

SEP 24 2018

Thomas J. Steinke
1673 Melville Avenue
Fairfield CT 06825

September 19, 2018

Betsey Wingfield, Bureau Chief
Connecticut Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Water Planning & Management Division
79 Elm Street
Hartford, CT 06106-5127

Re: Comment on the Proposed Stream Flow Classifications for the Housatonic, Hudson and Southwest Coastal River Basins

Dear Ms. Wingfield:

These comments are offered following my review of the proposed stream flow classification map affecting Fairfield CT now pending before the CTDEEP.

In sum, the map is fairly well drafted and should be adopted after clarifying conditions in the area of Morehouse Brook at the Easton and Fairfield boundary at Morehouse Highway and North St. (Beers Rd. in Easton).

This area of the proposed stream flow classification for Morehouse Brook is designated class 1, but such designation apparently does not reflect its location downstream of the registered Morehouse Brook diversion of the Aquarion Water Company, or the chain of dedicated Fairfield conservation wetland open space properties immediately downstream, or the receiving waters of the Mill River. Some of the omissions made in classifying this section of the brook (Stream Segments ID: 102,002,063; and ID: 102, 001, 995) may have been the result of the data being omitted from the base maps used by the CTDEEP to support the proposed classifications, e.g., the USGS National Hydrography Dataset (NHD) for Connecticut does not include the diversion of the Morehouse brook; the CTDEEP Map of Parcels for Protected Open Space does not include the downstream Fairfield wetland open space properties, and therefore were understandably omitted in the DEEP's evaluation process.

Overview:

1. By way of background, I should note that, while now retired, my interest in this subject has developed from nearly forty-three years of experience as the former conservation director for the Town of Fairfield. It is more important to note that Fairfield is host to the Aquarion Water Company and its long-term registered diversions of water out of the Aspetuck River at the Aspetuck Reservoir, and out of the Mill River at the Easton Reservoir, at the Morehouse Brook Diversion, at the Hemlocks Reservoir, and, the hydraulic company's ability to pump the

water out of Fairfield's Mill River aquifer from its Brookside Drive well field downstream of the aforementioned diversions.

2. CTDEEP's proposed stream flow classification map depicts the Morehouse Brook as a Class 1 free-flowing stream from its headwaters in Easton at Banks North Road downstream through Fairfield's Hardy Open Space swamp to about 500 ft. south of North Street where the brook is classified as Class 2. In actuality, Morehouse Brook is diverted out of its channel into the East Branch of Cricker Brook (and thence into the Hemlocks Reservoir) about 600 ft. north of North St. and approximately 100 ft. west of Morehouse Highway. If you look carefully at the DEEP proposed map you can see a faint unlabeled light gray 'shadow' of the actual diversion channel crossing the watershed divide along the contour at this location.

The chain of downstream dedicated conservation open space properties owned by the Town of Fairfield contain the truncated Morehouse Brook and include:

- Map 57 Parcel 5, No. 3601 Morehouse Highway, 7.96 acres, extensive wooded swamp;
- Map 57 Parcel 1A, No. 3265 Morehouse H., 5 acres, upland and channel/floodplain;
- Map 57 Parcel 1, No. 3161 Morehouse H., 6 acres, upland and channel/floodplain.

In sum, the proposed stream flow classification map fails to reflect the correct classification, flow diversion, and channel location(s) of the Morehouse Brook in this area as well as the dedicated conservation open space properties supported by Morehouse Brook.

3. The subject of the Morehouse Brook diversion arose some years ago during the Aquarion Water Company's application to divert additional water out of the Mill River system to the Ridgefield -- Georgetown area. At that time, I examined the files and archival records of the Aquarion Water Company/Kelda/Bridgeport Hydraulic Company as well as the CTDEP and CT Dept. of Health and found that nearly every document filed by the water company (water supply plans, safe yield analyses, water diversion registration, diversion applications) described a different purpose and configuration of the Morehouse Brook Diversion. This uncertainty complicated the review of Aquarion's Ridgefield diversion application to the point where the parties sought to separate the issues.

As noted in the enclosed document, Fairfield addressed the regulatory uncertainty of the Morehouse Brook Diversion during its negotiations with the Aquarion Water Company concerning the Ridgefield diversion application then pending before the CTDEP in 2007; with all three parties agreeing to temporarily separate the Morehouse Brook diversion from the Ridgefield discussions and seek to resolve Morehouse in the future. The letter to Fairfield First Selectman Flatto from Aquarion Vice-President Howard J. Dunn, dated June 19, 2007 (enclosed), formally outlines this understanding and the parties' collective desire to work with the CT DEEP, CT Public Health Dept., the Town of Fairfield, and Aquarion Water Company. If acted upon today, the proposed Connecticut Streamflow Classifications for the Southwest Coastal drainage basins could provide all parties with an opportunity to renew their efforts to

improve water quality and quantity in the Mill River and correct the stream flow misclassification for Morehouse Brook.

Further, in light of the uncertain history and regulatory status of this flow diversion by the hydraulic company:

a. What is the CTDEEP's rationale for depicting two channel locations for the same stream flow?

b. Is it because the on-going diversion is intended to be only a partial condition, whereby the baseflow is passed downstream to the Mill River in its natural channel with the subsequent diversion of higher water flows into the East Branch of Cricker Brook to the Hemlocks Reservoir? This was thought to be the case where the severe drought of the 1960s prompted the hydraulic company to modify the dual-flow weir and by-pass the lower Morehouse Brook. In essence, diverting all water flow to the Hemlocks Reservoir, but forgetting to restore the dual-flow water control mechanism following the lifting of the drought emergency.

4. If not diverted to the Hemlocks Reservoir, the Morehouse Brook upper watershed would continue to contribute to the improved water quantity and quality of the Mill River in Fairfield where it is sorely needed – in its Trout Management Area between Easton Reservoir and Fairfield's Lake Mohegan Open Space Area; in Fairfield's Lake Mohegan and Lake Hills Association's Samp Mortar Lake where the water flow is especially needed for contact recreation at the town's Lake Mohegan public beach and the Association's five private swimming beaches which are not reflected in the final Mill River TMDL report; the water flow is needed in the four-mile long Mill River TMDL channel reaches between Samp Mortar Lake and the Easton Reservoir where coliform bacteria (*E. coli*) predictably and adversely affect these summer swimming beaches by periodically forcing their closure due to high bacterial counts.

5. The Morehouse Brook is an important tributary to the diverted Mill River flows and pumped aquifer for which the March 3, 2005 Final Total Maximum Daily Load Analysis for the Mill River, Rooster River, and Sasco Brook was adopted by the CTDEEP and USEPA.

- As stated on page 2 of the final TMDL report, the affected river [CT7108-00_02] reach extends "from the upper end of Samp Mortar Reservoir (Fairfield) upstream to Easton Reservoir (Easton)" It is important to note here that "Samp Mortar Reservoir" used to be a Bridgeport Hydraulic Company reservoir constructed in 1900+/- and subsequently abandoned and developed as Samp Mortar Lake in the 1950s and '60s by the Lake Hills Association for its five recreational swimming beaches on Mill River. This designation as "reservoir" instead of 'lake', implies that no contact recreation occurs in the waterbody and this misnomer may have affected the TMDL conclusions below.

-The TMDL "Impaired Use / Cause is Contact Recreation / Indicator Bacteria" [*E. coli*]; Potential sources of bacteria include Nonpoint sources (Source unknown, Urban Runoff/Storm Sewers) and Point Sources (Regulated Urban Runoff/Storm Sewers [MS4s]).

-Page 4, tables 3 and 4, state that Mill River is a Class A waterbody and that Average Percent (%) Reduction to Meet Water Quality Standards at its monitoring stations require in excess of fifty percent including their implicit Margins of Safety.

The apparent errors of significance in this final TMDL report occur where the report designated

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the Samp Mortar Lake as a 'reservoir' noted on page 2 above; on page 3 where the report states "There are no designated swimming or non-designated swimming areas located in these waterbody segments" [i.e., in the 4-mile reach of the TMDL for Mill River below the Easton Reservoir], and on page 5 where the Margin of Safety discussion notes that "The indicator bacteria criteria used in this TMDL analysis were developed exclusively from data derived from studies conducted at high use public bathing areas (EPA 1986). Therefore, the criteria provide an additional level of protection when applied to water not designated for high use bathing." However, it is to be noted that high use bathing is a specific designated use at the five private swimming beaches in Samp Mortar Lake, as well as the public swimming beach at Fairfield's Lake Mohegan Open Space Area within the TMDL-designated reach. These facts would seem to underscore the need to revisit the Mill River TMDL assumptions, and reinforce the importance of increasing water flow to the TMDL reach from the Morehouse Brook diversion.

6. Proposed Clean Water Act Section 319 Grant: Fairfield is pursuing an EPA 319 NPS Mill River Watershed Based Plan which is expected to reflect the interests of the Towns of Fairfield and Easton as well as the Aquarion Water Company, and affect the Mill River and its tributaries such as Morehouse Brook and its diversion within this proposed stream flow classification.

In conclusion, I recommend, until a final decision is reached by all interested parties in the diversion matter, that the proposed Morehouse Brook stream flow classification be maintained as indicated on the proposed map, and that the Morehouse Brook Diversion currently maintained by the Aquarion Water Company be modified so as to pass the first foot of water flow into the natural brook channel below the diversion, and that flows in excess of one foot in depth pass into the diversion channel to the East Branch of Cricker Brook and Hemlocks Reservoir.

Thank you for the opportunity to comment on the proposed stream flow classifications and please do not hesitate to contact me if you have any questions in this matter.

Sincerely yours,



Thomas J. Steinke

enc: letter from Aquarion to Fairfield First Selectman June 19, 2007

cc: M. Tetreau, Fairfield First Selectman

C. V. Firlotte, President, Aquarion Water Company of Connecticut

B. Carey, Fairfield Conservation Director

Aquarion Water Company
of Connecticut
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Bridgeport, CT 06606
www.aquarionwater.com

Copy
for
Tom S.



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JUN 25 2007
CONSERVATION DEPT.

The Honorable Kenneth A. Flatto
First Selectman
Town of Fairfield
Independence Hall
725 Old Post Road
Fairfield, CT 06824

June 19, 2007

re: Morehouse Brook Diversion

Dear First Selectman Flatto:

During our discussions regarding Aquarion's Diversion Permit Application to increase the quantity of water that can be transferred from our Greater Bridgeport System to the Town's of Redding and Ridgefield Tom Steinke (Fairfield Conservation Director) identified a discrepancy between the description of the Morehouse Brook Diversion in our 2000 Water Supply Plan and actual field conditions. We have corrected this discrepancy in our 2006 Water Supply Plan, submitted to the State in January 2007, and have provided Tom full access to our files to investigate the history of the diversion construction and operation. Unfortunately, as described in our November 3, 2006 memo, the diversion was constructed in approximately 1918 and there are little records regarding its design or operation.

Aquarion understands that the Town has remaining questions regarding Aquarion's rights to operate the Morehouse Brook Diversion in the manner in which it is currently operated. As previously offered, Aquarion would be happy to work together with the Town and the State Departments of Public Health (DPH) and Environmental Protection (DEP) to determine those rights and, if necessary, modify the diversion operations to conform to them.

Sincerely,

A handwritten signature in black ink, appearing to read "H. J. Dunn".

Howard J. Dunn, P.E.
Vice President
Operations and Technology