tributary that joins the Aspetuck in Easton that cuts through easternmost Redding via Lyons Swamp north to the old Easton Landfill: B/AA.

2. Chestnut Ridge Reservoir tributary reaching south into Redding from Bethel: AA/AA.

3. Mill River tributary entering from Easton: AA/AA.

4. Norwalk River in the Georgetown Area, entering from Wilton and flowing south to again cross the Wilton Line: B/B.

5. Saugatuck River and tributaries: AA/AA.

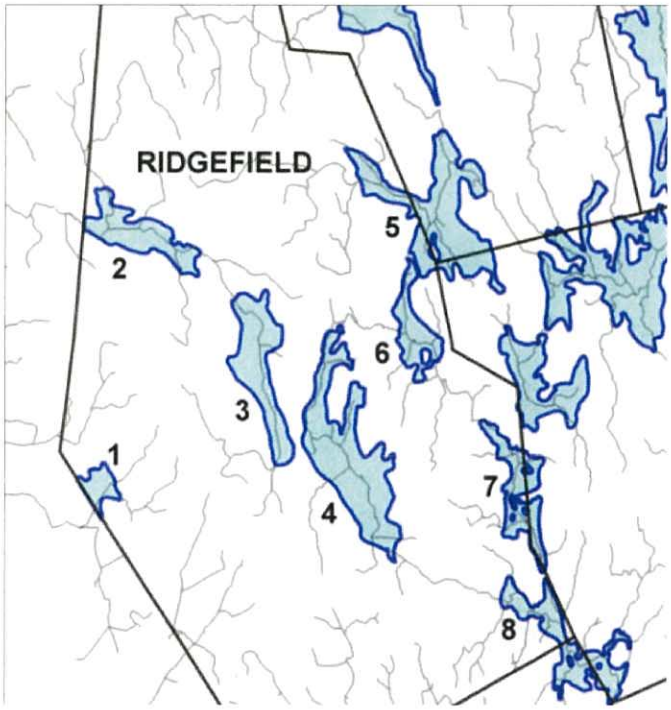
6. Wolf Pit Brook and tributaries reaching south into Redding from Bethel: A/AA.

7. All other streams in Redding such as Gilbert Bennett Brook, West Branch Saugatuck River, etc: A/A.

Ridgefield, CT Water Supply Resource Inventory

RIDGEFIELD, CT
WATER SUPPLY AQUIFERS

Each of the ten municipal plans of conservation and development has policies towards aquifers and water supply watersheds. **Ridgefield's and the other nine** have been copied and placed into one regional file to facilitate comparisons.



1) West Mountain Aquifer: Starting on the west side of the the town, the **West Mountain Aquifer** is adjacent to the New York State line, under the Pumping Station Swamp, south of West Mountain Road (State Route 822) and west of Oscaleta Road.

2) Titicus Valley Aquifer: To the north of the resource above, also on the west side of the Town and adjacent to New York State, located between Route 116 and Mopus Bridge Road and in back of Ridgefield High School is the **Titicus Valley Aquifer**.

3) Upper Titicus Aquifer: Moving southwesterly to central Ridgefield, following the Titicus River Valley upstream, with Route 116 to the west and North Street to the east, is located the **Upper Titicus Aquifer**.

4) Great Swamp Aquifer: Not far away to the east but across the drainage divide and in the Norwalk River Watershed is the **Great Swamp Aquifer**. It lies underneath the Great Swamp, a major geographic feature which defines the eastern edge of Downtown Ridgefield.

5) Sugar Hollow Aquifer: Moving on to the eastern border of the Town, starting to the north is the **Sugar Hollow Aquifer**, crossed by Route 7 and Starrs Plain Road. The bulk of this aquifer is located in adjacent Danbury.

6) Little Pond Aquifer: To the south and not far from the Redding Town Line is the **Little Pond Aquifer**. It lies along Route 7 and the Norwalk River just south of the Routes 7 and 35 intersection commercial area.

7) Simpaug Aquifer: Continuing south down Route 7 is the **Simpaug Aquifer**. It is centered on the intersection of Route 7 with Simpaug Turnpike, with parts extending easterly into Redding.

8) Branchville Aquifer: Then in the southeastern corner of Ridgefield is the **Branchville Aquifer**, part of which is also located in the adjacent Town of Wilton.

it is important to note that in 1995 a consultant to the Ridgefield Planning and Zoning Commission issued a report entitled "Aquifer Protection Study, Progress Report." The primary conclusion was that "although all the stratified-drift aquifers in the Town are not fully defined, it is not cost-effective for the Town to perform additional studies to further characterize the aquifers.

The basis of this conclusion is the fact that very little of the public supply water comes from stratified-drift sources (only two wells at one of the well fields) and most of the newer domestic wells are drilled in bedrock. Some of the public supply wells are drilled through stratified-drift aquifers and completed in the underlying bedrock.

The stratified-drift are apparently not the preferred sources of water due to relatively thin saturated thicknesses, limited watershed areas, fine-grained zones within the aquifers and, in some cases, contamination. ...Due to the limited watershed areas, DEP permits for wells in stratified drift could be difficult to obtain due to potential impacts on aquatic habitats."

Continuing, the State has a mandatory program that requires recharge area mapping (Level A and Level B) be performed for all wells completed in stratified drift that supply water to more than 1,000 people, and municipalities must develop aquifer protection ordinances for these recharge are areas. However, public supply wells completed in bedrock and domestic wells are not covered by the DEP requirements.

The only wells that the DEP will likely require mapping for are the two stratified-drift wells in the Oscaleta well field {in the West Mountain Aquifer}. Therefore, for most of the Town, there is no State regulatory requirement that aquifer protection regulations be adopted; however, municipalities are certainly able to go beyond the DEP requirements, as Ridgefield has done."

The consultant then "recommended that the Town revisit the aquifer protection regulations and consider baseline actions that will protect bedrock aquifers in the Town of Ridgefield, keeping in mind that the primary sources of water for the residents of Ridgefield are the bedrock aquifers.

Note that with the current framework, a risky land use could end up being sited in an area outside an "aquifer protection zone" to supposedly be more protective of Ridgefield's stratified-drift aquifers, but actually end up being closer to municipal or domestic wells that if it had been located in stratified drift.

Also note that one bedrock aquifers are contaminated, it is generally assumed in our profession that they are more difficult to clean up than sand and gravel aquifers."

RIDGEFIELD, CT EXISTING WATER SUPPLY WATERSHEDS

Like Redding, large areas of Ridgefield are in use as water supply watersheds for other communities. Part or all of its three basic drainage orientations are in such use for a total of 62% of the Town's land area.

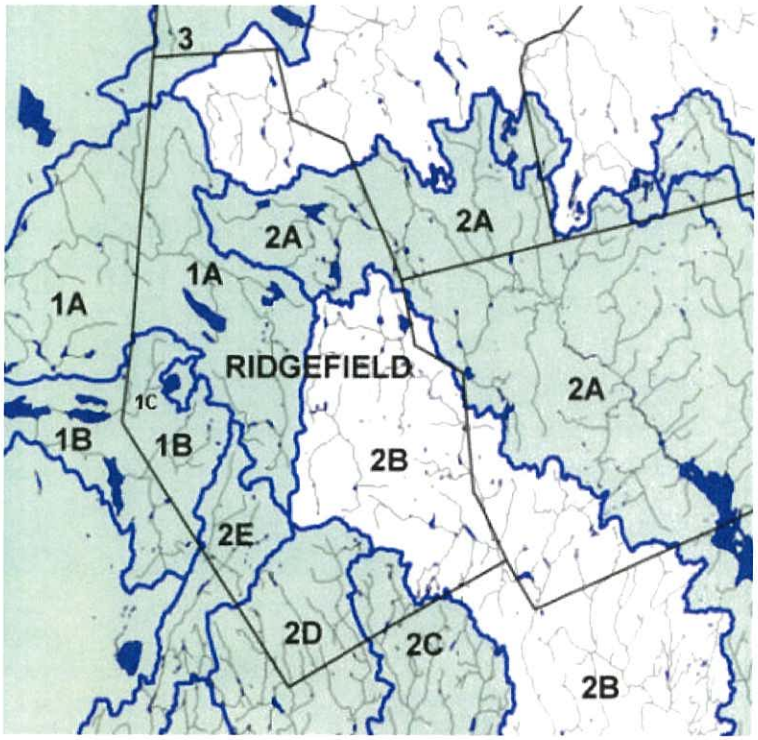
The three basic drainage orientations for Ridgefield are westward towards the Croton River in New York State, southward towards the coast of Long Island Sound, and northeasterly towards the Still River in Danbury. Of the ten municipalities ranked in terms of land area used for water supply watershed, the percentage for Ridgefield is exceeded only by that of Redding.

Only one small watershed tributary to the Round Pond Reservoir is used for water supply within Ridgefield. The remainder exported, mostly to New York City, but also to Danbury.

Most of the public water supply in Ridgefield arrives from the south via a regional pipeline. A 12/8/2000 CT DEP diversion of water application reads: "The applicant proposed to construct a pipeline and pump station to divert a maximum of 1.9 million gallons of water per day from the BHC Main System to the Georgetown section of Redding and Ridgefield for the purpose of providing public water supply.

The diversion will supply up to a maximum of 1.15 million gallons of water per day to Ridgefield and a maximum of 0.24 million gallons of water per day to the Georgetown section of Redding. The proposed activity will affect the Saugatuck, Aspetuck, and Mill Rivers, and Clicker Brook."

Revisions to the diversion permit were being approved by CT DEP as of 8/2005, such that the Ridgefield figure of 1.15 million gallons per day was being increased to 1.30 million and the Georgetown figure of 0.24 was increased to 0.48 million gallons per day.

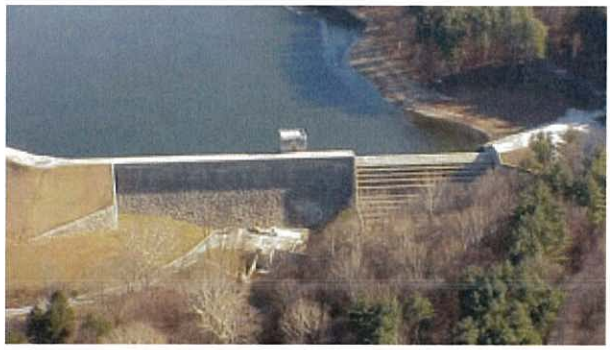


1) Croton River Watershed: All of the Croton River Watershed in Ridgefield, draining westerly into adjacent New York State, is in use as a water supply resource. This use of Ridgefield's water by New York City dates from 1842.

The three divisions of the Croton Watershed in Ridgefield are that 1A) drained by the Titicus River, then 1B) just to the south by the Waccabuc River tributary to the Cross River, and 1C) the very small Round Pond sub - watershed within the Waccabuc Watershed which is pumped easterly our of the Waccabuc basin for use as water supply in Ridgefield.

1A) The **Titicus River** has its source in central Ridgefield, then flows north westward along the north side of Route 116 out of Ridgefield into North Salem, N.Y. It then feeds into the Titicus Reservoir located in North Salem, then into the Croton Reservoir serving New York City.

This drainage occupies 5,130 acres in Ridgefield, more than one third of the total acreage of the Town.



The Titicus Reservoir in New York State is recharged in part by waters from Ridgefield, CT

1B) The **Waccabuc River** tributaries in west central Ridgefield drain to the Cross River Reservoir in New York State. Like the Titicus River to its north, this part of the same Croton Reservoir system which provides drinking water to New York City. Like the Titicus River, the source of the Waccabuc River is in Ridgefield.

The Cross River Reservoir in New York State is recharged in part by waters from Ridgefield, CT

1C) By a letter dated 3/10/03, the CT DEP approved water diversion permit #199902409 for the Aquarion Water Company of Connecticut that authorized the withdrawal of a maximum of 720,000 gallons of surface water per day from the **Round Pond Reservoir**. The permit also states that "the permittee shall not at any time drawdown the water surface elevation of Round Pond below elevation 771.6 above mean sea level."

2) Coastal River Watersheds: The Coastal Rivers Watersheds in Ridgefield are oriented south toward Long Island Sound. They are, from east to west, 2A) the Saugatuck River and the 2B) Norwalk River main branch.

Continuing, 2C) the Comstock Brook Watershed subbranch of the Norwalk River Watershed, 2D) Silvermine River Watershed subbranch of the Norwalk River Watershed, and then 2E) the Mill River Watershed, with passes through a small part of New York State on its way to Stamford.

2A) The runoff from the approximately 2,610 acres of the **Saugatuck River Watershed** in northeastern Ridgefield first flows east into Danbury, then southeasterly into Redding before it contributes to the supply of the Saugatuck Reservoir in Redding and Easton.

2B) Of these five coastal basins, only the main branch of the **Norwalk River Watershed** is not in use nor planned for water supply purposes, although some **historic discussion** of that possibility is preserved. A **map of the entire Norwalk River Watershed** from the Norwalk River Watershed Initiative group is available.

2C) To the west the **Comstock Brook Watershed** tributary to the Norwalk River flows south-southeasterly into the Town of Wilton, draining about 640 acres of Ridgefield. Once in Wilton the water is diverted from a point immediately south of the confluence of Comstock Brook and the outlet from Pope's Pond further south to the South Norwalk Reservoir, which is also located in Wilton.

This water supply watershed comprises part of the holdings of the *Second* Norwalk Taxing District. These Second District watersheds as a group are evaluated by a CT DPH **assessment report**.

2D) The headwater in the **Silvermine River Watershed,** also a tributary to the Norwalk River, flow to the south to the Brown's Reservoir and Scott's Reservoir, located in the Town of Lewisboro, NY. About 2,140 acres of land in Ridgefield are drained into these two reservoirs.

These facilities, in turn, feed into impoundments owned by the **Norwalk *First* District Water Department**. These First District watersheds as a group are evaluated by a CT DPH **assessment report**.

2E) The **Mill River Watershed** begins in Ridgefield, then flows south by southwest, draining about 1,250 acres of the Town, into the Mill Reservoir in adjacent Pound Ridge, New York. The water then flows to the Laurel Reservoir on the Stamford-New Canaan Line, part of the holdings of the Aquarion Water Company and oriented towards Stamford.

3) Lake Kenosia Watershed: The discharge of the approximately 220 acres of Lake Kenosia Watershed at the northwestern tip of Ridgefield, primarily the west side of the Keeler Drive neighborhood northerly via the small Sawmill River, is oriented northeasterly toward Lake Kenosia, formed by an impoundment in the Still River in Danbury. Lake Kenosia became a supplemental public water supply source for that City in 1984.

Danbury's Lake Kenosia diversion is used as a flood skimming operation and therefore Lake storage is not utilized in the calculations of safe yield. The pump station has the capacity to divert up to 9 million gallons per day from Lake Kenosia to West Lake Reservoir, but only during the non-swimming season, and only when West Lake Reservoir does not fill from other water supply watersheds.

RIDGEFIELD, CT POTENTIAL WATER MAIN CONNECTIONS TO DANBURY

Water Main Connection to Danbury: As shown in this 2006 study, a potential **interconnection with Danbury has been considered** but does not appear likely.

AQUARION WATER COMPANY SERVICE AREA IN RIDGEFIELD

Proceed to the report of the Aquarion Company **concerning service to Ridgefield**.

CT DEP CLASSIFICATION OF STREAMS IN RIDGEFIELD

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There is a non degradation policy such that stream now AA or A cannot be reduced to B to allow discharges from industries or treatment plants. The classification system and application to Ridgefield is summarized below:

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Class B: Designated uses are varied and include discharges from industrial and municipal wastewater treatment facilities providing Best Available Treatment and Best Management Practices are applied. All water bodies must eventually reach the minimum standards of the B classification.

Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. **Comstock Brook** and tributaries reaching into Ridgefield from Wilton: AA/AA.

2. **Hudson River (Croton) tributaries** reaching into Ridgefield from New York State and including the Titicus River, Waccabuc River, Round Pond and their tributaries: AA/AA.

3. **Kenosia Lake tributaries** reaching into the northwest corner of Ridgefield from Danbury: AA/AA.

4. **Mill River and tributaries** reaching into Ridgefield from New York State: AA/AA.

5. **Norwalk River** flowing from east of the Ridgefield Sewer Treatment Plant near Downtown Ridgefield to Wilton Town Line: B/B.

6. **Saugatuck Reservoir tributaries** reaching into Ridgefield from Danbury and Redding: AA/AA.

7. **Silvermine River and tributaries** reaching into Ridgefield from Wilton and New York State: AA/AA.

8. **All other streams in Ridgefield** such as Cooper Pond Brook, etc: A/A.

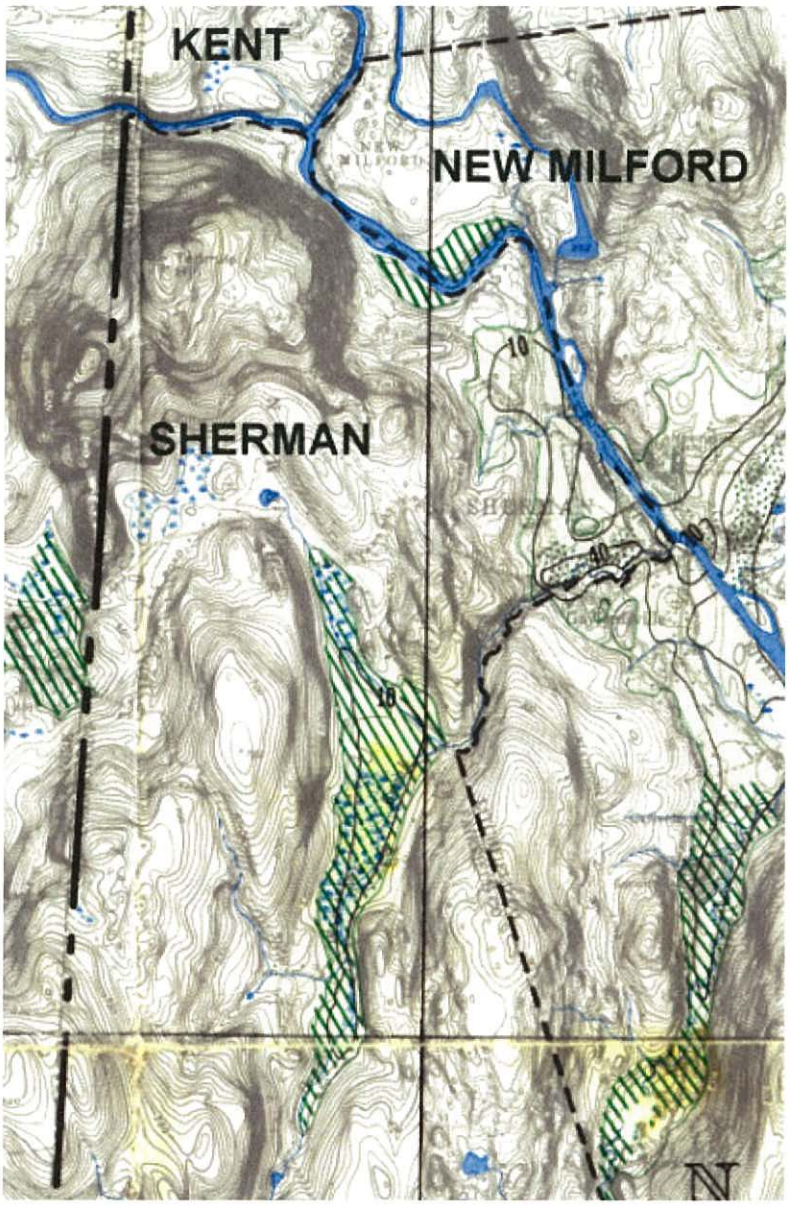
Sherman, CT Water Supply Resource Inventory

SHERMAN, CT
WATER SUPPLY AQUIFERS

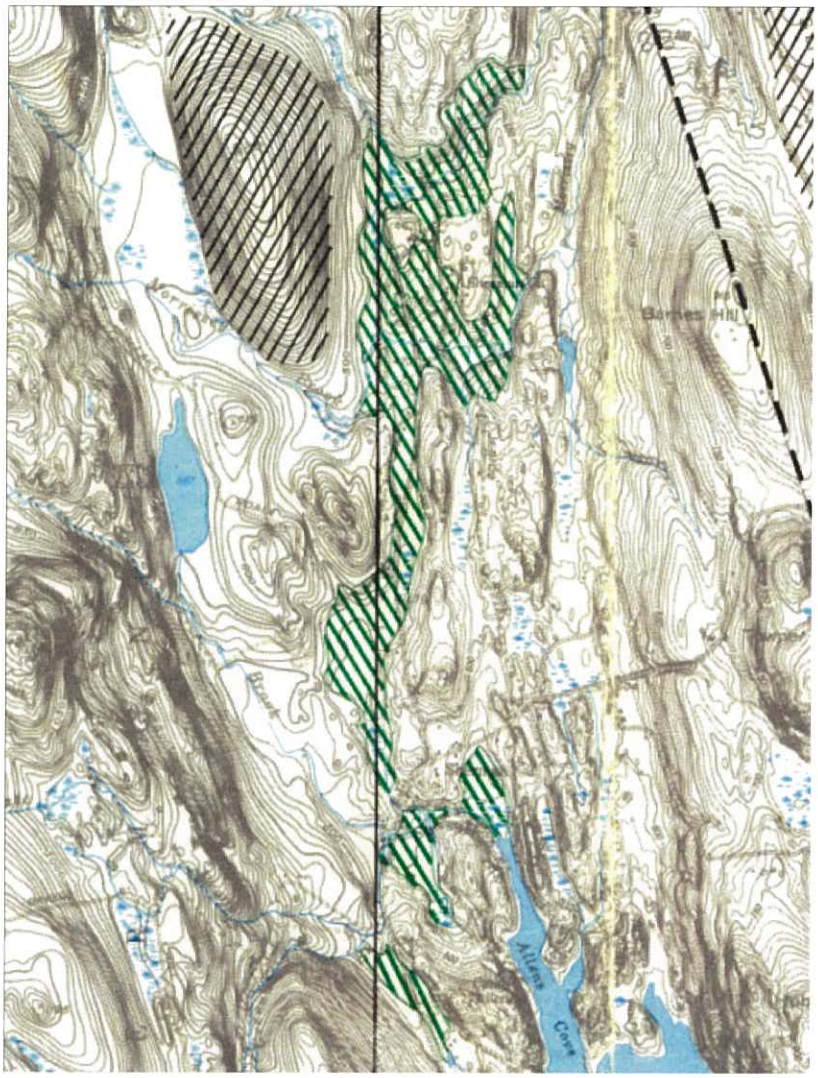
1. Minor Aquifers: There are only small aquifers in Sherman. This is not surprising, as the Town is in an upland area, for the most part well away from the major river valleys. These small deposits are identified on the three maps below.

Access the legend for the maps below
Source of Map: Water Resources Inventory of CT, Part 6, Upper Housatonic River Basin, by the U. S. Geological Survey and the CT Department of Environmental Protection, 1972.

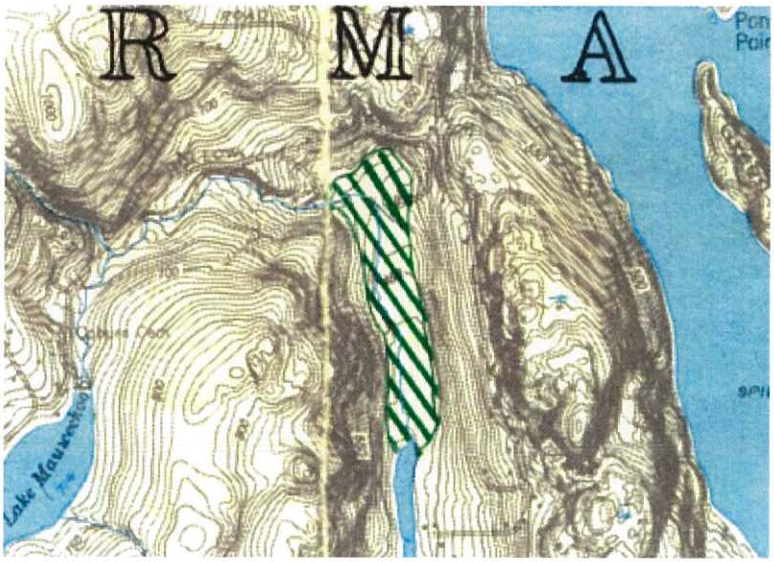
THIS IS AN EARLY (1972) GENERALIZED MAP OF ESTIMATED AQUIFER BOUNDARIES ONLY;
COMPARE IT TO LATER DATE USGS SURFICIAL MATERIALS MAP



The center of the map above identifies a stratified drift aquifer deposit along north flowing Wimisink Brook, to the west of Route 39 and extending north to Route 55. After Winisink Brook turns east (serving there as the Sherman - New Milford Town Line) and near its confluence with the Housatonic River is found the **Gaylordsville Aquifer** extending into New Milford.



The main feature on the map above is a linear stratified drift deposit running northerly from Sherman Center along Route 39 and ending between Route 39 and Church Road. There are also a few minor deposits in the vicinity of and south of the Sherman Center.

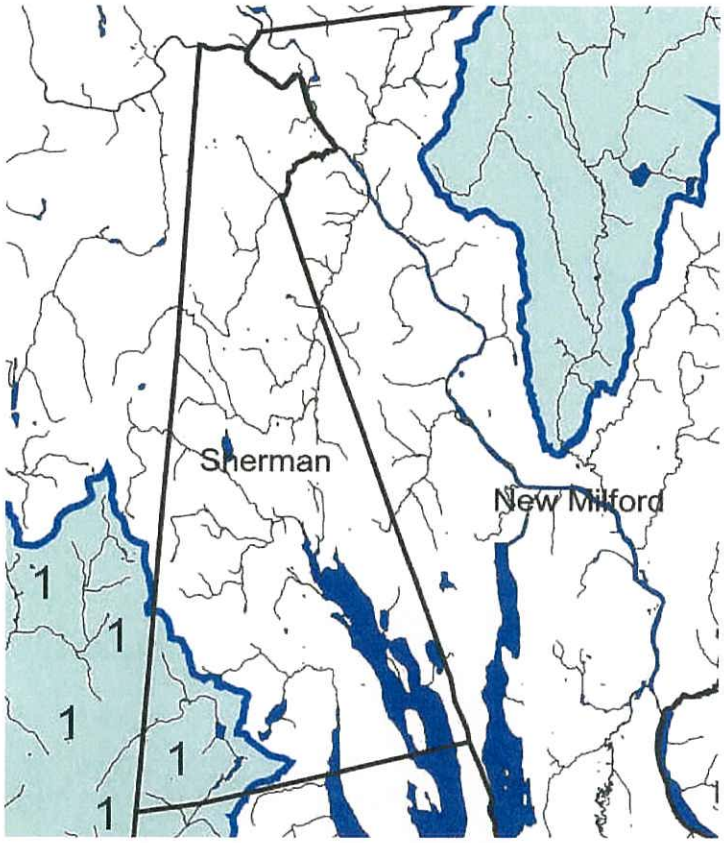


The remaining estimated aquifer deposit in the municipality is found at the north end of Squantz Pond, extending northerly to approximately Leach Hollow Road.

SHERMAN, CT EXISTING AND POTENTIAL WATER SUPPLY WATERSHEDS

According to the 2001 Sherman Town Plan "Most of the Town's surface area is part of a proposed public water supply watershed for the State of Connecticut and public water supply watershed for the State of New York.

Whenever significant development activities are proposed within the two major watersheds present in the Town of Sherman, the development guidelines of the authorities responsible for those watersheds shall be taken into account."



1. Croton River Watershed: The southwestern corner of Sherman, about 1,590 acres, drains southwesterly via Quaker Brook into New Fairfield, then west into Patterson, N.Y. via Haviland Hollow Brook, and on into the East Branch of the Croton River, all part of the East Branch Croton River Watershed.

The East Branch Reservoir in New York State is recharged in part by waters from southwestern Sherman, CT

The East Branch Croton River then drains into the East Branch Reservoir in Southeast, NY, and from there to the Croton Reservoir for consumption in New York City and environs. This was one of the first water supply watersheds in the United States, dating from 1842.

CT DEP CLASSIFICATION OF STREAMS IN SHERMAN

The Connecticut Department of Environmental Protection (CT DEP) has developed **water quality standards** in conjunction with the principles of the federal Clean Water Act.

As a result each stream or water body in the Region has two classifications, one for existing use, and one for ultimate future use, written in a existing/future format such as "B/A" or "A/AA". The highest standards are reserved of existing and potential water supply areas, which are AA.

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Classes C and D: Indicates unacceptable quality, the goal is Class B or Class A and DEP will issue orders to require improvement.

1. Candlewood Lake due to wastewater pumped up from the Housatonic River: B/B.

2. Housatonic River forming part of Sherman's boundary with New Milford: C/D. The severe D rating is due to PCB contaminated bottom sediments.

3. Hudson River tributaries reaching into Sherman from New York State: AA/AA.

4. Ten Mile River from the New York State Line east to the Housatonic River: B/B.

5. All Other streams in Sherman such as Morrissey Brook, Sawmill Brook, Wimisink Brook, etc: A/A.