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July 12, 2018

Mr. Denton Butler, Chairman  
Town of New Hartford WPCA  
530 Main Street  
P.O. Box 316  
New Hartford, CT 06057

Subject: Pine Meadow Area Sewer Extension - Prioritization and Cost Summary

Dear Mr. Butler:

CDM Smith's July 2016 Sewer Line Extension and Repair Evaluation Report, prepared for the New Hartford WPCA, recommends sewer extensions in both the Cottage Street area and the Pine Meadow Area for environmental, public health, and economic reasons. Pursuant to the request reflected in Task Order No. 3 to our Master Services Agreement, CDM Smith has evaluated health and environmental resource factors regarding the Pine Meadow Sewer Extension Project. After our assessment, we recommend that this project be designated as a top priority for the Town. Accordingly, we have updated project costs and economics to advise the WPCA based on the best available information at this time.

*Pine Meadow Area Environmental Resources and Public Health*

As noted in the July 2016 Report, the Farmington River is a Federally-designated "Wild & Scenic" River due to its outstanding resources. Prevention of water pollution is a paramount goal along this River, and is explicitly called out in the Town's "Farmington River Protection Overlay" District. While both the Cottage Street and Pine Meadow areas are located in proximity to the River, the Pine Meadow area overall has nearly a 0.9-mile border with the River, while the Cottage Street area is slightly less at approximately 0.7 miles.

Importantly, the Pine Meadow Area includes a designated Aquifer Protection Area (APA), meaning that the aquifer contributing to a public water supply well (the Town's Pine Meadow Well) is located within the Pine Meadow Area. Due to the human consumption use of groundwater, it is vital to protect groundwater quality within this APA. Nutrient loading from septic tanks in densely developed areas can adversely affect groundwater quality. Because of the presence of the public water supply well and APA, there is a public health risk associated with septic tank failure within the Pine Meadow Area.

The majority of the Pine Meadow Area is within the 100-year flood plain boundary as designated by the most recent FEMA Flood Insurance Map (dated 1982). This area includes Wickett Street, Ten Street, Black Bridge Road and a small portion of Main Street. Just in the northern half of the Pine Meadow Area, there are approximately 70 properties within the 100-year flood plain. By contrast,



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in the Cottage Street Area, there are approximately 25 properties within the 100-year flood plain. Elimination of septic systems in flood-prone areas is advisable as septic system leaching fields will be underwater during flooding events. Flood events can also make septic systems vulnerable to exposure due to potential scouring velocities of floodwaters.

Finally, based on a review of available assessor data, the homes in the Pine Meadow Area average over 120 years old. A review of Health District data reveals that records on septic system construction are sporadic. By extending sewers to this area, the septic systems, many of which may be deteriorating or substandard, will be eliminated and the Town of New Hartford will further its goal of protecting the environment in existing developed neighborhoods in close proximity to the Farmington River.

#### *Pine Meadow Sewer Extension Economics*

The July 2016 Report provided several options for sewerage the Pine Meadow Area. Per our recent discussions, the current cost analysis focuses on the sewer alignment option that incorporates the abandoned canal bed located between Main Street and Wickett Street (Option “P-2” in the Report – Figure attached to this letter for reference). According to Town officials, this property is privately owned, and the owner has agreed to donate the land to the Town of New Hartford should it be needed for sewer construction. The use of this canal bed reduces the construction necessary on Main Street/Route 44. Further, although a detailed topographical survey of the area has not yet been performed, this option will also likely reduce the depth of the new sewers, which will help to control the construction costs and reduce disturbance area. Additionally, Town officials report that most of the existing septic systems are in rear yards, adjacent to the canal bed, so the use of the canal location will decrease the cost for homeowners to connect to the new sewer line.

As such, the Pine Meadow Area project costs, Option P-2, have been updated to reflect a midpoint of construction in 2020, and are presented in **Table 1** below.

**Table 1: Pine Meadow Sewer Extension Option P-2 – Project Costs**

	Pine Meadow Option P-2
Anticipated Construction Cost	\$2,600,000
Engineering and Implementation (17% of Construction)	\$440,000
Project Contingency (10%)	\$310,000
Total Estimated Project Cost (Rounded)	\$3,400,000

**Note:** Construction cost estimates assume minimal rock and groundwater, and no contaminated soils.  
Escalation to midpoint of construction in 2020 is included.

As stated in the June 2016 Report, this project was expected to be eligible for grant funding in the amount of 25% through the small communities set-aside program through the Connecticut DEEP, Clean Water Fund (CWF). A low-interest, 20-year loan may be borrowed for the balance. However,

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in recent years the 25% grant has not been available for sewer extensions; collection system projects are currently loan-only and the Pine Meadow Sewer Extension project is not on the present CWF Priority List.

A comparison of the debt service and income economics of the Pine Meadow Area P-2 option, project cost of \$3,400,000, financed via a 20-year CWF loan at 2% interest, with and without the 25% grant funding can be found in **Table 2** below. A Benefit Assessment of \$9,000 per property was assumed in accordance with prior discussions.

**Table 2: Pine Meadow Area Sewer Extension Option P-2 – Debt Service and Income – CWF Funding**

	With CWF 25% Grant	Without CWF 25% Grant
Number of New Connections (EDUs)	106	106
Project Cost Estimate (Construction & Implementation)	\$3,400,000	\$3,400,000
Town/WPCA Portion	\$2,550,000	\$3,400,000
Connection Fee Recovery (1st year) (\$1,000 each)	\$106,000	\$106,000
Amount Financed (20 yrs, 2%)	<b>\$2,444,000</b>	<b>\$3,294,000</b>
Annual Debt Payment	(\$149,000)	(\$201,000)
Annual Additional Income from Benefit Assessment Payments (\$9000 each, 2%, 20 years)	\$58,000	\$58,000
Annual Additional Income from New Users (Average \$1400/EDU)	\$148,000	\$148,000
Annual Net Income (during 20-year debt service period) from Sewer Extensions	<b>\$57,000</b>	<b>\$5,000</b>

If the CWF or similar grant funding is not available, it is estimated that the Town will essentially be breaking even during the debt service period (estimated annual net income of \$5,000), depending on the actual final construction cost and the terms of financing.

As discussed in the July 2016 report, however, this project would likely be eligible for USDA Rural Development (RD) funding which would extend the debt service term for up to 40 years, depending on life of the assets, and therefore lower the annual debt payment. RD funding may also include a grant component, though this is not guaranteed and varies from year to year; RD loan terms also vary but have been less than 3% in recent years. Further, the Town may also apply to the State for a Small Town Economic Assistance Program (STEAP) grant for up to \$500,000 for this project. A comparison of the debt service and income economics of the Pine Meadow Area P-2 option, project cost of \$3,400,000, financed via a 40-year RD loan at 3% interest, with and without this STEAP grant can be found in **Table 3** below.



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**Table 3: Pine Meadow Area Sewer Extension Option P-2 – Debt Service and Income – RD Funding**

	With STEAP Grant	Without STEAP Grant
Number of New Connections (EDUs)	106	106
Project Cost Estimate (Construction & Implementation)	\$3,400,000	\$3,400,000
Town/WPCA Portion	\$2,900,000	\$3,400,000
Connection Fee Recovery (1st year) (\$1,000 each)	\$106,000	\$106,000
Amount Financed (40 yrs, 3%)	<b>\$2,794,000</b>	<b>\$3,294,000</b>
Annual Debt Payment	(\$121,000)	(\$143,000)
Annual Additional Income from Benefit Assessment Payments (\$9000 each, 2%, 20 years)	\$58,000	\$58,000
Annual Additional Income from New Users (Average \$1400/EDU)	\$148,000	\$148,000
Annual Net Income (during 20-year debt service period) from Sewer Extensions	<b>\$85,000</b>	<b>\$63,000</b>

Either of these longer-term funding scenarios, or other grant opportunities, would improve the cash flow and net income estimated with CWF financing.

Regardless, in the long-term, after the debt service is paid, this project will result in additional yearly WPCA user revenue by expanding the user base in perpetuity.

### *Conclusion*

There are numerous public health and environmental factors that support construction of sewers and elimination of septic systems in the Pine Meadow area. In the long-term, the project would also improve the WPCA budget while limiting homeowners' financial uncertainty associated with aging on-site septic systems. Adding over 100 sewer customers to the current user base of approximately 215 users would represent a substantial new WPCA revenue source and help to stabilize the long-term WPCA budget and better utilize the available capacity at the Town's wastewater treatment plant.

We would be pleased to discuss this project further at your convenience.

Very truly yours,

Kristie G. Wagner, P.E.  
Project Manager  
CDM Smith Inc.

cc: T. Dupuis, CDM Smith





**Legend**

PS

Proposed Pump Station

Existing Sewers

Proposed Force Mains

Proposed Gravity Sewers

Existing Sewer Connection