

Project No. _____

August 12, 2024

Mr. Rob Thorp, Superintendent
New London-Springfield Water System Precinct (NLSWSP)
73 Old Dump Road
New London, NH 03257

**Re: Available Water Supply
Long Meadow Commons
New London, New Hampshire**

Dear Mr. Thorp,

On August 6, 2024, we received the July 29, 2024 Application for Water Connection for the above-referenced project from Wilcox & Barton. This application included the following:

1. Cover Letter
2. Application for Water Connection / Service
3. Projected Water Use Memorandum
4. Long Meadow Commons Site and Utility Plans, Construction Details
5. GMZ Report for Adjacent Property
6. Email from NHDES dated 7/26/2024
7. Email from Water Consultant dated 7/26/2024

Due to the fact that the main issue with this Application is related to supply capacity and not the details about the project and that a quick response turnaround was requested, we limited this review to the water supply capacity issue only. Therefore, we will delay our review of the remaining documents.

PROJECT UNDERSTANDING

Our understanding for the project to date is as follows:

- A Water Connection Application was submitted in 2023 for domestic as well as fire service.
 - The New Hampshire Department of Environmental Services (NHDES) issued a letter on March 17, 2023 stating that the Precinct did not have the supply capacity to provide water to this development because the Precinct would not be able to meet NHDES' supply capacity requirements. See **Attachment A**.
 - The Application was denied due to available water capacity.
- A revised Application was submitted and approved that was just for fire protection as the domestic water would be coming from onsite wells that would be drilled.
- The developer drilled two onsite wells that had estimated yields of:
 - Well 1 – less than 5 gpm
 - Well 2 – less than 5 gpm

- The developer proceeded to drill two additional wells at NHDES-approved locations that had estimated yields of:
 - Well 3 – 5 gpm
 - Well 4 – 23 gpm
- The developer proceeded to drill a fifth well that was not approved by NHDES (per the attached email in **Attachment B**). This well (Well 5) had an estimated yield of 100 gpm.
- During the well approval process, Tetrachloroethylene (also known as Perchloroethylene or *PCE*) was detected in a well on an adjacent property (i.e. the subdivision between the Hospital and Parkside Rad). It was then determined that the PCE most likely came from a dry cleaning company that is located 93 Newport Road. In an email dated July 26, 2024, NHDES noted that they do not approve pump testing of Wells 4 and 5 given the potential nearby contamination. See **Attachment B**.
- A new Water Connection Application was submitted on July 29, 2024 (i.e. the Application we are currently reviewing) for domestic and fire protection services.
- NHDES issued a letter to the Precinct on August 8, 2024 in reference to Colby Point Wellfield – Source Development Options. See **Attachment C**. Because Wilcox & Barton was copied on this letter and the Precinct didn't directly inquire about this issue recently, it is assumed that Wilcox & Barton inquired about the Colby Point Supply which prompted this letter.
- On a somewhat related issue, NHDES issued an Amended Concept Approval for the Proposed New Community Water System for the New London Place development that is located between the hospital and Parkside Road. See **Attachment D**. This letter states that NHDES is amending the approval of their new Community Water System and requiring that they connect to the Precinct's system due to PCE contamination. Coincidentally, this letter is dated July 26, 2024 which is the same date as the email in **Attachment B** denying pump testing of the onsite wells for this project. We would like to add that we do not believe NHDES can require a proposed development to tie into your system.

ANALYSIS

Based on a conversation that we had, the system flows are as follows:

- Average Fall, Winter, and Spring flows – 250,000 gpd
- Average Summer flows – 350,000 gpd (over 11 MG was pumped in July 2024)
- Maximum-Day flow – 550,000 gpd
- Supply Capacity – 500,000 gpd

As noted in NHDES' March 17, 2023 letter (see **Attachment A**), the Precinct does not have sufficient water supply to meet existing demand. Since this letter was written, no additional supply has been put online; however, you are currently working with GZA on locating an additional supply. We encourage the Precinct to continue with this work as the time required to gain approval of a new supply and construct the infrastructure to connect it to the existing system could take 5 years or so to complete. We understand that due to the topography of the land on which New London sits (i.e. on top of a hill), it is more difficult to find an adequate yielding well close to the existing system as can be seen in GZA's map of potential water sources.



Page 3 of 3
Mr. Thorp
August 12, 2024

In NHDES' August 8, 2024 letter (**Attachment C**), they note some possibilities to improve the capacity of the Colby Point supply. We agree with those options and encourage the Precinct to investigate them further; however, the Precinct is more than aware then anyone of the hurdles that must be overcome to making improvements on Colby Point. Some of these are as follows:

- The Precinct does not own the land on Colby Point and they have an easement that has restrictions. The current property owners of Colby Point are not excited about modifications to the infrastructure that is on it, but the Precinct does have rights to maintain them.
- Installing an additional well on Colby Point is not as simple as it sounds as it would have its own set of hurdles to overcome such as running power to the well as we believe there is no room in existing conduits to run the wires in, the electrical feed and backup power at the pump station would have to be analyzed to determine if they need to be upgraded, the control system would need to be upgraded, and the property owners of Colby Point would have to give their concurrence of a new well.

We are encouraged by NHDES' statements about increasing the supply capacity on Colby Point and recommend that this be investigated. We are unsure if the Precinct has funds available to start this in 2024 and if not, the Precinct should try to appropriate funds at the 2025 Precinct Meeting to investigate these options and appropriate final design and construction funds in subsequent years.

In terms of supply capacity in the near future for Long Meadow Commons project, the options noted above to develop a new supply and/or increase the Colby Point supply does not help as those are long-term projects. Additionally, they are not guaranteed solutions and the costs are unknown. Based on these facts, we believe that it is in the Precinct best interest to evaluate your ability to provide water to the Long Meadow Commons project on your current supply capacity and not possible future capacity. We are unsure when the Precinct completed a formal evaluation of historical flows and made projections for future demands. If it has been some time that this has been completed, it might be worth while to go through that exercise.

In closing, while we empathize with the developer not being able to create an onsite water supply, nothing has changed in the Precinct's supply capacity since the first application was rejected and, therefore, we do not believe there is a reason to change your position at this time.

Please call if you have any questions.

Very truly yours,

UNDERWOOD ENGINEERS, INC.



Peter J. Pitsas, P.E., (NH)
Senior Project Manager

PJP/
Encl.





Attachment A
The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

March 17, 2023

Rob Thorp
New London-Springfield Water System Precinct
via email: rob.nlswp@tds.net

Subject: New London-Springfield Water: PWS 1721010
Twin Pines Development: Design Review #6487

Dear Mr. Thorp:

The New Hampshire Department of Environmental Services Drinking Water and Groundwater Bureau (DWGB) has reviewed the design plans for permitting the proposed expansion of the New London-Springfield Water System Precinct. The plans are specific to supplying drinking water and fire protection to the Twin Pines development. I performed a review of the project in accordance with the design standards for large public water systems listed under the New Hampshire Department of Environmental Services Administrative Rules, specifically Env-Dw 404, and referencing the Recommended Standard for Water Works. I have the following questions and comments, some of which should be addressed prior to approval:

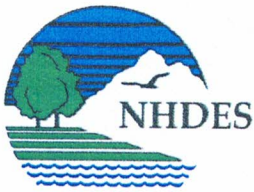
1. According to the most recent (2022) sanitary survey performed by this office, New London-Springfield Water does not currently have sufficient water supply to meet demand for existing customers. According to the survey report, the maximum day demand of the system is approximately 550,000 gallons per day (gpd). Additional flow data provided by the water system indicates a maximum demand within the last three years of 510,000 gpd. In either case, the wells are maintained at a maximum of 500,000 gpd. Please confirm if this remains the case. An evaluation for alternative sources was recommended as part of the survey and our rules state that the system must be able to meet the maximum day demand with its largest source offline.
2. Recommended Standards for Water Works requires maintaining adequate separation of 10 feet horizontal or 18-inches vertical between water mains and both sanitary and storm sewer pipe where possible. The notes should include storm drain piping, not just sewer.

Please provide responses to the items listed above. If you have any questions or comments, please contact me at 603-271-1746 or Randal.A.Suozzo@des.nh.gov.

Sincerely,

Randal A. Suozzo

Randal A. Suozzo, P.E.
Drinking Water and Groundwater Bureau



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

July 26, 2024

Via E-mail to: MKB1205@GMAIL.COM

Mr. Joseph Hogan / Principal
Continuum at North Conway, LLC
250 Goddard Rd.
Lewiston, ME 04240

AMENDED CONCEPT APPROVAL

Re: DR 006643 – Amended Concept Approval for Proposed New Community Water System
New London Place, New London Hospital Senior Living Facility, Tax Map 72 Lot 19, New London, NH

Dear Mr. Hogan:

The New Hampshire Department of Environmental Services is amending the referenced Concept Approval based on the department's denial of a new community well source issued July 26, 2024 (enclosed), due to presence of Tetrachloroethene (also known as Perchloroethylene or PCE) contamination likely from a nearby hazardous waste site.

The new water system concept is hereby revised to **require connection to the New London Springfield Water District PWS 1721010 as the best feasible water source** per Env-Dw 405.04 Concept Approval for Proposed Small Community Water Systems.

Per your submittal received Sept 5, 2023, the proposed development consists of:

- Total 167 services, 278 population incl. residents and 77 staff for supply to 10, 2-bedroom senior housing units, a clubhouse, and 186-beds in-care facilities.
- Design flow of 27,290 gallons per day (gpd) or 20 gpm for domestic uses only, no irrigation.

The development may be classified as:

- a) A consecutive community water system (CWS) if water is treated or re-sold beyond the master meter;
- b) A Privately Owned Redistribution System (PORS) if a water storage tank or booster station are required; or
- c) No state regulation if neither of the above conditions apply.

If you have any questions, I can be reached at (603) 271-2953 or David.D.Gaylord@des.nh.gov.

Sincerely,

David Gaylord, PE
Drinking Water and Groundwater Bureau
Small Systems Design Review

Encl. DES Well Siting Denial Letter

ec. A.Fopiano, P.G. Edgewater Strategies - Abby@edgewater.nh.com
New London Town Planner – planning@NewLondon.NH.gov
New London Springfield Water PWS 1721010 - nlswp@tds.net
DES DWGB - Communitywellsiting@des.nh.gov, Randall.A.Suozzo@des.nh.gov

Attachment B

From: [Abigail Thompson Fopiano](mailto:Abigail.Thompson.Fopiano@des.nh.gov)
To: [Andrew Winter](mailto:Andrew.Winter@tphtrust.org); [Charlie Lanza, HAWC](mailto:Charlie.Lanza@hampsteadwater.com)
Subject: Re: Long Meadow Commons PT Approval
Date: Friday, July 26, 2024 9:20:21 AM

Less than 1 hour before this email DES DENIED the wells across the street siting migration of contamination from the Dry Cleaners site at 93 Newport Rd. They also canceled a meeting about it for Monday. Things are still developing on this.

We will get the results of our testing and discuss.

Abigail Thompson Fopiano, P.G.
abby@edgewater.nh.com
www.edgewater.nh.com
(603) 630-1971

From: DES: Community Well <communitywell@des.nh.gov>
Date: Friday, July 26, 2024 at 9:03 AM
To: Abigail Thompson Fopiano <abby@edgewater.nh.com>, Andrew Winter <andrew.winter@tphtrust.org>, Charlie Lanza, HAWC <Charlie@hampsteadwater.com>
Subject: RE: Long Meadow Commons PT Approval

Hello Abby-

NHDES does not approve of this pumping test for wells 4 and 5 at this time given the potential nearby contamination sources that were not previously identified as threat to the wells. Submit to us the results of the recent water quality sampling from wells 4 and 5. What sample parameters were collected and how long were the wells purged before sampling? Once we have had a chance to review those results, we review next steps for the pumping test.

FYI—Dave is out on leave for the time being so please continue to email the community well email address.

Regards,
Drew

Andrew Koff, P.G.
Hydrogeologist
NHDES Drinking Water & Groundwater Bureau
Andrew.T.Koff@des.nh.gov

Attachment B

603-271-3918

From: Abigail Thompson Fopiano <abby@edgewaternh.com>

Sent: Thursday, July 25, 2024 8:54 AM

To: Koff, Andrew <Andrew.T.Koff@des.nh.gov>; Hisz, David <David.B.Hisz@des.nh.gov>; DES: Community Well <communitywell@des.nh.gov>; Andrew Winter <andrew.winter@tphtrust.org>; Charlie Lanza, HAWC <Charlie@hampsteadwater.com>

Subject: Long Meadow Commons PT Approval

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Drew and David,

We are planning to run the 72-hour pump test for the New London Commons starting Monday August 5th. We request your approval on the wells we plan to test. Attached is an updated site plan.

We have installed 3 wells in addition to the two original locations. The two originally approved wells (Well 1 and Well 2) each gave less than 5gpm. We discussed and you approved two new locations a couple weeks ago. Well 3 gave 5 gpm, Well 4 was rated at 23 gpm. We pushed forward with a 5th location (Well 5), that yielded 100 gpm. The water bearing fractures were around 640 feet deep in 4 and 5. We are requesting to move forward with the pump test and permitting of Well 4 and Well 5.

Portions of the 200-foot SPA to Well 5 falls onto an abutting lot. Long Meadow Commons is currently working on an easement for that portion of the abutting property. That land is already under Common Use by the HOA that owns it – but more restrictive language must be put on it to get proper documentation for permitting and protection into the future. The owners feel confident in obtaining an easement and realize it is at their risk to move forward. We understand it needs to be final by the time final approval is requested.

Can we extend the Preliminary Report Approval to pump Well 4 and Well 5? We will monitor water levels in Wells 1-3 during the test. We also are monitoring water levels in the proposed wells across the street for the New London Place.

We are sampling these wells (4 + 5) today as a prelim test on yield and water quality, given the knowledge of water quality across the street.

Please let us know if you have any questions or if you need anything else.

Attachment B

Thank you,

Abigail Thompson Fopiano, P.G.

abby@edgewaternh.com

www.edgewaternh.com

(603) 630-1971



Attachment C
The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

August 8, 2024

Kenneth Jacques
New London Springfield Water Precinct
72 Old Dump Rd
New London, NH 0257

transmitted via email to: nlswp@tds.net

**Subject: RE: Colby Point Wellfield— Source Development Options
CWS New London Springfield Water; PWS ID: 1721010**

Dear Commissioners:

The purpose of this letter is to follow up a recent meeting between New London Springfield Water Precinct (the Precinct) and New Hampshire Department of Environmental Services (NHDES) Drinking Water Groundwater Bureau, regarding the source capacity of the Colby Point Wellfield in New London. The Colby Point Wellfield consists of six relatively shallow overburden wells located on a peninsula (Colby Point) on Little Sunapee Lake. The wells were installed and tested in 1994 and 1995 by DL Maher and have been in operation by the Precinct since that time. The total wellfield withdrawal rate during the 1995 well test was 780,480 gallons per day (gpd), but the Precinct now reports that the sustainable yield of the wellfield has declined to around 500,000 gpd. The Precinct is assessing additional water supply options to increase their capacity to meet the future demands of the system.

The Precinct reports implementing regular well maintenance through Barrie Miller Well & Pump to clean out the wells three at a time every three years (so a 6-year interval per well). NHDES has also reviewed the Emery and Garrett Groundwater Investigations, A Division of GZA report entitled "Groundwater Resource Assessment Phase 1 Groundwater Investigation Report" dated May 30, 2023. This report summarizes different options that Precinct could take to develop additional water supplies and ultimately recommends that the Precinct considers development of new sources in other locations. While NHDES agrees with continued evaluation of new water sources, we also recommend that the Precinct investigate regaining lost capacity from the existing Colby Point Wellfield as this could be completed in a timely manner at relatively lower costs.

NHDES has also reviewed water use records from New London, but it has not been able to find any water level records from the wellfield. Water levels in the production wells and in the surrounding aquifer are vital important information to determine the cause for the decline in yield and track well performance over time. Without water level information it is difficult to determine if the decline is related to the formation or the well itself. Yield decline may be due to clogging of well's screen and gravel pack over time and the well is no longer as efficient at transmitting water from the surrounding aquifer. NHDES strongly recommends that the Precinct install transducers in each of the production wells to monitor pumping and non-pumping water levels, if it is not already doing so. Additionally, NHDES recommends that water level measurements are collected from surrounding monitoring wells if still available.

NHDES offers the following information regarding NHDES permitting requirements related to increasing the water supply capacity of the Colby Point Wellfield:

- Redevelopment of the existing wells by surging or other means does not require NHDES approval and can be completed by the Precinct at any time.
- Since the wellfield was installed before July 1998, the wellfield is exempt from the large groundwater withdrawal permit requirements, in accordance with RSA 485-C:21.
- In accordance with RSA 485-C:22, back-up and/or replacement wells can be installed in the wellfield without obtaining a large groundwater withdrawal permit as long as the total withdrawal remains below the documented yield of the wellfield (780,480 gpd). It would be acceptable to NHDES for the Precinct to develop a seventh well to add to the existing production wells. This would be considered a “backup well” for permitting purposes. Alternatively, the Precinct could install a “replacement well” to replace one (or more) of the existing wells that has lost capacity. This would require that the Precinct deactivate one of the existing sources.
- Any new well, either a back-up well or replacement well in the existing Colby Point wellfield, would require equivalent testing efforts under the large community well siting rules Env-Dw 302 only (no large groundwater withdrawal permitting). This process would require the Precinct to submit a plan for a 5-day pumping test (Preliminary Application). Once approved by NHDES, the Precinct would complete the pumping test and submit a final report summarizing the pumping test for review and approval. This permitting effort could be completed in as little as 6 months once the production well is installed, depending on the availability of contractors and consultants doing the work. There are no public hearings or other requirements associated with this approval. Due to the unique location of the wellfield, surrounded by the lake, the monitoring program during the test would be relatively limited to the wellfield and surface water; there are no nearby private wells that could be impacted by this withdrawal.
- There is no set maximum distance that a back-up or replacement well can be installed from one of the existing wells. In accordance with RSA 485-C:22, the Precinct would have to demonstrate that the effects of the well on water resources will be substantially the same as the existing wells. NHDES has discretion on the location of back-up/replacement wells based on this statute and on-site factors such as potential or known source of contamination. NHDES is willing to review any proposed new well locations with the Precinct as needed.
- The new well would be required to meet sanitary protective area (SPA) requirements (Env-Dw 302.10) or obtain a waiver as needed. NHDES acknowledges the unique nature of this site and that a significant portion of the current SPA overlaps the lake.
- NHDES does not recommend that the Precinct develop a horizontal or angled well at this location. Due to the proximity of the surface water bodies, there is increased risk of bacteria from these types of sources.

If you have any questions about this letter, please feel free to contact me at (603) 271-3918 or Andrew.T.Koff@des.nh.gov.

Regards,



Andrew Koff, P.G.

Drinking Water and Groundwater Bureau

cc: Stephen Roy, Brandon Kernen, R.Suozzo, C.Klevens; NHDES
M.Metcalf, P.Pitsas - Underwood Engineers - mmetcalf@underwoodengineers.com, ppitsas@underwoodengineers.com
Thomas Burack, Sheehan Phinney - tburack@sheehan.com
E.Lambert, Wilcox & Barton - elambert@wilcoxandbarton.com

Department of Environmental Services

Robert R. Scott, Commissioner



July 26, 2024

Via E-mail to: MKB1205@GMAIL.COM

Mr. Joseph Hogan / Principal
 Continuum at North Conway, LLC
 250 Goddard Rd.
 Lewiston, ME 04240

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If you have any questions, I can be reached at (603) 271-2953 or David.D.Gaylord@des.nh.gov.

Sincerely,

David Gaylord, PE
 Drinking Water and Groundwater Bureau
 Small Systems Design Review

Encl. DES Well Siting Denial Letter

ec. A.Fopiano, P.G. Edgewater Strategies - Abby@edgewater.nh.com
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