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March 20, 2025

Meredith Badalucca
Assistant Planner
Town of Montville
310 Norwich-New London Turnpike
Uncasville, CT 06382

Re: Town Engineer's Additional Comment
Applicant/Owner: Cricket's Corner, LLC
Location: 1645 Route 85 – Montville

Mrs. Badalucca,

We have received the additional comment from the Town Engineer and have prepared the following response.

- 1- The Applicant should address changes in runoff volume and impacts downstream, if any. The Engineer pointed to Tables 2 and 3 within the Report to indicate the peak flow rates would be reduced post development. We concur with that. However, it does appear that there are increases in runoff volumes from the site. The Engineer should address impacts downstream from additional runoff volume.

Runoff from the site flows to Latimer Brook after flowing off-site and under Route 85 through an existing culvert. According to StreamStats, Latimer Brook has a contributing area of 8.95 square miles or 5,728 acres. The contributing area of the watershed affected by this project is 12 acres which is 0.2% of the total contributing area to the Brook in that location. Due to the insignificant percentage of the watershed affected by this project, we do not anticipate any negative downstream impacts. In addition, the increase in runoff volume to the existing culvert does not impact capacity of the culvert which is based on peak flow rates and not overall volume.

Chapter 4 of the 2024 Connecticut Stormwater Quality Manual requires volume retention for the Water Quality Volume but does not require a reduction in the runoff volume. Stormwater Management Basins have been designed to retain 100% of the Water Quality Volume as required by the Manual.



In addition, Town of Montville Zoning Regulations sections 16.3.6.c applicable to Special Permit (current application is for Site Plan Approval), requires stormwater runoff retention so as to produce no increase in peak runoff in accordance with the 2004 Stormwater Quality Manual. Consistent with the Manual, this requirement does not address overall volume.

Attached please find the StreamStats report for your review and consideration.

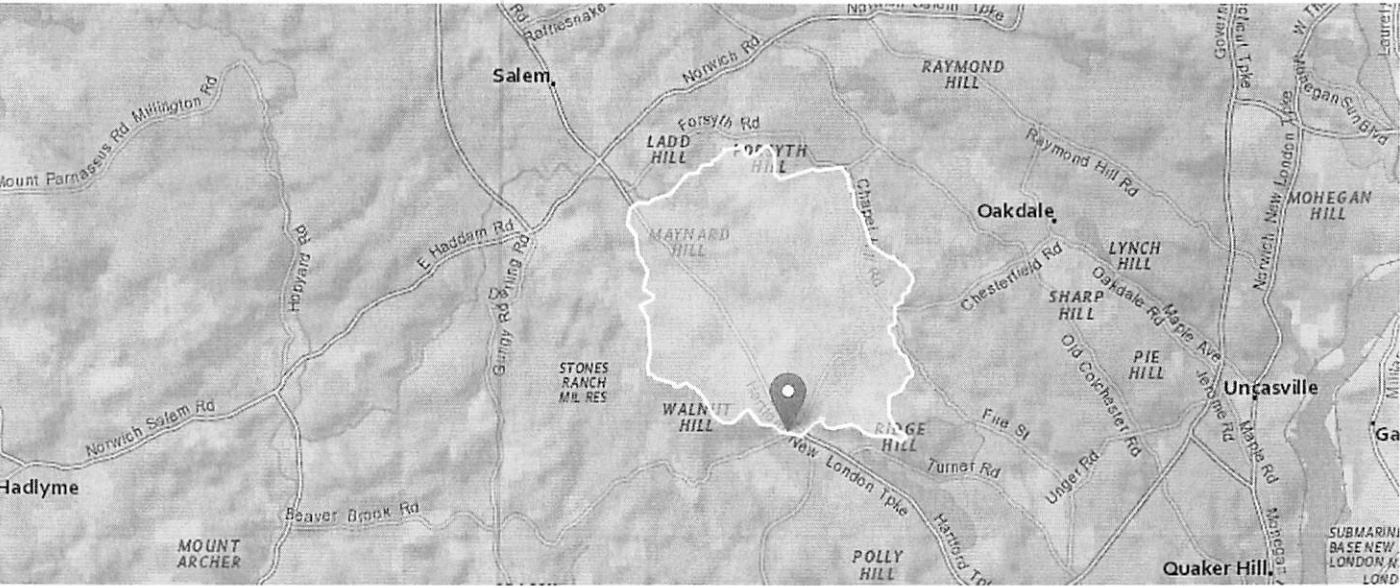
If you have any questions regarding this correspondence or the attached document, please contact me at your convenience.

Sincerely,


Jacob Faulise, EIT

StreamStats Report

Region ID: CT
Workspace ID: CT20250320164450070000
Clicked Point (Latitude, Longitude): 41.42859, -72.22004
Time: 2025-03-20 12:45:59 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	8.95	square miles
I24H100Y	Maximum 24-hour precipitation that occurs on average once in 100 years	7.83	inches
I24H10Y	Maximum 24-hour precipitation that occurs on average once in 10 years	5.08	inches
I24H200Y	Maximum 24-hour precipitation that occurs on average once in 200 years	8.94	inches
I24H25Y	Maximum 24-hour precipitation that occurs on average once in 25 years	6.17	inches
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	3.16	inches
I24H500Y	Maximum 24-hour precipitation that occurs on average once in 500 years	10.41	inches
I24H50Y	Maximum 24-hour precipitation that occurs on average once in 50 years	7	inches
I24H5Y	Maximum 24-hour precipitation that occurs on average once in 5 years	4.25	inches
SSURGOCCDD	Percentage of area with hydrologic soil types C, D, or C/D from SSURGO	0.2967	percent

➤ Peak-Flow Statistics

Peak-Flow Statistics Parameters [Statewide DA only SIR 2020 5054]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.95	square miles	0.69	325

Peak-Flow Statistics Parameters [Statewide Multiparameter SIR 2020 5054]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	8.95	square miles	0.69	325
I24H100Y	24 Hour 100 Year Precipitation	7.83	inches	7.62	9.38
I24H10Y	24 Hour 10 Year Precipitation	5.08	inches	4.86	5.79
I24H200Y	24 Hour 200 Year Precipitation	8.94	inches	8.7	11.22
I24H25Y	24 Hour 25 Year Precipitation	6.17	inches	5.99	7.22
I24H2Y	24 Hour 2 Year Precipitation	3.16	inches	2.77	3.32
I24H500Y	24 Hour 500 Year Precipitation	10.41	inches	10.1	13.64
I24H50Y	24 Hour 50 Year Precipitation	7	inches	6.81	8.3
I24H5Y	24 Hour 5 Year Precipitation	4.25	inches	4	4.7
SSURGOCCDD	Percent soil type C or D from SSURGO	0.2967	percent	0.118	0.945

Peak-Flow Statistics Flow Report [Statewide DA only SIR 2020 5054]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp
Drainage Area Only 50-percent AEP flood	353	ft ³ /s	35
Drainage Area Only 20-percent AEP flood	608	ft ³ /s	35
Drainage Area Only 10-percent AEP flood	821	ft ³ /s	36.3
Drainage Area Only 4-percent AEP flood	1140	ft ³ /s	37.8
Drainage Area Only 2-percent AEP flood	1410	ft ³ /s	39.8
Drainage Area Only 1-percent AEP flood	1710	ft ³ /s	42.4
Drainage Area Only 0.5-percent AEP flood	2050	ft ³ /s	44.4
Drainage Area Only 0.2-percent AEP flood	2570	ft ³ /s	48

Peak-Flow Statistics Flow Report [Statewide Multiparameter SIR 2020 5054]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	300	ft ³ /s	73.4	1230	26.5
20-percent AEP flood	451	ft ³ /s	100	2020	26.3
10-percent AEP flood	569	ft ³ /s	117	2770	28.4
4-percent AEP flood	758	ft ³ /s	141	4070	31.5
2-percent AEP flood	926	ft ³ /s	157	5470	34.3
1-percent AEP flood	1110	ft ³ /s	171	7200	37.1
0.5-percent AEP flood	1310	ft ³ /s	229	7500	40.6
0.2-percent AEP flood	1640	ft ³ /s	306	8800	45

Peak-Flow Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR²: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	ASEp		
Drainage Area Only 50-percent AEP flood	353	ft ³ /s	35		
Drainage Area Only 20-percent AEP flood	608	ft ³ /s	35		
Drainage Area Only 10-percent AEP flood	821	ft ³ /s	36.3		
Drainage Area Only 4-percent AEP flood	1140	ft ³ /s	37.8		
Drainage Area Only 2-percent AEP flood	1410	ft ³ /s	39.8		
Drainage Area Only 1-percent AEP flood	1710	ft ³ /s	42.4		
Drainage Area Only 0.5-percent AEP flood	2050	ft ³ /s	44.4		
Drainage Area Only 0.2-percent AEP flood	2570	ft ³ /s	48		
50-percent AEP flood	300	ft ³ /s	73.4	1230	26.5
20-percent AEP flood	451	ft ³ /s	100	2020	26.3
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2-percent AEP flood	926	ft ³ /s	157	5470	34.3
1-percent AEP flood	1110	ft ³ /s	171	7200	37.1
0.5-percent AEP flood	1310	ft ³ /s	229	7500	40.6
0.2-percent AEP flood	1640	ft ³ /s	306	8800	45

Peak-Flow Statistics Citations

Ahearn, E.A., and Hodgkins, G.A., 2020, Estimating flood magnitude and frequency on streams and rivers in Connecticut, based on data through water year 2015: U.S. Geological Survey Scientific Investigations Report 2020–5054, 42 p. (<https://doi.org/10.3133/sir20205054>)

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Application Version: 4.28.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1