Emery & Garrett
GROUNDWATER INVESTIGATIONS
A Division of GZA

POTENTIAL FOR DEVELOPING ADDITIONAL GROUNDWATER WITHDRAWALS AT THE COLBY POINT WELLFIELD

DRAFT

NEW LONDON-SPRINGFIELD WATER SYSTEM PRECINCT

July 31, 2025
33.0083192.01

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

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PREPARED FOR:
Robert Thorp
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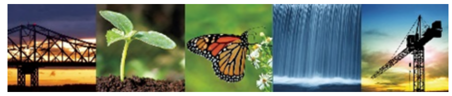

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July 31, 2025
Project No.: 33.0083192.01

Robert Thorp
New London-Springfield Water System Precinct
73 Old Dump Road
New London, NH 03257

Re: DRAFT - Potential for Developing Additional Groundwater Withdrawals at the Colby Point Wellfield, New London-Springfield Water System Precinct, New Hampshire

Dear Mr. Thorp:

Emery & Garrett Groundwater Investigations (EGGI), a Division of GZA GeoEnvironmental, Inc. (GZA) is pleased to submit this report which summarizes the potential for developing additional groundwater resources from the Colby Point Wellfield for the New London-Springfield Water System Precinct.

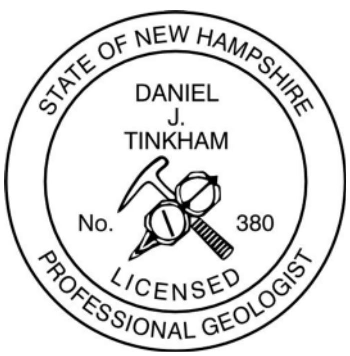
We hope you find our recommendations helpful while you consider options for modifying the existing Colby Point Wellfield to optimize groundwater withdrawals. EGGI would be glad to meet with the Board via Teams to discuss the conclusions of this investigation or our recommendations. Of course, we are willing to discuss alternative well designs, infrastructure upgrades, and wellfield management practices with the Precinct's water well contractor or engineering consultant.

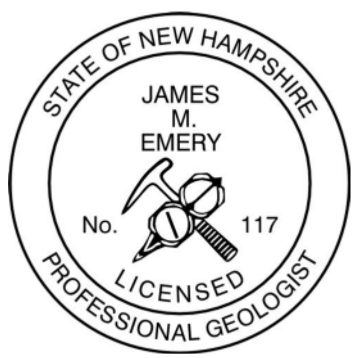
Please do not hesitate to contact us if you have any questions.

Very truly yours,

EMERY & GARRETT GROUNDWATER INVESTIGATIONS, A DIVISION OF GZA

Daniel J. Tinkham, P.G.	James M. Emery, P.G.
Senior Consultant/Hydrogeologist	Principal/Senior Hydrogeologist





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1.0 INTRODUCTION

Emery & Garrett Groundwater Investigations (EGGI), a Division of GZA GeoEnvironmental, Inc. (GZA) has completed a detailed assessment of the potential for additional groundwater to be extracted from the Colby Point Wellfield for the New London-Springfield Water System Precinct (NLSWSP) (**Figure 1**). The NLSWSP is almost wholly within New London, New Hampshire, but a small portion of the distribution system and the water storage tank is located in the southeast corner of the Town of Springfield. This report presents the results of our assessment. EGGI's investigation was focused on the consideration of various alternatives for increasing the groundwater withdrawal capacity of the existing Colby Point Wellfield. The Wellfield is located on a prominent peninsula extending southward from the north shore of Little Lake Sunapee (**Figure 1**).

Although EGGI conducted a Town-wide groundwater exploration program for the NLSWSP in 2023[1], this investigation was focused solely on assessing the feasibility of increasing groundwater withdrawals from the existing Colby Point Wellfield. The investigation included five tasks and each is discussed below, including:

- Review of Existing Production Well Design
- Testing of the Six Existing Production Wells
- Conducting Geophysical Surveys to Identify Additional Production Well Targets
- Exploratory Test Well Drilling and Preliminary Testing of Yield and Quality
- Recommendations for Next Steps

The contents of this report and its recommendations are subject to the Limitations in **Appendix A**.

2.0 REVIEW OF EXISTING PRODUCTION WELL DESIGN

The geologic formation that lies beneath the Colby Point Wellfield generally becomes finer grained with depth (discussed more later under the test well drilling section), so the screened intervals of the existing production wells are relatively shallow and do not allow significant water level drawdown (pumping-induced water level declines) to occur in the production wells. Since drawdown is the only mechanism by which groundwater can be induced to flow towards a production well, this inherently limits the pumping capacity of the wells. The amount of available drawdown is dependent on the saturated thickness of the unconsolidated materials above the well screen or the level of the pump suction (intake), whichever is higher. If the pump suction is installed above the top of the well screen, it further reduces the amount of potential drawdown that can be induced in a production well because the water level in the Production Well needs to be maintained above the level of the pump suction.

All six of the production wells were installed as ten-inch-diameter, gravel-packed wells in 18-inch-diameter borings. The screen lengths are limited from eight to ten feet because of the limited amount of available drawdown (saturated thickness) in those locations. Without the ability to have longer screen lengths, the only

[1] Groundwater Resource Assessment, Phase I Groundwater Investigations Report, New London, New Hampshire, dated May 30, 2023.

way to increase open area (screen openings to the formation) is by installing larger diameter wells. In general, the larger diameters would allow more water to flow into the wells more efficiently, so pumping-induced drawdown would be reduced, thereby allowing greater production volumes at the same location.

Pumping infrastructure also can be a potential limitation to well capacity. All the production wells in the Colby Point Wellfield utilize four-inch-diameter pumps, which may limit the ability to remove water at the recommended withdrawal rate. Likewise, the electric wire that is currently installed may not be large enough to allow larger horsepower motors without expensive upgrades to the electrical infrastructure. A preliminary electrical assessment was made by Underwood Engineers (UE, the Precinct's engineers), which suggested that the existing wire may be adequate for supporting larger pumps. However, those types of considerations will need to be more fully vetted by UE, if the Precinct decides to increase the size of the pumps.

3.0 TESTING OF THE SIX EXISTING PRODUCTION WELLS (APPENDIX B)

The production capacity of each of the six Production Wells was tested at their normal operational pumping rates in December 2024-January 2025. Two-hour pumping tests were performed on each Well while the other five remained off. Isolating each Production Well for a two-hour period and pumping the Wells to waste through the raw water hydrant allowed accurate flow measurements to be made of the discharging water from each individual well. Automated water level recorders were installed in each Production Well and two existing monitoring wells during the testing program. The discharge rate was divided by the pumping-induced drawdown in each well to calculate the specific capacity in units of gallons per minute per foot of pumping-induced drawdown (gpm/ft) (**Table 1**). This is a commonly applied measure of relative well yield capacity.

The pumping test results also allowed the pumping-induced drawdown to be compared to the saturated thickness of the aquifer materials above the top of the pump suctions[2]. Under pumping conditions, the pumping-induced drawdown provides a measure of how hard a well is being stressed. For instance, if the pumping-induced drawdown is only 20% of the saturated thickness, then the well can produce more water without lowering the water table too close to the screen. However, if drawdown already utilizes 80% of the saturated thickness, then it is likely that no additional yield capacity is available.

- **Production Well #1:** The saturated thickness above the pump suction is approximately 10 feet. This assumes that at least two feet of water remains above the pump suction during operation. During our two-hour pumping test, the Well pumped at a rate of 27.3 gpm and experienced only 4.18 feet of drawdown (**Appendix B**). There should be enough remaining drawdown to increase the pumping rate from Well #1 by 10 gpm or up to 37 gpm during its normal pumping cycle. This could possibly generate an approximate 35% increase in yield from this well.

- **Production Well #2:** Likewise, Well #2 has approximately 10 feet of available drawdown, 2.20 feet of which was used during the two-hour test at a rate of 14.4 gpm (**Appendix B**). Well #2 should be capable of being pumped at 30 gpm during its normal pumping cycle. This could possibly increase the well yield capacity by more than 100%.

[2] This data was provided by the well contractor (Barrie Miller's Well and Pump Service, Inc.)

- **Production Well #3**: Well #3 is limited to just nine feet of available drawdown. During the two-hour test at a pumping rate of 62.0 gpm, drawdown was 6.70 feet (**Appendix B**). Therefore, the pumping rate should be capable of an increase to approximately 72 gpm or about a 15% possible increase in yield.

- **Production Well #4:** The available drawdown is approximately 13 feet. During our two-hour pumping test, the Well pumped at a rate of 121 gpm and experienced 9.11 feet of drawdown (**Appendix B**). There should be enough remaining available drawdown to pump Well #4 up to 150 gpm during its normal pumping cycle or another possible 25% increase in yield.

- **Production Well #5**: Well #5 has nine feet of available drawdown, 7.42 feet of which was utilized during the two-hour pumping test at 50.4 gpm (**Appendix B**). Therefore, it should be capable of only a relatively small increase in pumping rate to 60 gpm.

- **Production Well #6:** The pump suction for Well #6 cannot be confirmed by the drilling contractor, but is suspected to be set at a depth of approximately 45 feet (top of screen). Therefore, the available drawdown is approximately 10 feet. During the two-hour pumping test at a pumping rate of 80.3 gpm, the drawdown was 5.88 feet, so it should be able to pump at a rate of 100 gpm or an approximate 25% in increase in yield.

4.0 GEOPHYSICAL SURVEYS

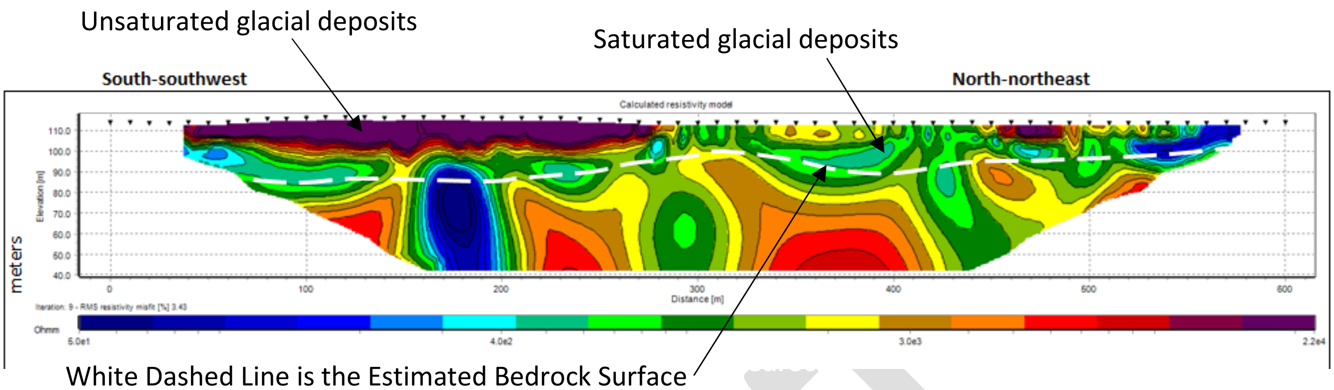
Electrical resistivity surveys and passive seismic surveys were conducted to assess the thickness and lateral distribution of the sand and gravel deposits beneath Colby Point. Automated ABEM electrical resistivity equipment (Model LS 2) was used to conduct two electrical resistivity surveys. In addition, a passive seismic survey was performed at the project site using a Tromino® seismograph. EGGI employed a method known as Horizontal to Vertical Spectral Ratio analyses (HVSR) to investigate the thickness of the sand & gravel deposits beneath selected points (**Figures 1** and **2**).

Two electrical resistivity surveys were conducted on the peninsula (**Figure 1**). The electrical resistivity geophysical method involves the measurement of induced electrical flow through subsurface materials, which serves to estimate the depth to bedrock and type of subsurface material (e.g., unconsolidated sediment, saprolite, solid bedrock, etc.). Electrical resistivity measurements of the subsurface materials were taken along the survey lines using arrays of 41 or more stainless steel electrodes spaced at ten-meter intervals. The Dipole-Dipole, Gradient, and Induced-Polarization methods of collecting electrical resistivity data were used in this study.

These resistivity data were analyzed using the RES2DINV[3] computer modeling software. The results of the analyses are displayed in color contoured cross-sectional resistivity models of the subsurface areas investigated (**Appendix C**). The results of the modeling are displayed in color contoured cross-sectional models of the subsurface electrical resistivities. The higher resistivity values displayed in the models (generally shown as green to purple-brown color contour intervals) represent either sand and gravel (when observed near the ground surface) or competent bedrock (when displayed in the middle to lower portions of the models). The blue colored contour intervals have electrical resistivity values typical of finer grained unconsolidated sediments (near the ground surface) or saturated sediments and weathered bedrock (in the middle to lower portions of the model). An example of the electrical resistivity data collected on the peninsula is shown below.

[3] This is a computer processing program developed to model the electrical resistivity of subsurface geologic materials (**Loke and Barker**, **1996**).

Survey Line R2 – Dipole-Dipole



Passive seismic surveys were also completed at Colby Point to further evaluate the potential thickness of the sand & gravel deposits overlying the bedrock. Passive seismic surveys utilize a single channel recording method using ambient seismic noise in the ground generated by natural and anthropogenic sources. The data collected was processed with Grilla® software. In general, the passive seismic points collected along the electrical resistivity survey lines helped to confirm the potential thickness of the deposits and showed that the sand & gravel deposits beneath the peninsula range from 30 to 90 feet thick (**Figure 1** and **Appendix C**).

The thickest portion of saturated overburden deposits appears to lie beneath the site footprint of the Colby Point Wellfield. Towards the south end of the peninsula, where compact glacial till is exposed at ground surface, the depth to bedrock appears limited to approximately 35 feet. North of the Wellfield, the thickness of unconsolidated material is less than beneath the site footprint, although beneath Seismic Station S3, it is estimated to be 75 feet to bedrock (**Figure 1**). Exploratory test wells were selected in areas predicted to have the greatest saturated thickness within the existing site footprint of the Colby Point Wellfield.

5.0 EXPLORATORY TEST WELL DRILLING AND PRELIMINARY TESTING

Exploratory test well drilling was limited to that part of the peninsula designated as the footprint for the Colby Point Wellfield (**Figures 1** and **2**). Seaboard Drilling, LLC. was retained by EGGI to perform the exploratory test well drilling using the "drive-and-wash method", a type of casing advancement drilling. Four-inch-diameter steel casing was pounded into the subsurface and periodically the material inside the casing was evacuated so that samples of geologic deposits could be collected and evaluated at defined intervals. In those intervals, where the geologist deemed it beneficial to obtain geologic samples, a split-spoon sampler was advanced beyond the drive casing into undisturbed aquifer material. Geologic logs of the four test borings are shown in **Appendix D**.

In general, the borings penetrated moderately sorted sand to pebbles, with some cobbles in the first 20 to 40 feet (much of the unsaturated zone) and then advanced through sub-horizontal beds of fine to coarse sand. Materials generally got finer with depth and the lowest layers of glacial deposits contained silt and very fine sand. Poorly-sorted, compact glacial till was penetrated before intercepting weathered to competent bedrock in the deepest borings.

After completion of the borings, three-inch-diameter, PVC exploratory test wells were installed (LON-1, LON-2, LON-4S, and LON-4D) with the screened interval placed in the most desirable material (**Table 2**). The exploratory test wells were developed using a combination of pumping and surging to remove fine-grained material from the well and nearby formation to create a natural sandpack around the screens. A temporary submersible pump was then installed in each test well and a short-term pumping test was performed to assess each well's potential yield and to collect water quality samples.

The screened interval for Well LON-1 extends from 49.5 to 69.5 feet below ground and was intended to test the productivity of the deeper saturated unconsolidated layers of fine to coarse sand that are located further south of the existing Production Wells (LON-1 is 81 feet northwest of Production Well #5 and 126 feet southeast from Well #4). The testing resulted in a specific capacity of 4.52 gpm/ft, which is moderately favorable. A larger-diameter well at the same location, constructed similar to the existing Production Wells, would likely produce a similar amount of water as the average existing production well (40-50 gpm).

Location LON-4 penetrated the full saturated thickness of the unconsolidated aquifer and two wells were constructed a few feet apart at that site. Well LON-4D has a deeper screened interval (45 to 65 feet) and had a specific capacity of 2.83 gpm/ft. Well LON-4S was screened from 30 to 50 feet and had a specific capacity of 4.58 gpm/ft. It lies 130 feet west from Production Well #5 and 220 feet south of Production Well #4, the furthest distance possible within the existing site footprint.

Well LON-2 was constructed near the northern border of the existing site footprint. It could not be tested due to equipment failure, but it generally penetrated material that was finer-grained than that intercepted at Wells LON-1 and LON-4 and is not considered a potential production well target.

Groundwater samples from all three of the exploratory test wells that were tested were analyzed for a wide variety of chemical constituents and the only chemicals of concern were detected levels of iron in LON-4D and manganese in Well LON-4S (**Table 3** and **Appendix E**). The elevated iron and manganese are likely due to turbidity remaining in the groundwater after well construction. Small amounts of suspended material (silt to clay-sized) were likely present contributing to the concentration of total metals. Upon further well development and pumping, turbidity of the groundwater will likely decrease, leading to subsequently lower iron and manganese levels.

6.0 CONCLUSIONS AND RECOMMENDATIONS

EGGI has completed its review of the existing production well design, testing of the six existing production wells, geophysical surveys, and exploratory test well drilling. Based on the available information and testing completed at the Colby Point Wellfield, we offer the following recommendations to the Precinct:

- Regarding the design of the Production Wells, a change in design that may result in substantive increases in groundwater withdrawal capacity is to increase the diameter of the wells. Larger-diameter well screens would substantially increase the area of screen openings allowing the more efficient transmission of groundwater from the formation into the well(s). Given the limitation of available saturated thickness at the wellfield, larger-diameter wells would have higher specific capacities and allow more groundwater to be removed with the same limited drawdown. Of course, well replacement requires significant capital expenditure and would require extended-duration construction work on the peninsula. The existing Large Groundwater Withdrawal

Permit for the Colby Point Wellfield would still be applicable, as long as the replacement well(s) did not increase the overall existing Permitted Production Volume (PPV). Currently the Precinct pumps less than 50% of the collective permitted capacity of the existing Production Wells.

- Results from the long-term water level monitoring and two-hour pumping tests on the six existing production wells indicate that there may be an opportunity for groundwater withdrawals to be increased from the existing production wells (**Appendix B**). The testing results suggest that as much as 75 to 80 gpm (or more) of additional capacity might be collectively available from the six wells combined. This is based on the calculated specific capacities and available drawdown measured during the recent testing periods. However, to confirm this and to effectively optimize groundwater withdrawals, the Precinct needs real-time access to two pieces of information: measured groundwater levels in each individual production well and accurately measured daily pumping rates from each well. Currently, there are no flowmeters on any of the six discharge lines and flow can only be measured in bulk when the groundwater is pumped from the wet well at the pump station into the distribution system. Therefore, if a particular well stops pumping, or a well is pumping much less than expected, the operators will not know that and therefore cannot be alerted to that situation.

- To resolve the need for real-time information to manage groundwater withdrawals, the District will need to upgrade the existing Supervisory Control and Data Acquisition (SCADA) system with operational water level monitoring probes and individual flowmeters installed at locations before the groundwater discharge is manifolded into the common water distribution main.

- Each of the six production wells has a four-inch-diameter pump installed. It may be beneficial to install larger-diameter pumps (i.e., six-inch-diameter) to increase the capacity for short duration groundwater withdrawals from Production Wells #4 and #6, the biggest yield producers. Preliminary engineering estimates suggest that the existing electrical wiring could be used to meet the larger horsepower requirements of larger-diameter pumps, but a formal engineering analysis and coordination with the existing pump contractor will be needed to assess the infrastructure required to support increased groundwater withdrawals.

- With regard to the potential for new well installations, EGGI recommends that the Precinct consider a new Production Well in the vicinity of Well LON-4S. This area has the greatest setbacks from existing Production Wells and moderately favorable results from the preliminary testing. The biggest limitation for the addition of a seventh production well at the Colby Point Wellfield is the limited available infrastructure. Currently, the electrical and communication apparatus utilize all the available space in the existing conduits. Therefore, either a new conduit would need to be installed to expand capacity for wiring or one of the lower-yielding existing production wells would need to be abandoned and the infrastructure utilized for a new well. Any expansion of the wellfield, therefore, requires a thorough professional engineering evaluation to evaluate the costs of any major additions.

Tables

TABLE 1
Existing Production Wells - Summary Table
Assessment of Existing Groundwater Capacity in the Colby Point Wellfield
New London-Springfield Water System Precinct, New Hampshire

Existing Production Well	Well Construction	Total Depth of Borehole (Well Log)	Well Screen Information			Depth to Pump Suction	2025 Operational Pumping Rate	2025 Specific Capacity
			Top	Bottom (Measured Depth of Well)	Slot Size			
ID	Type	(feet bg)*	(feet)**	(feet)**	(inches)	(feet)**	(gpm)	(gpm/ft)
Production Well #1	10 X 18" Gravel Pack	30	19.5	27.5	0.050	18	27.3	6.5
Production Well #2	10 X 18" Gravel Pack	30	19.8	27.8	0.050	18	14.4	6.5
Production Well #3	10 X 18" Gravel Pack	56	42.7	51.7	0.050	40.6	62.0	9.3
Production Well #4	10 X 18" Gravel Pack	59	48.5	56.5	0.050	45.4	121	13.3
Production Well #5	10 X 18" Gravel Pack	34	22.8	31.8	0.060	21.4	50.4	6.8
Production Well #6	10 X 18" Gravel Pack	60	45.5	55.5	0.050	45***	80.3	13.7

* Depth below original ground surface.

** Depth in feet below the top of casing (approximately two feet below ground, in vault).

*** This is the best estimate available from the water well contractor, Barrie Miller Well & Pump.

TABLE 2
Exploratory Test Well Drilling and Preliminary Testing
Assessment of Existing Groundwater Capacity in the Colby Point Wellfield
New London-Springfield Water System Precinct, New Hampshire

Exploratory Test Well	Well Construction	Depth to Bedrock	Total Depth of Borehole	Screened Interval	One Hour Pumping Test - Submersible Pump			
					Pre-Pumping Water Level (feet)	Pumping-Induced Drawdown (feet)	Pumping Rate (gpm)	Specific Capacity (gpm/foot)
ID	Type	(feet)	(feet)	(feet/slot size)	***MCL***			
LON-1	3" PVC	89	90.0	49.5-69.5 /0.020"	34.10	8.37	37.83	4.52
LON-2	3" PVC	N/A	45.0	30-45 /0.020"	19.94	Could Not be Tested**		
LON-4S	3" PVC	N/A	67.0	30-50 /0.020"*	36.12	6.77	30.99	4.58
LON-4D	3" PVC	N/A	65.0	45-65 /0.020"	36.06	12.94	36.64	2.83

* - The lowest section of the screened interval (estimated to be from 45 to 50 feet) is inside a five-foot section of drive casing that could not be retrieved.

**LON-2 was partially developed, but could not be pumped due to equipment failure.

TABLE 3

Selected Laboratory Water Quality Results

Assessment of Existing Groundwater Capacity in the Colby Point Wellfield

New London-Springfield Water System Precinct, New Hampshire

Exploratory Test Well	Date	Iron (mg/L)	Manganese (mg/L)	Sodium (mg/L)	Arsenic (mg/L)	pH	Total Dissolved Solids (mg/L)	Chloride (mg/L)	Hardness (mg/L)	Nitrate (mg/L)	VOCs (mg/L)	SOCs (mg/L)
Primary MCL			**0.30**		***0.010***					***10***		
Secondary MCL		***0.30***	***0.05***			***6.5-8.5***		***250***				
LON-1	4/1/2025	0.10	0.030	13.00	ND	6.8	34	15.0	12	ND	ND	ND
LON-4S	4/2/2025	0.080	**0.220**	9.00	ND	6.8	31	16.0	13	ND	ND	ND
LON-4D	4/2/2025	**1.10**	0.030	10.00	ND	8.1	33	15.0	12	ND	ND	ND

Those values shown in bold do not meet EPA Drinking Water Standards or the Recommended pH Range for Drinking Water.

ND - Not Detected

Samples submitted to National Testing Laboratories of Cleveland, Ohio.

Figures

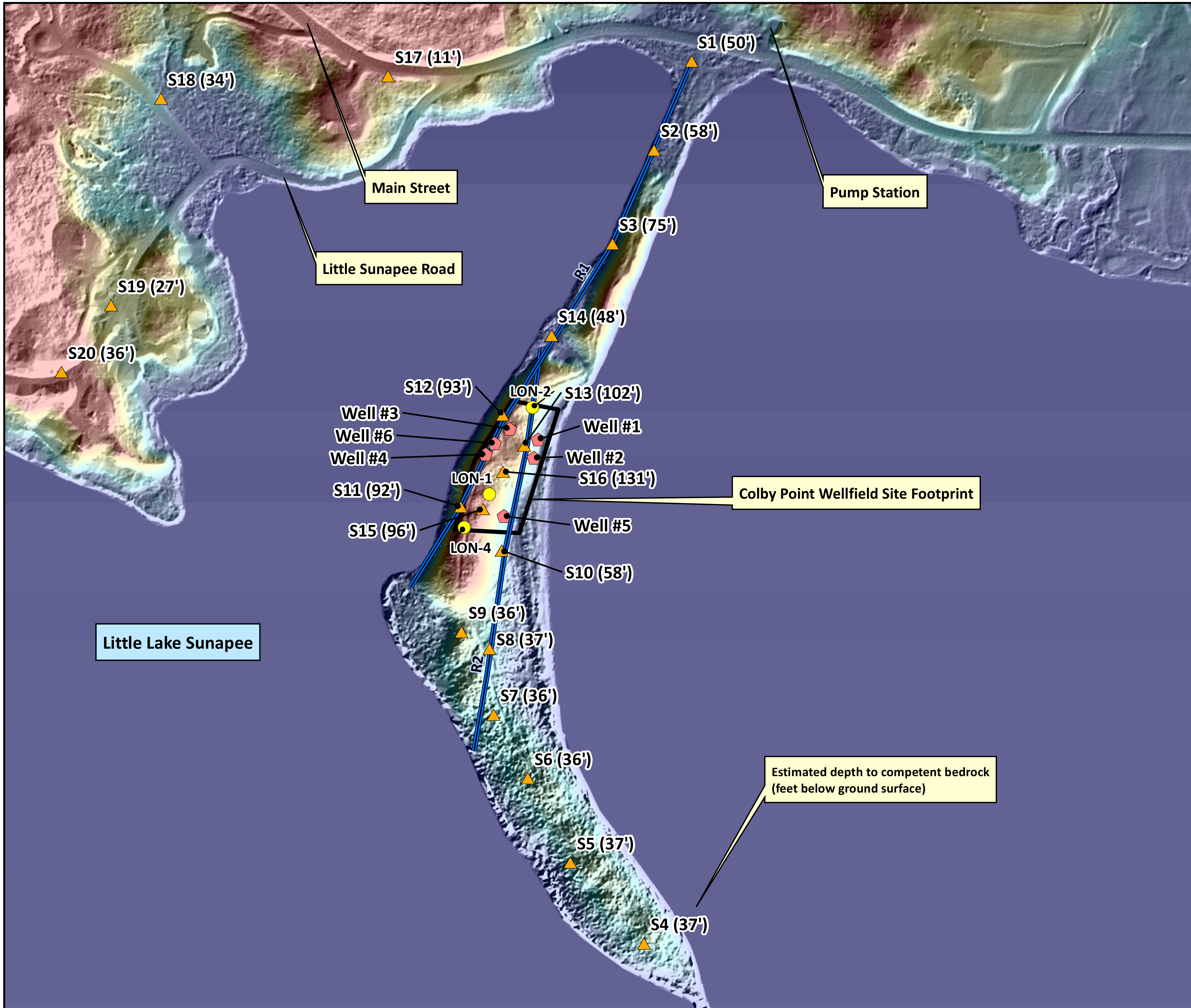


FIGURE 1

Existing Production Wells, Exploratory Test Wells and Geophysical Surveys

Colby Point Wellfield
New London-Springfield Water Precinct
New Hampshire

Legend

- Existing Production Well
- Exploratory Test Well
- Seismic Survey Points
- 4R1 *Location and Name of Electrical Resistivity Survey Line*
- Colby Point Wellfield Site Footprint

LiDAR-Based Digital Elevation Model (feet above sea level)

Value

High : 395.1

Low : 371.1

N

Scale is 1:3,600
1 inch = 300 feet

0 30 60 120 Meters

0 150 300 600 Feet

Emery & Garrett Groundwater Investigations, A Division of GZA

FIGURE 1

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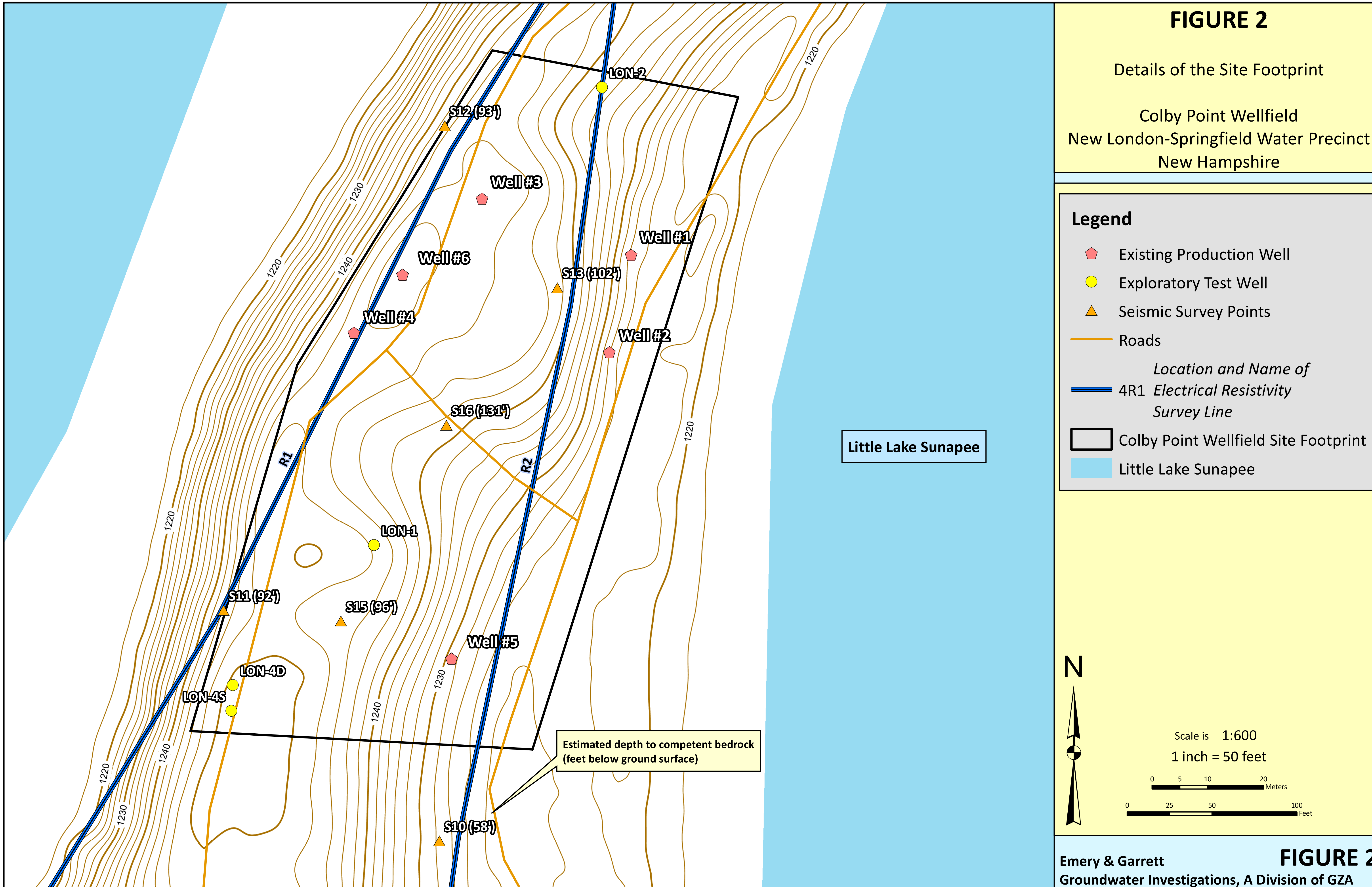


FIGURE 2
Details of the Site Footprint
Colby Point Wellfield
New London-Springfield Water Precinct
New Hampshire
Legend
Existing Production Well
Exploratory Test Well
Seismic Survey Points
Roads
4R1 Location and Name of Electrical Resistivity Survey Line
Colby Point Wellfield Site Footprint
Little Lake Sunapee
Little Lake Sunapee
LON-2
S12 (93')
Well #3
Well #1
Well #6
S13 (102')
Well #4
Well #2
S16 (131')
R1
R2
LON-1
S11 (92')
S15 (96')
Well #5
LON-4D
LON-4S
S10 (58')
Estimated depth to competent bedrock (feet below ground surface)
1220
1230
1240
N
Scale is 1:600
1 inch = 50 feet
0 5 10 20 Meters
0 25 50 100 Feet
Emery & Garrett
Groundwater Investigations, A Division of GZA
FIGURE 2

Appendix A – Limitations

USE OF REPORT

1. Emery & Garrett Groundwater Investigations (EGGI), a Division of GZA GeoEnvironmental, Inc. (GZA) (hereafter referenced as GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The nature and extent of well yield performance associated with this testing process may not become evident until further pumping of the well . If variations or other latent conditions then become evident, it may be necessary to reevaluate the conclusions and recommendations of this report.

6. Water level readings have been made, as described in this Report, in the production well at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.

SCREENING AND ANALYTICAL TESTING

8. GZA collected environmental samples at the locations identified in the Report. These samples were analyzed for the specific parameters identified in the report. Additional constituents, for which analyses were not conducted, may be

present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.

9. Our interpretation of field screening and laboratory data is presented in the Report. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.

10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

INTERPRETATION OF DATA

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

ADDITIONAL INFORMATION

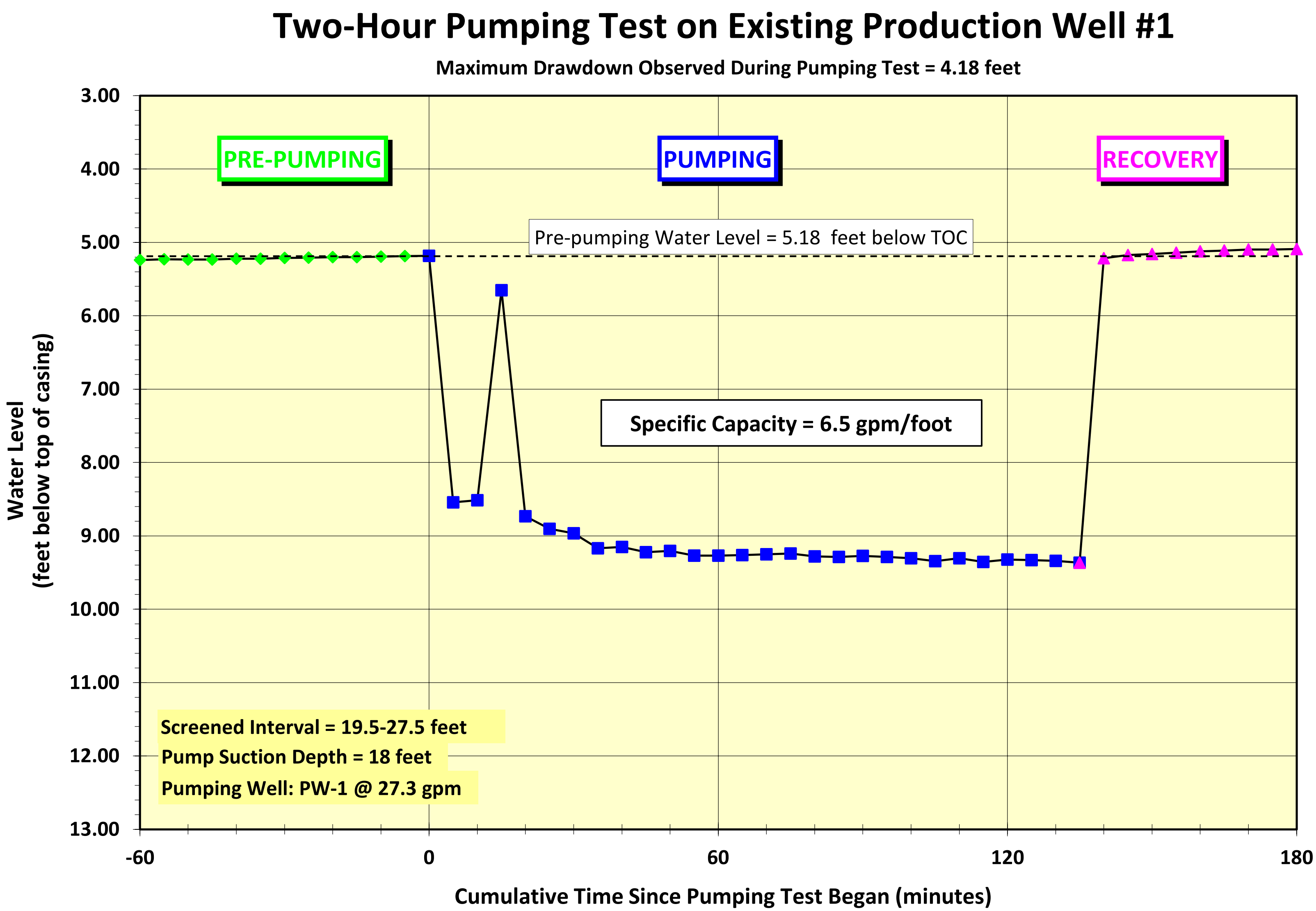
12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

Appendix B – Water Level Plots

Two-Hour Pumping Test Plots

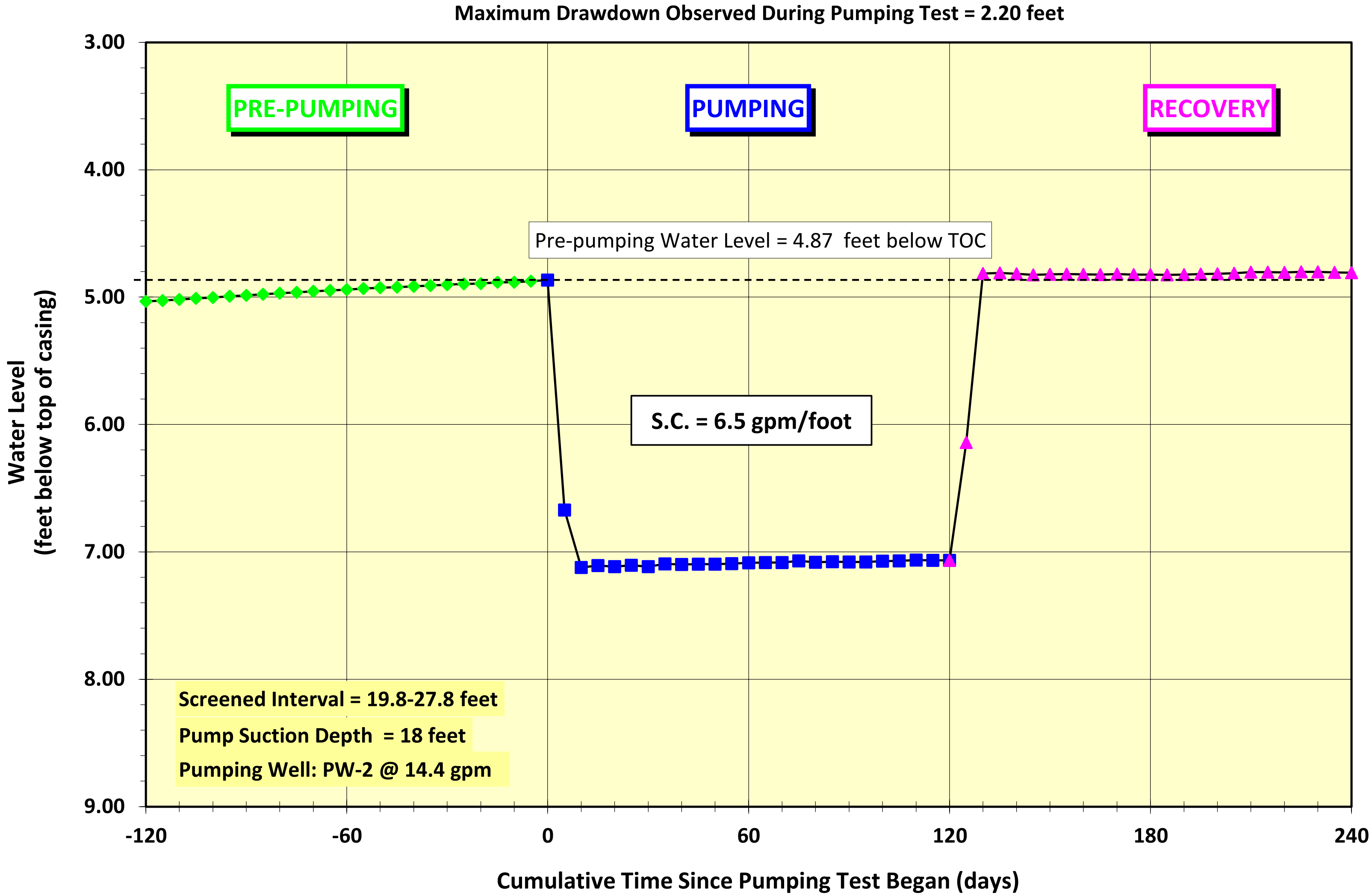


Plot of Water Level versus Time for December 19, 2024

Evaluation of the Colby Point Wellfield

New London-Springfield Water Supply Precinct

Two-Hour Pumping Test on Existing Production Well #2

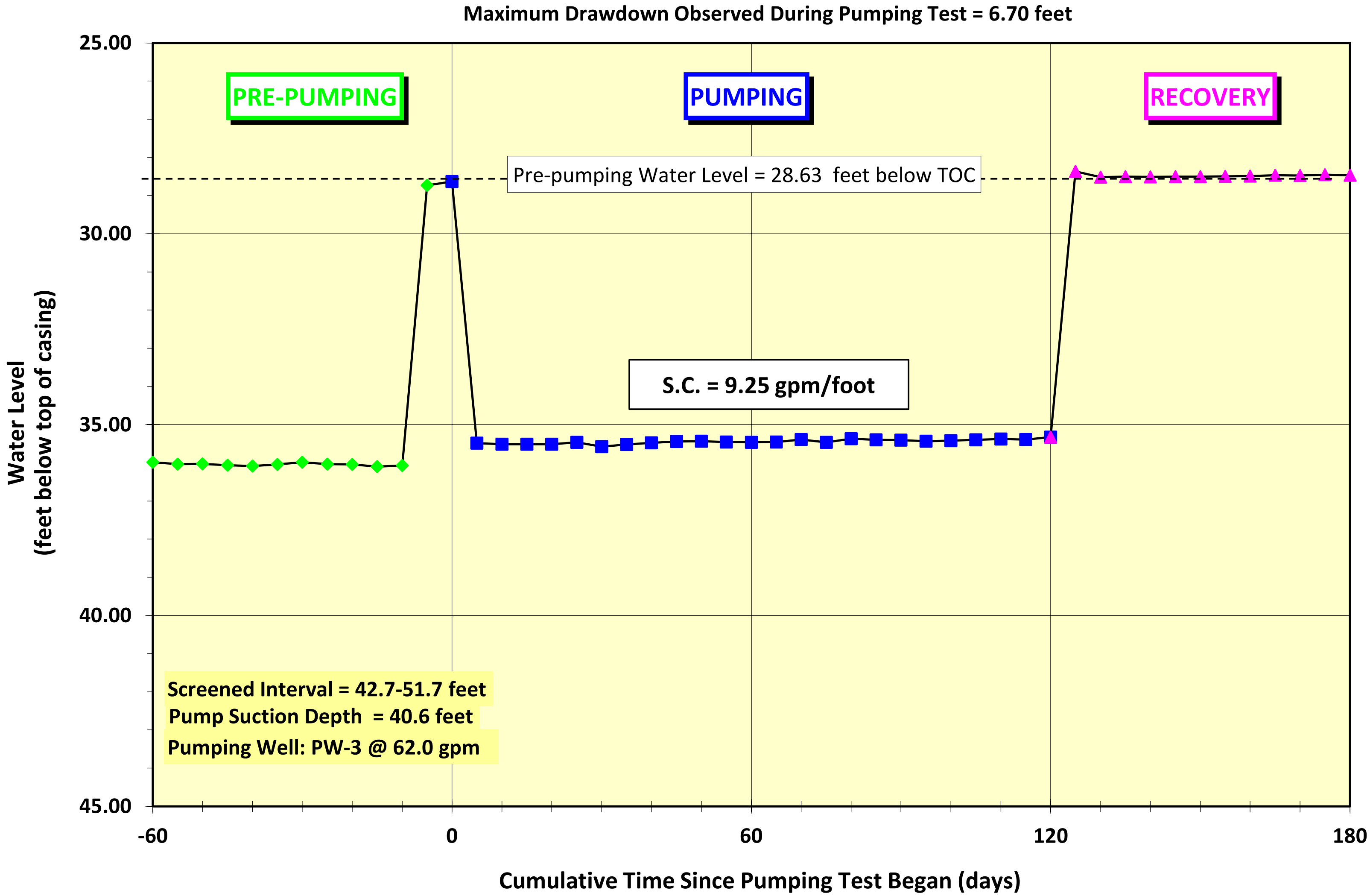


Plot of Water Level versus Time for January 2, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Two-Hour Pumping Test on Existing Production Well #3

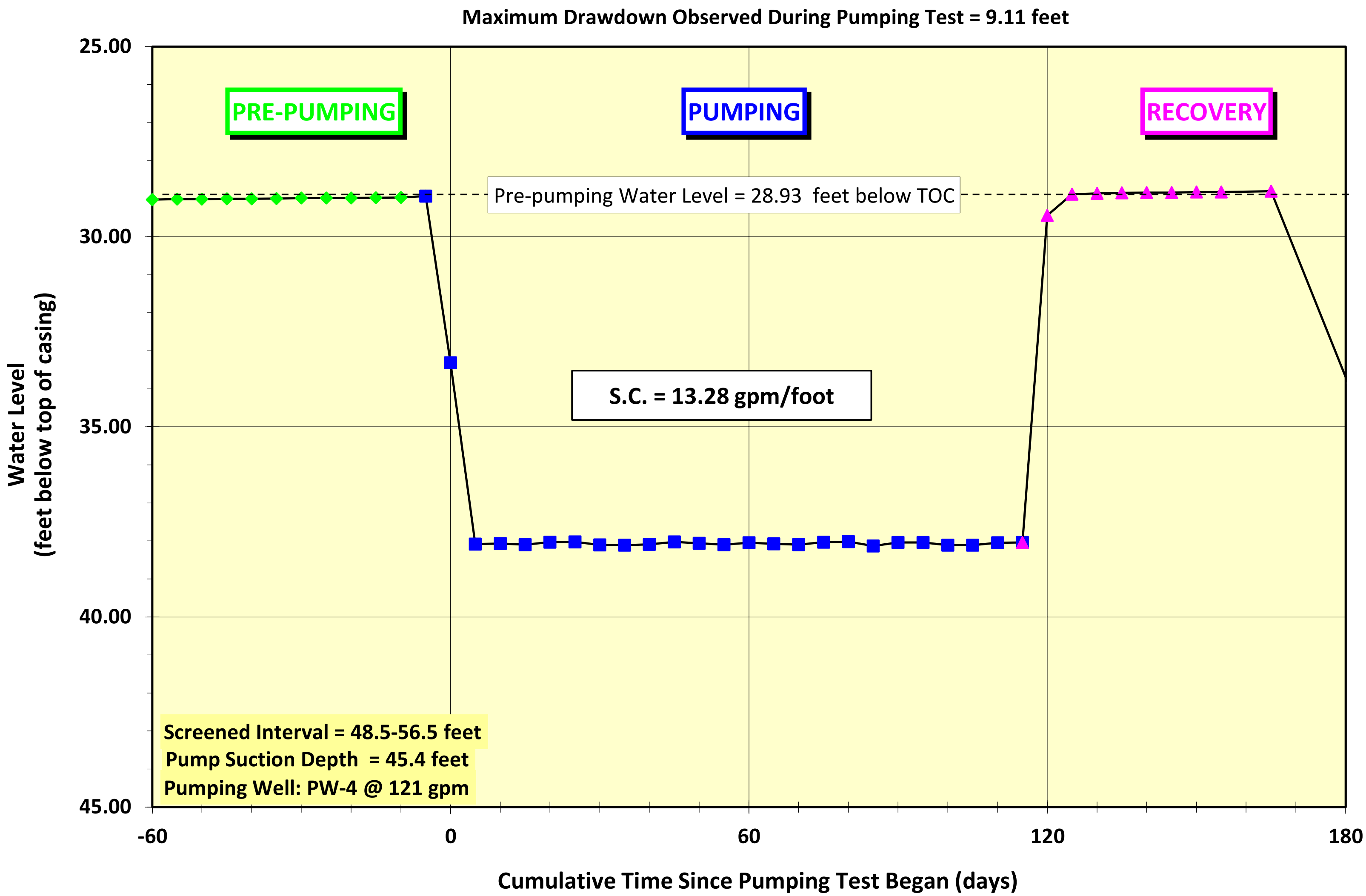


Plot of Water Level versus Time for January 3, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Two-Hour Pumping Test on Existing Production Well #4

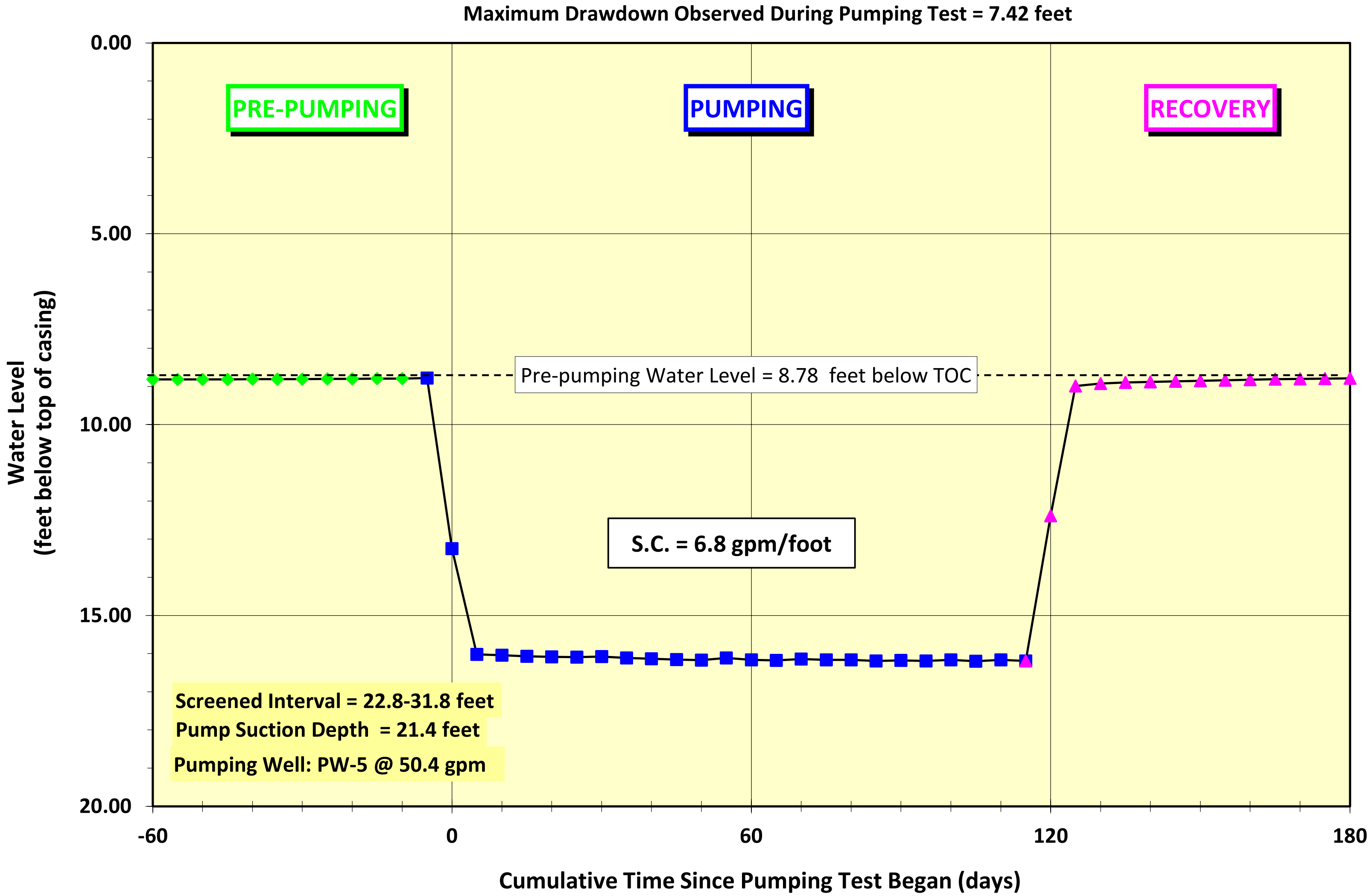


Plot of Water Level versus Time for January 3, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Two-Hour Pumping Test on Existing Production Well #5

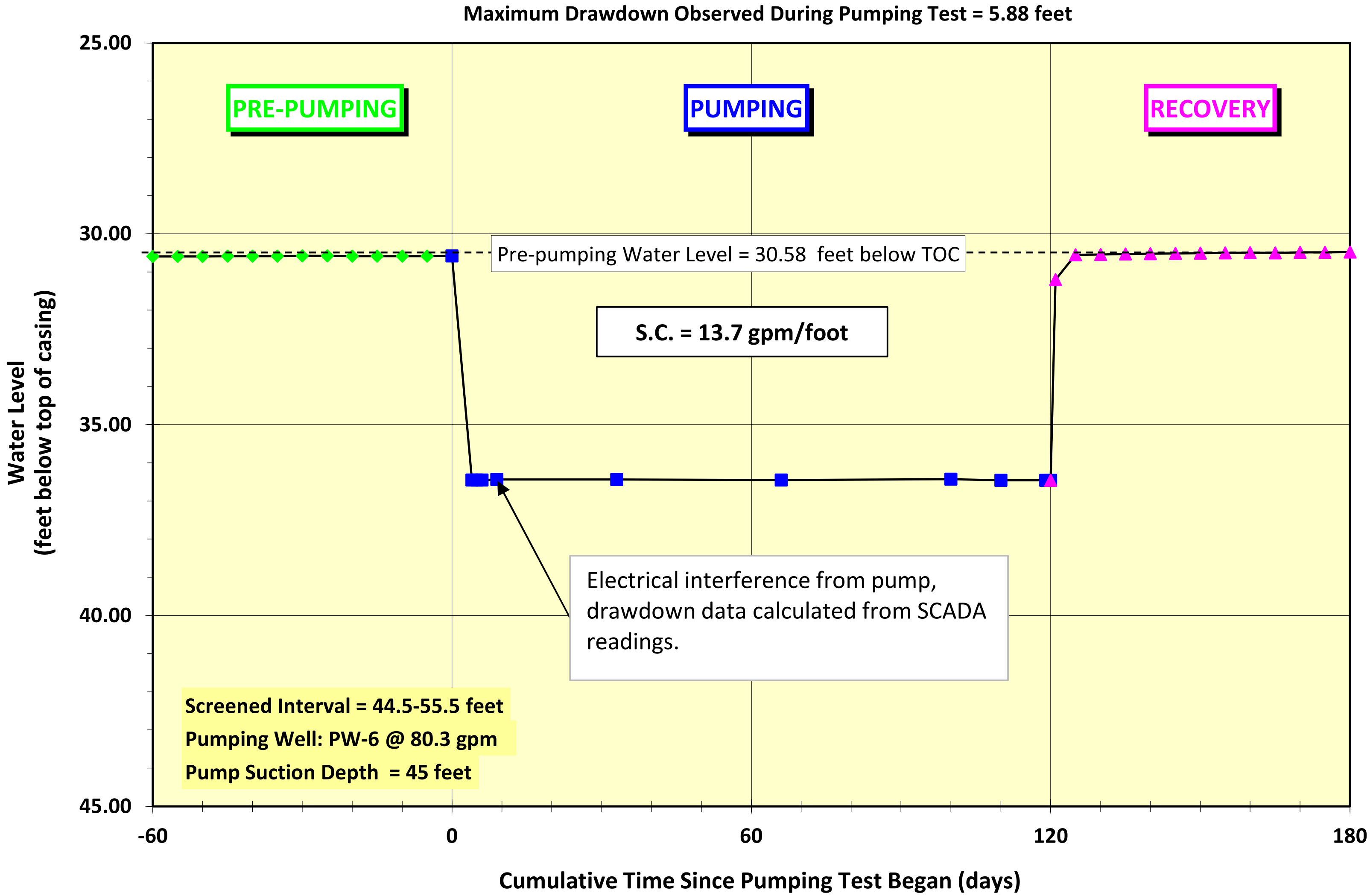


Plot of Water Level versus Time for January 2, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Two-Hour Pumping Test on Existing Production Well #6



Plot of Water Level versus Time for January 2, 2025

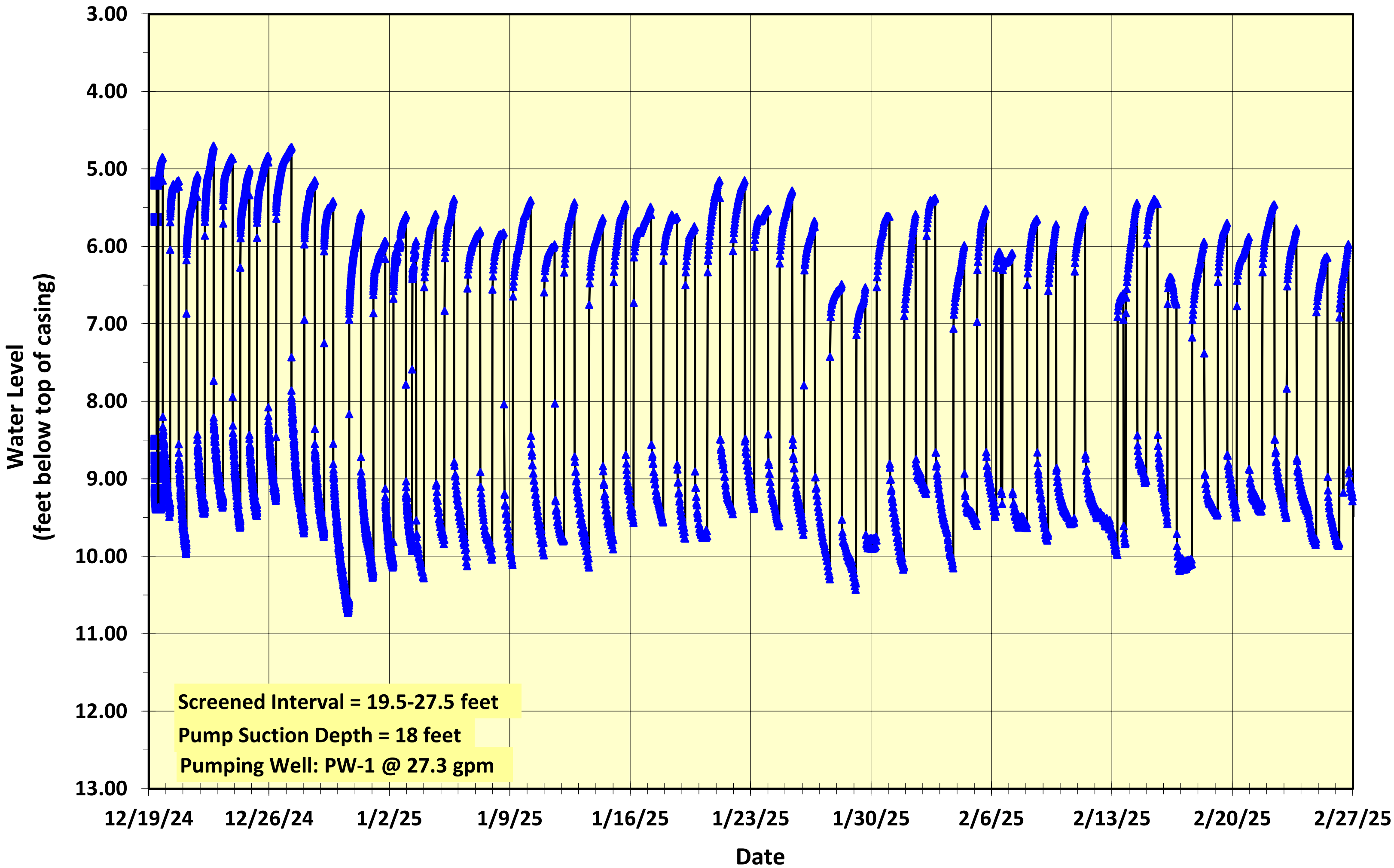
Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Emery & Garrett
GROUNDWATER
INVESTIGATIONS
A Division of GZA

Long-Term Water Level Monitoring Plots

Existing Production Well #1 - Long-Term Water Level Monitoring

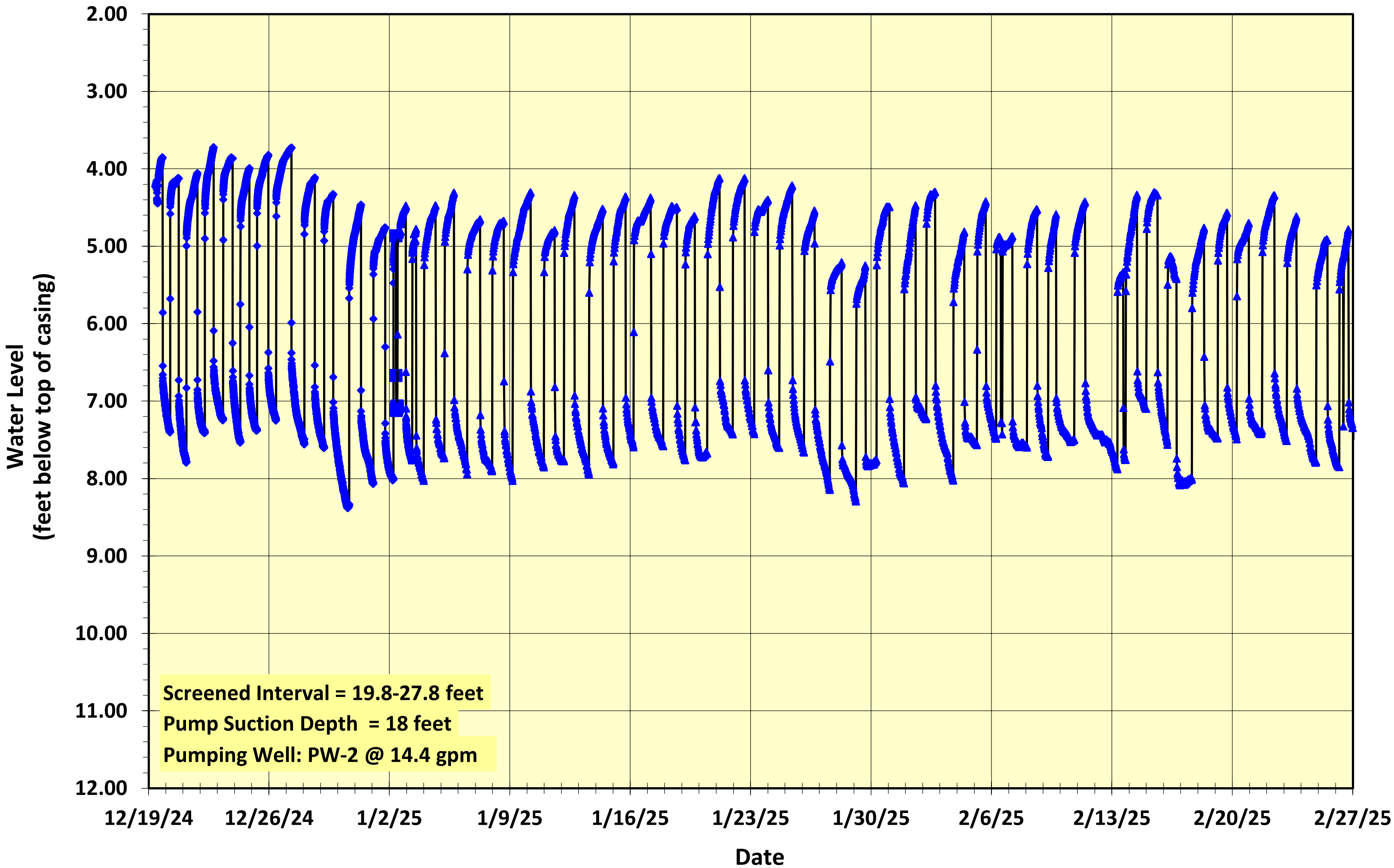


Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

Evaluation of the Colby Point Wellfield

New London-Springfield Water Supply Precinct

Existing Production Well #2 - Long-Term Water Level Monitoring

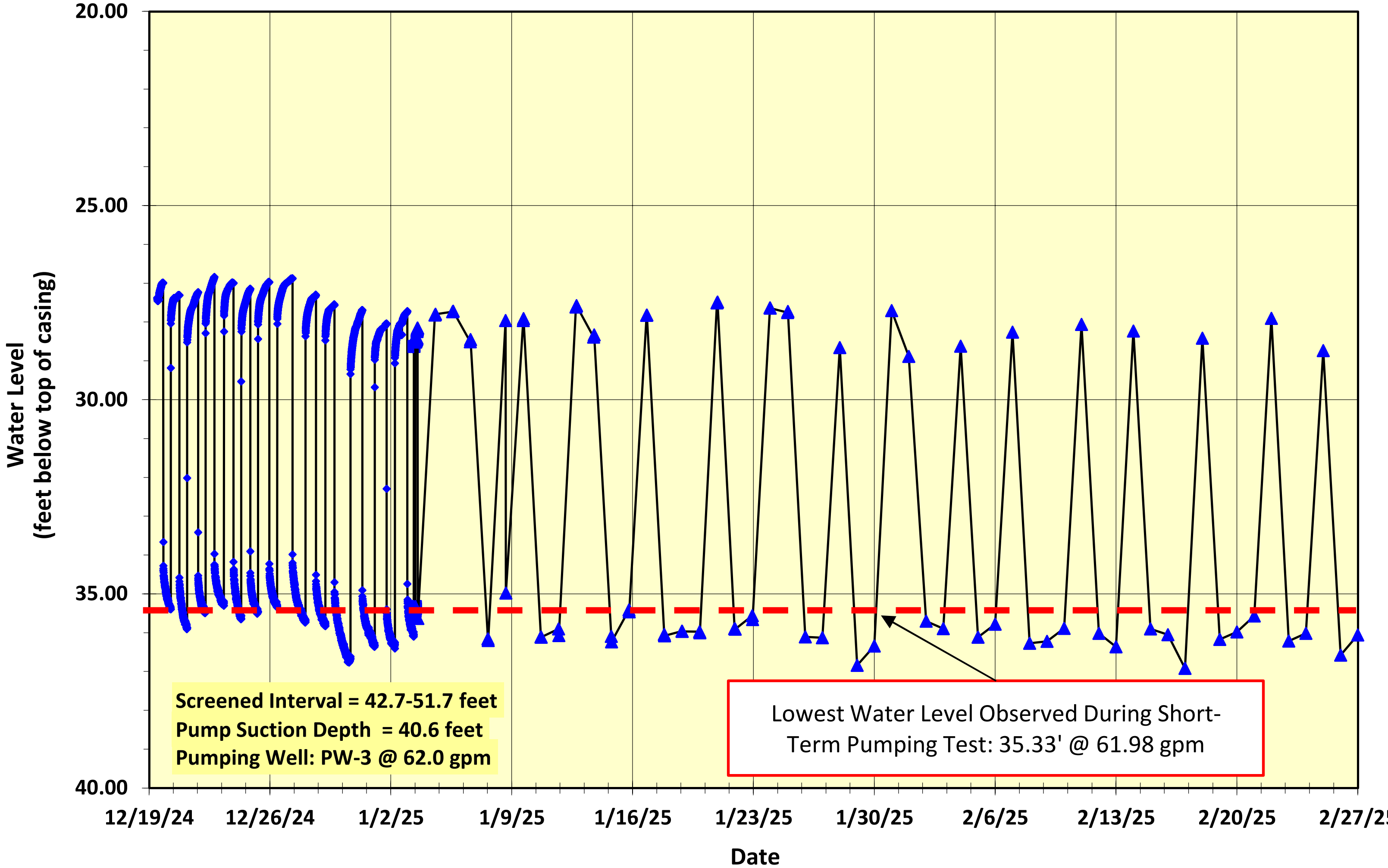


Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Existing Production Well #3 - Long-Term Water Level Monitoring

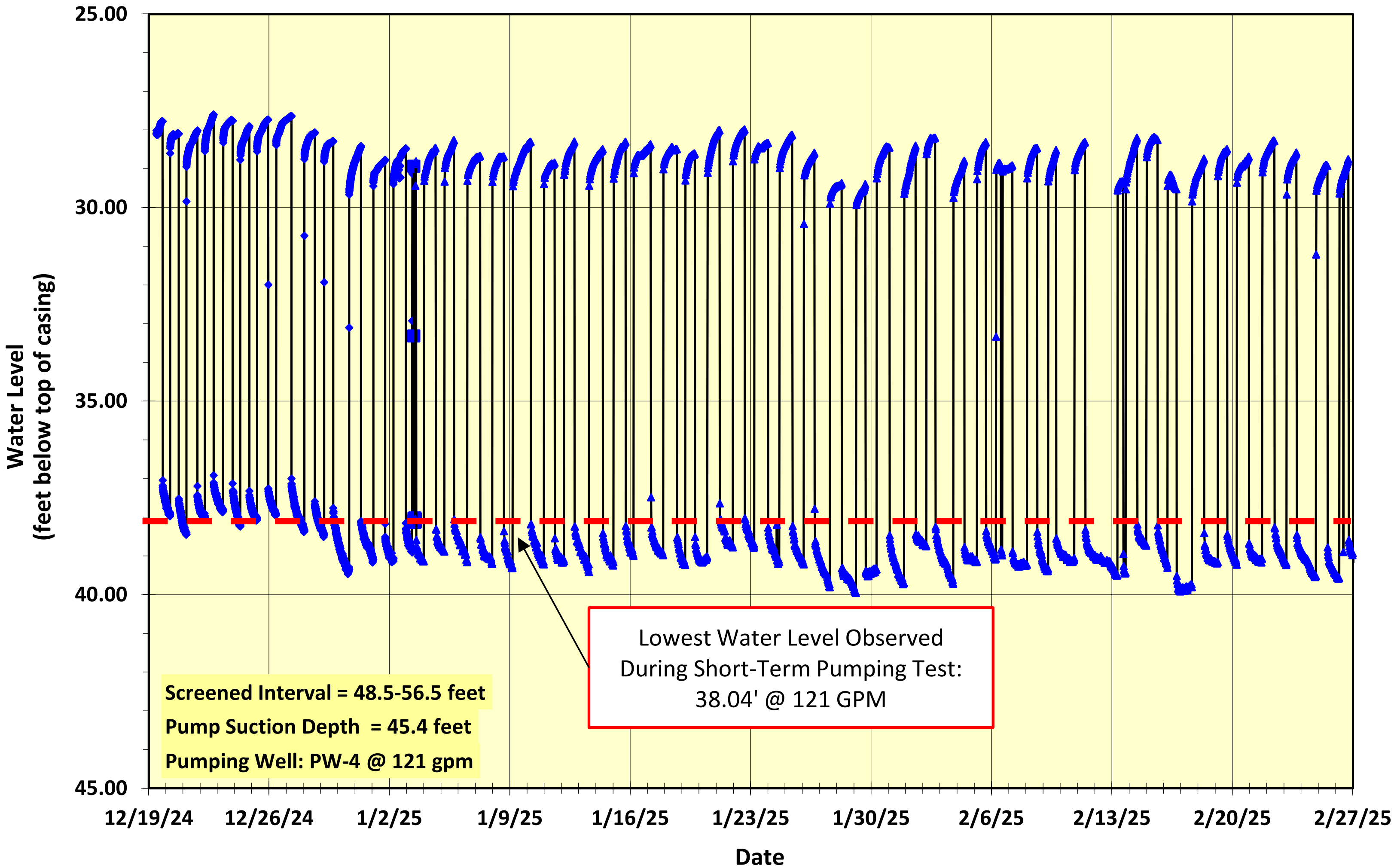


Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Existing Production Well #4 - Long-Term Water Level Monitoring

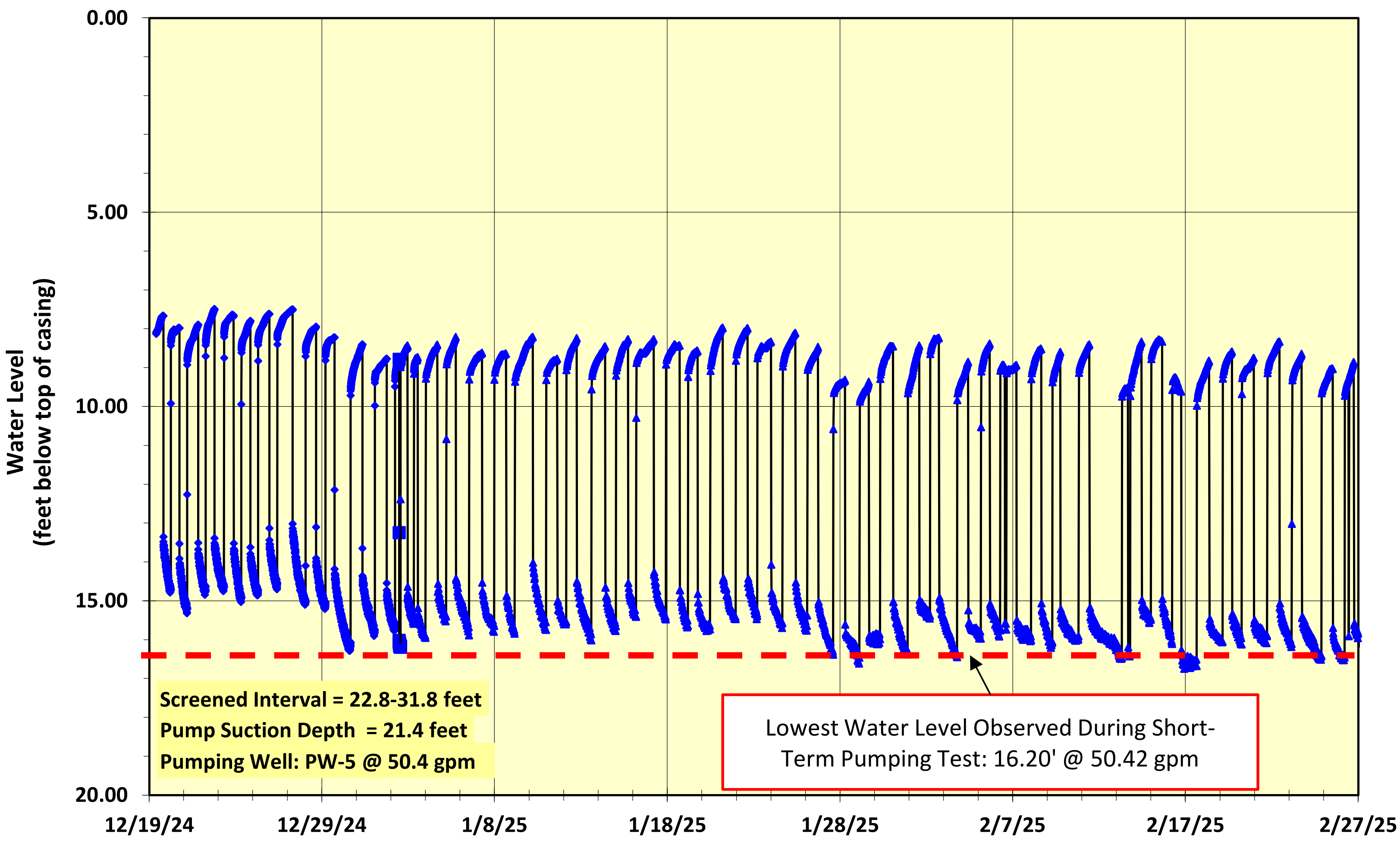


Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Existing Production Well #5 - Long-Term Water Level Monitoring

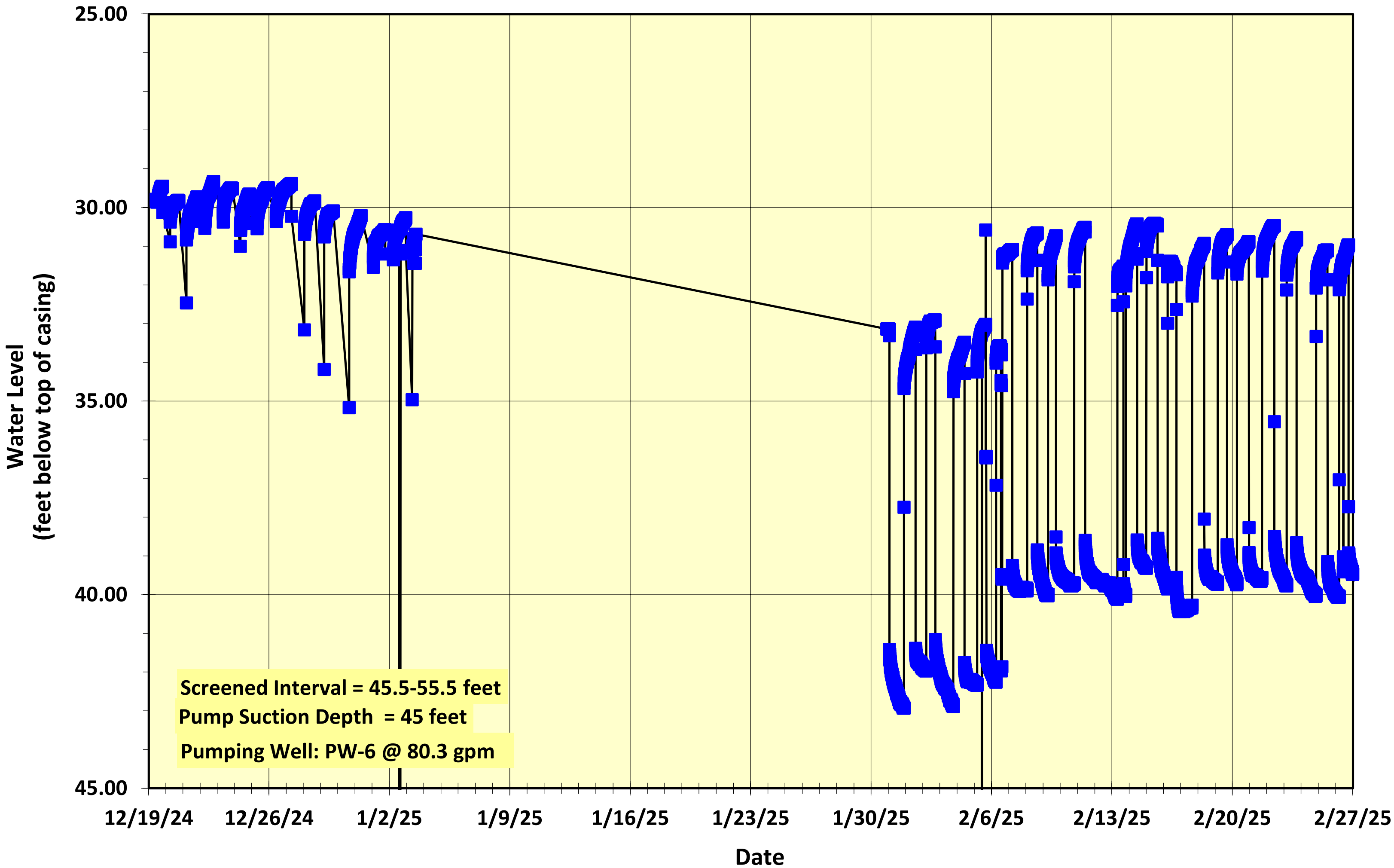


Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Existing Production Well #6 - Long-Term Water Level Monitoring



Plot of Water Level versus Time for December 19, 2024 to February 27, 2025

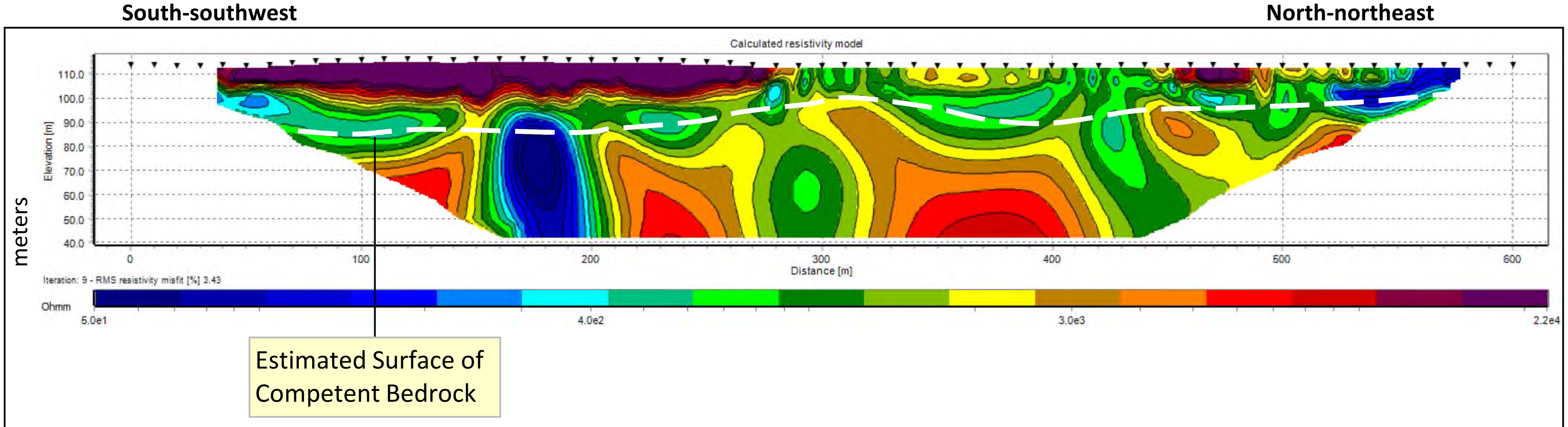
Evaluation of the Colby Production Well Field

New London-Springfield Water Supply Precinct

Appendix C – Electrical Resistivity Survey Lines and Passive Seismic Data Collection Points

Electrical Resistivity Profiles

Electrical Resistivity Survey Line R1 - Gradient Method
New London-Springfield Water System Precinct
New London, New Hampshire

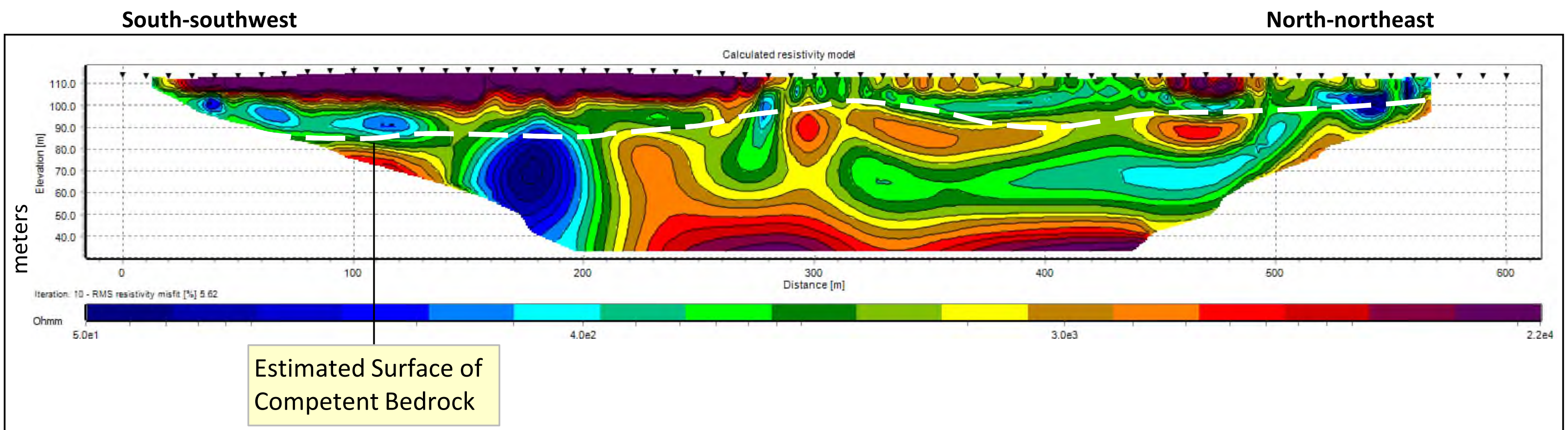


Horizontal and Vertical Axis Units are Meters

Survey Type: Gradient
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 31

Number of Data Points		
Surveyed	After Modeling	Number Removed
931	898	33

Electrical Resistivity Survey Line R1 - Dipole Dipole Method
New London-Springfield Water System Precinct
New London, New Hampshire



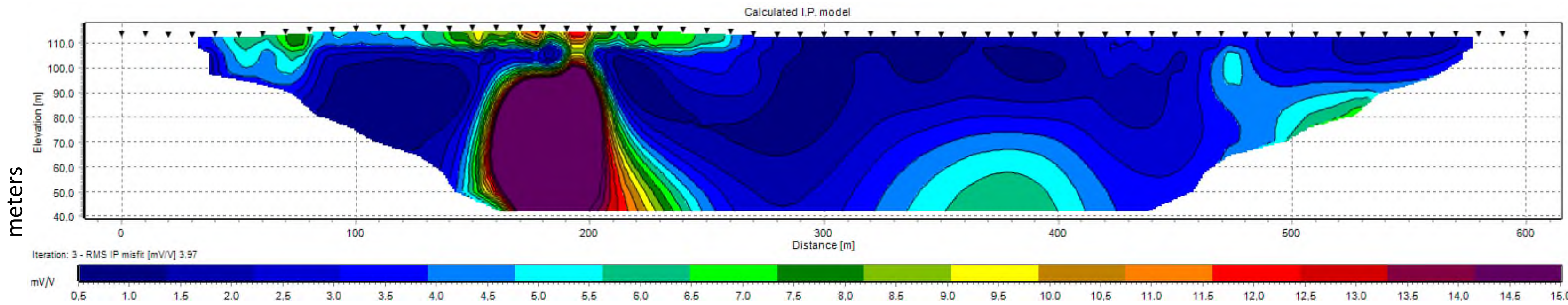
Horizontal and Vertical Axis Units are Meters

Survey Type: Dipole-Dipole
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 31

Number of Data Points		
Surveyed	After Modeling	Number Removed
806	597	209

Electrical Resistivity Survey Line R1 - Induced Polarization Method
New London-Springfield Water System Precinct
New London, New Hampshire

South-southwest **North-northeast**

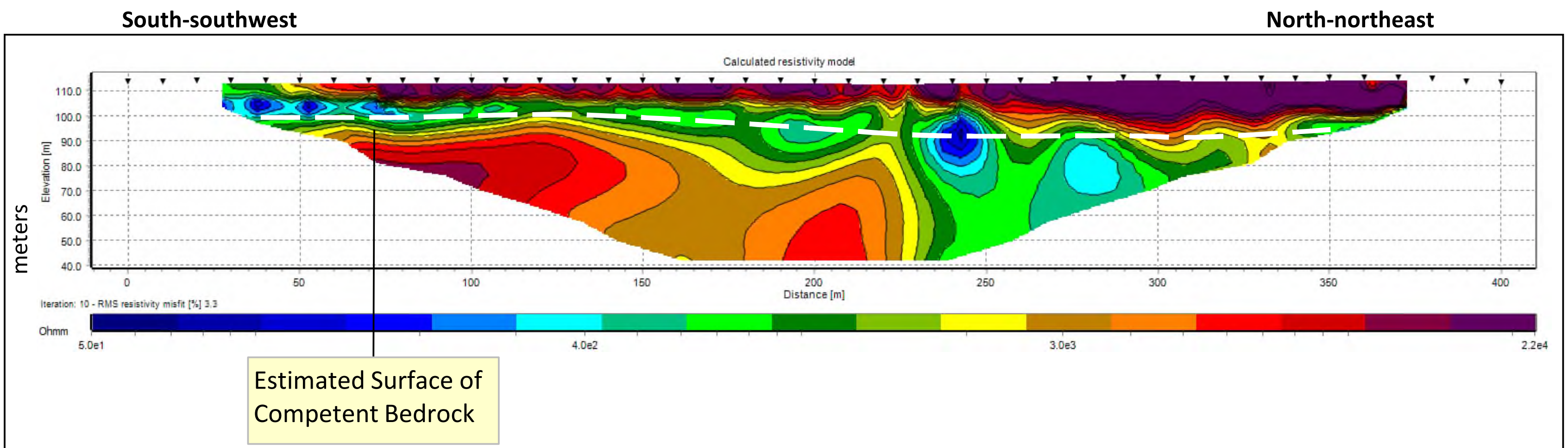


Horizontal and Vertical Axis Units are Meters

Survey Type: Gradient
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 31

Number of Data Points		
Surveyed	After Modeling	Number Removed
931	662	269

Electrical Resistivity Survey Line R2 - Gradient Method
New London-Springfield Water System Precinct
New London, New Hampshire

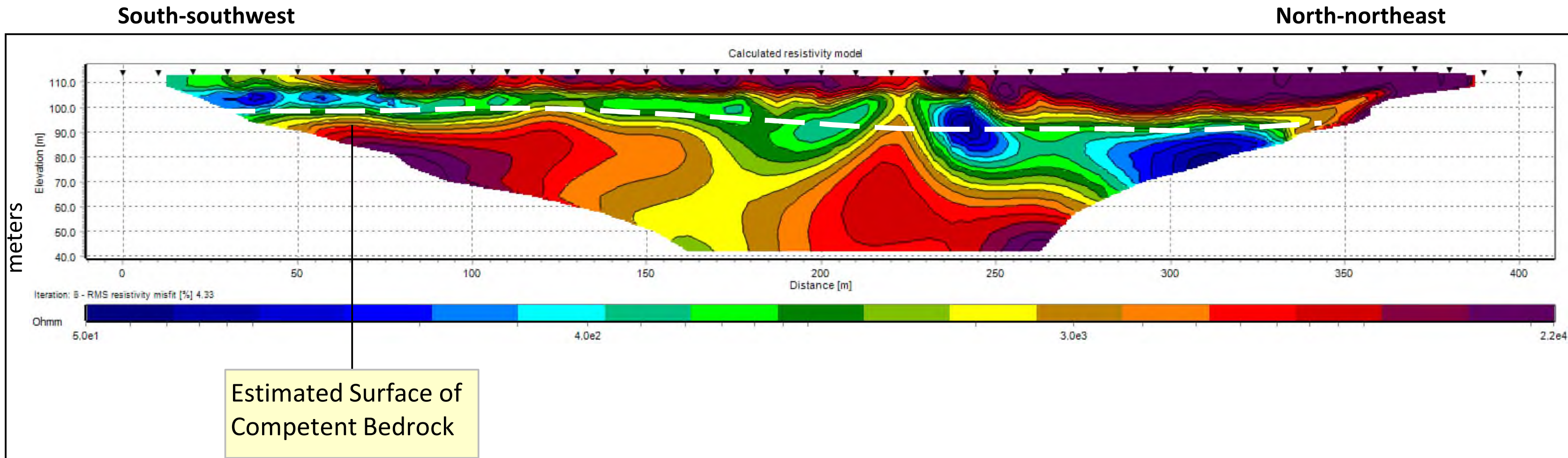


Horizontal and Vertical Axis Units are Meters

Survey Type: Gradient
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 190

Number of Data Points		
Surveyed	After Modeling	Number Removed
518	482	36

Electrical Resistivity Survey Line R2 - Dipole Dipole Method
New London-Springfield Water System Precinct
New London, New Hampshire

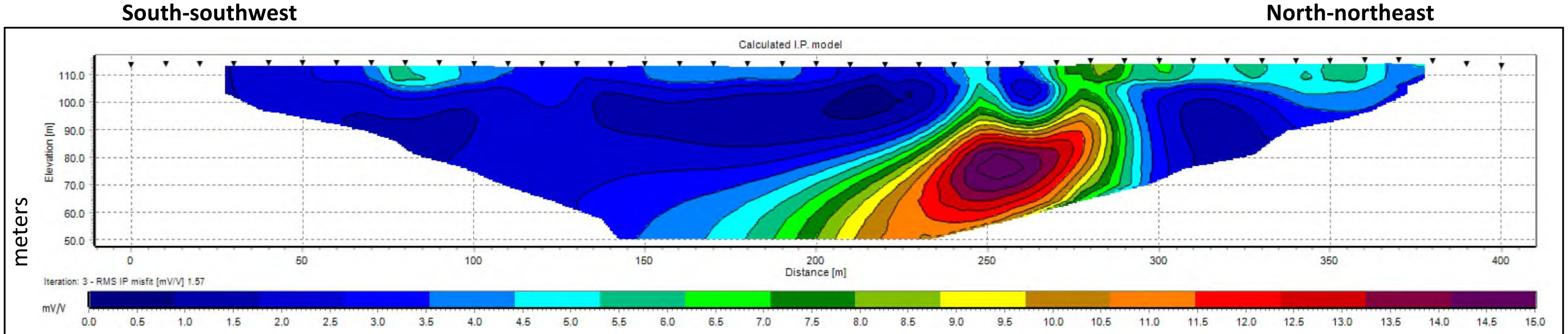


Horizontal and Vertical Axis Units are Meters

Survey Type: Dipole-Dipole
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 190

Number of Data Points		
Surveyed	After Modeling	Number Removed
462	305	157

Electrical Resistivity Survey Line R2 - Induced Polarization Method
New London-Springfield Water System Precinct
New London, New Hampshire



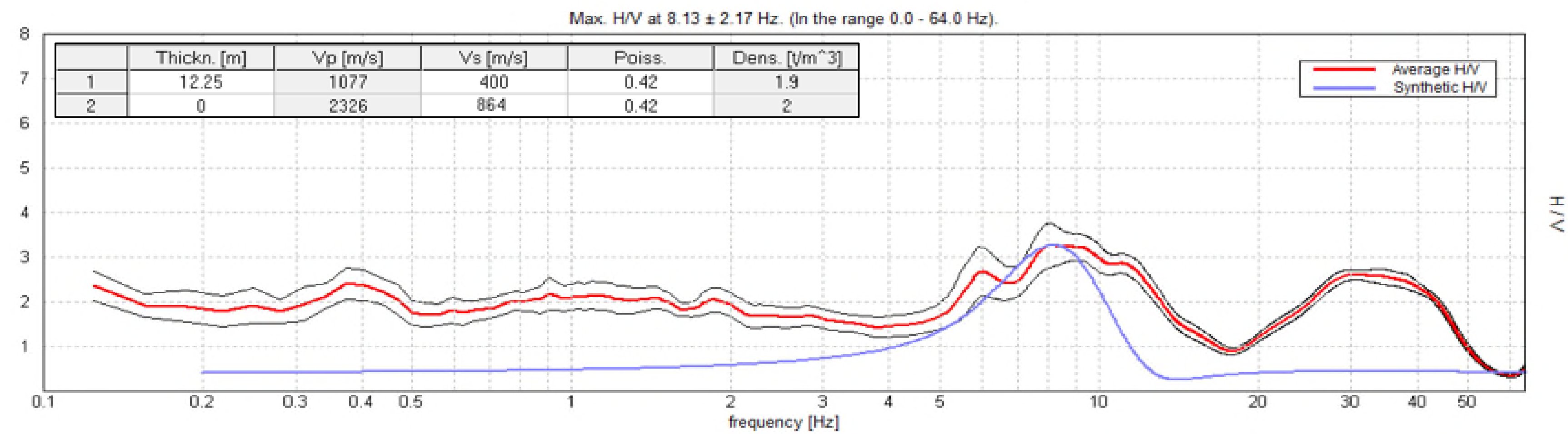
Horizontal and Vertical Axis Units are Meters

Survey Type: Gradient
Electrode Spacing (m.): 10
Vertical Exaggeration: 1
Line orientation (geographic degrees): 190

Number of Data Points		
Surveyed	After Modeling	Number Removed
518	388	130

Passive Seismic Results

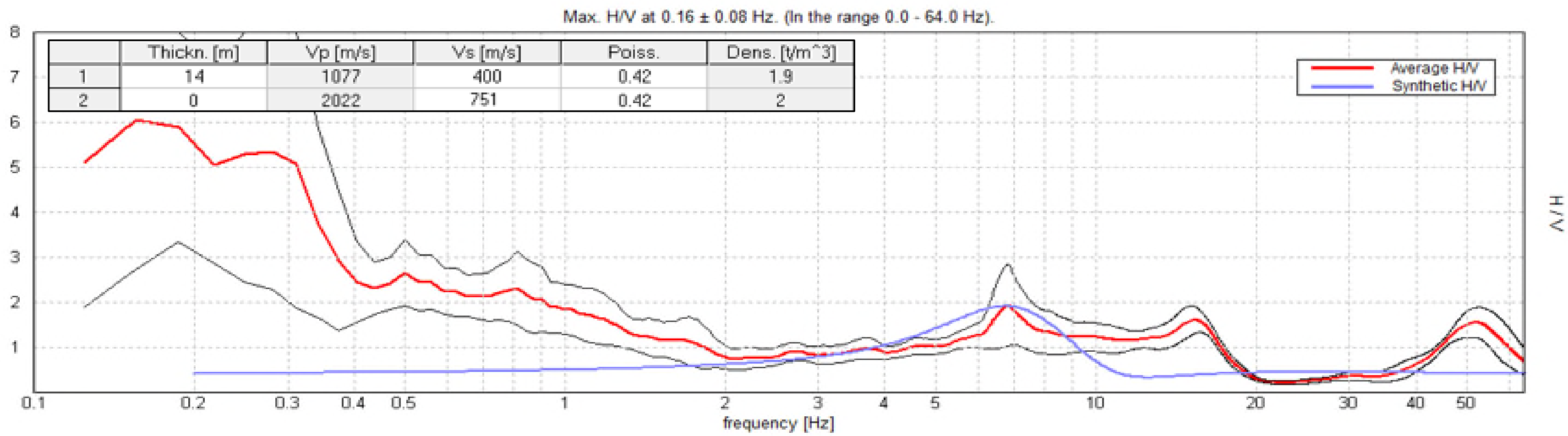
Passive Seismic Data Collection Point S1
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	12.25	1077	400	0.42	1.9
2	0	2326	864	0.42	2

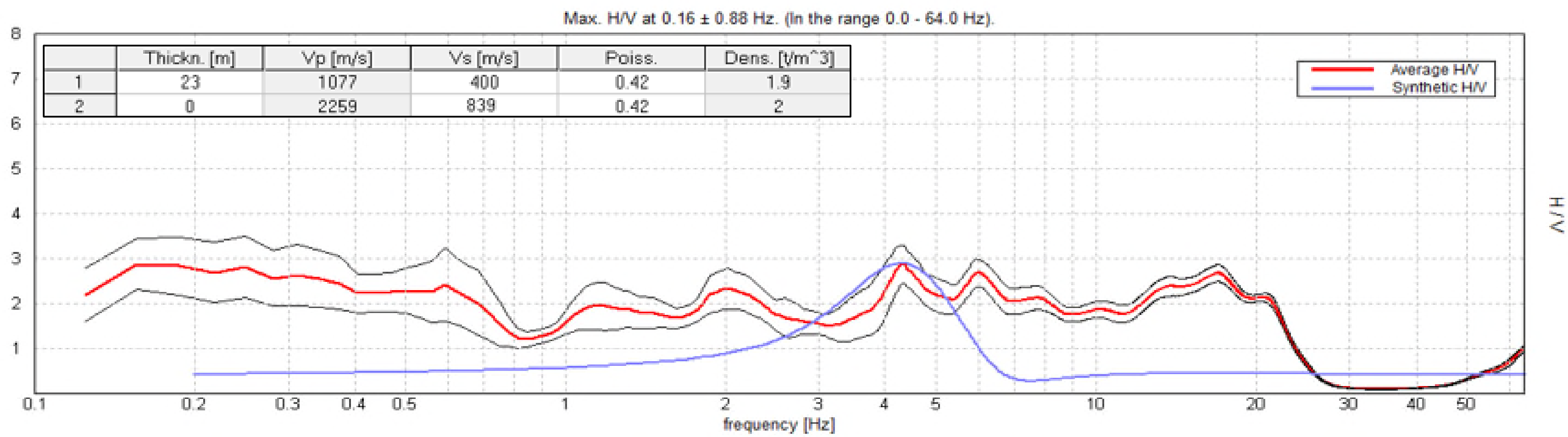
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S2
New London-Springfield Water System Precinct
New London, New Hampshire



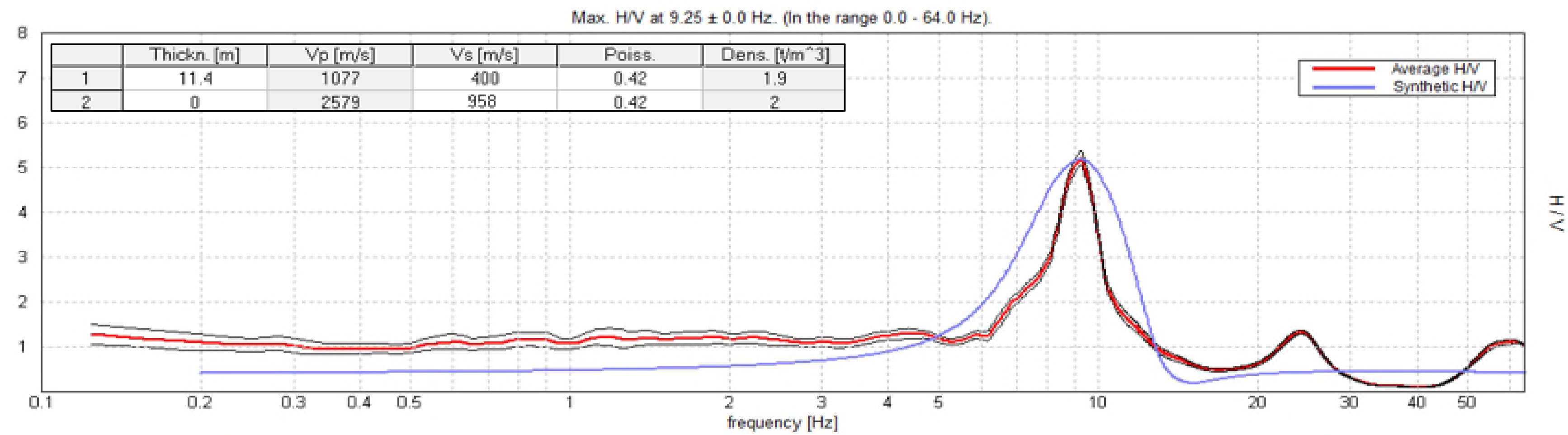
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S3
New London-Springfield Water System Precinct
New London, New Hampshire



Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

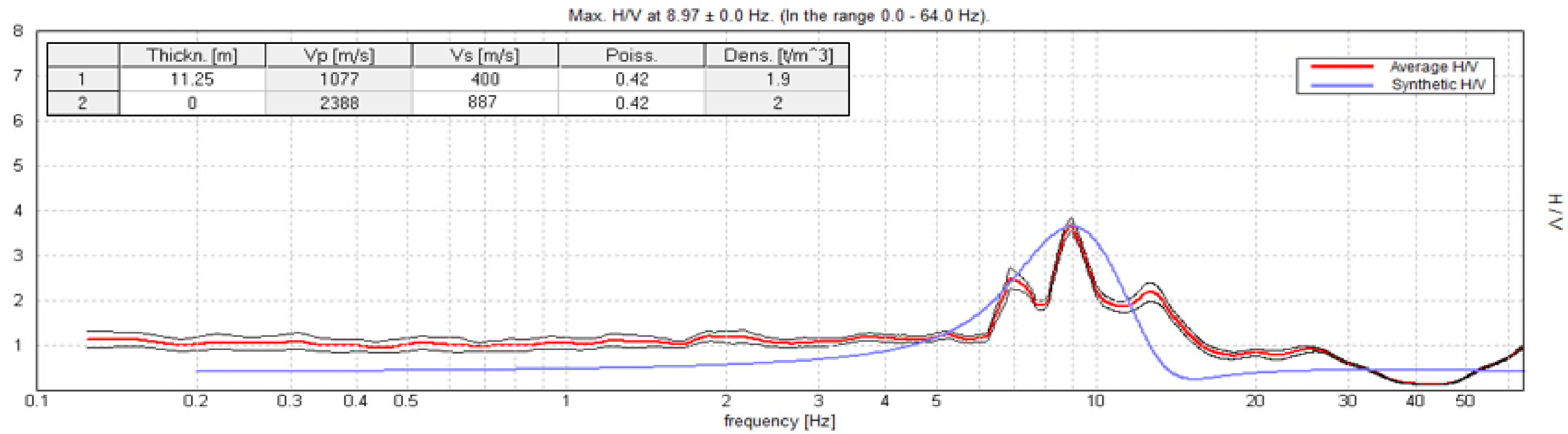
Passive Seismic Data Collection Point S4
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	11.4	1077	400	0.42	1.9
2	0	2579	958	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

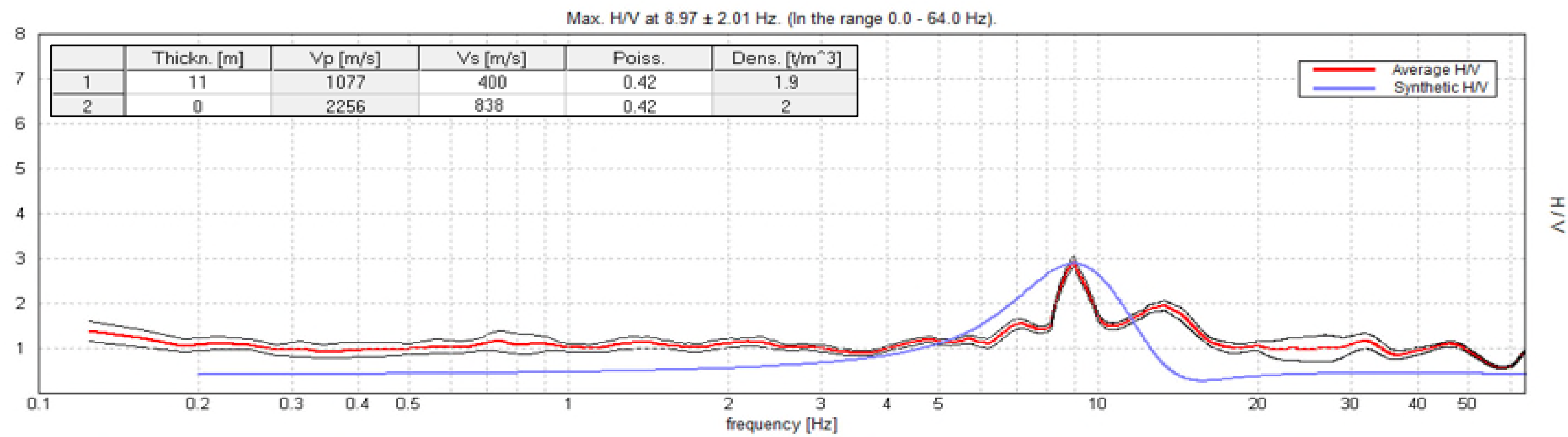
Passive Seismic Data Collection Point S5
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	11.25	1077	400	0.42	1.9
2	0	2388	887	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

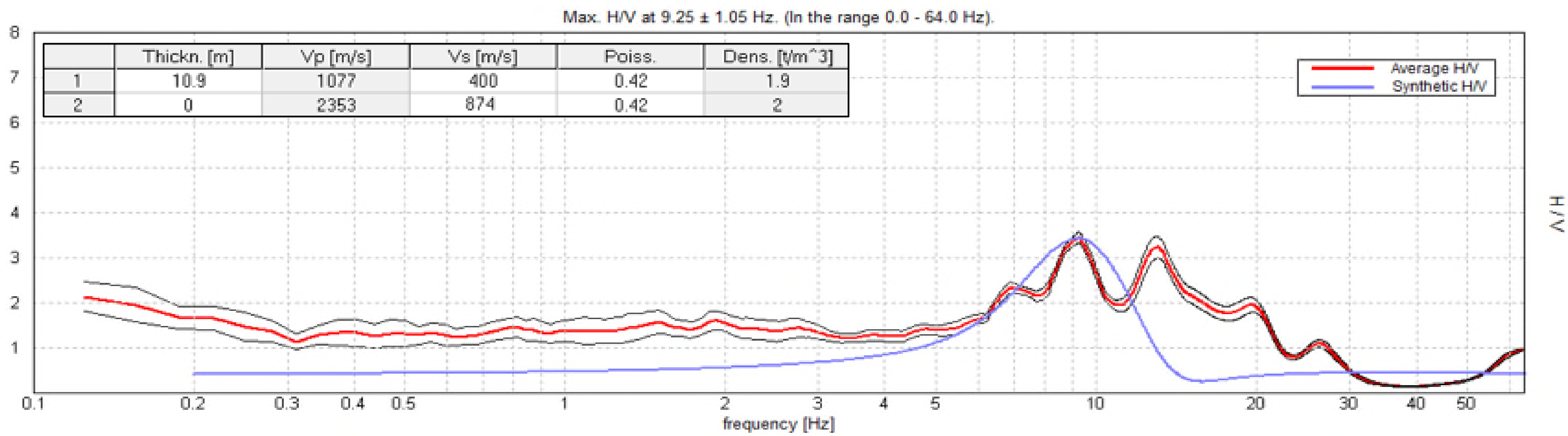
Passive Seismic Data Collection Point S6
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	11	1077	400	0.42	1.9
2	0	2256	838	0.42	2

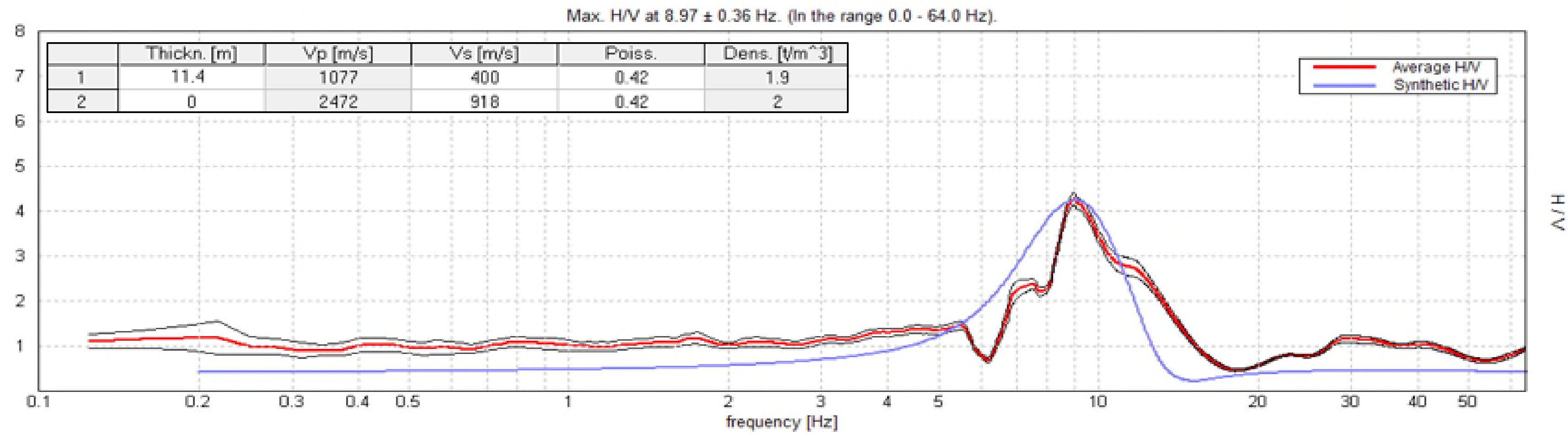
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S7
New London-Springfield Water System Precinct
New London, New Hampshire



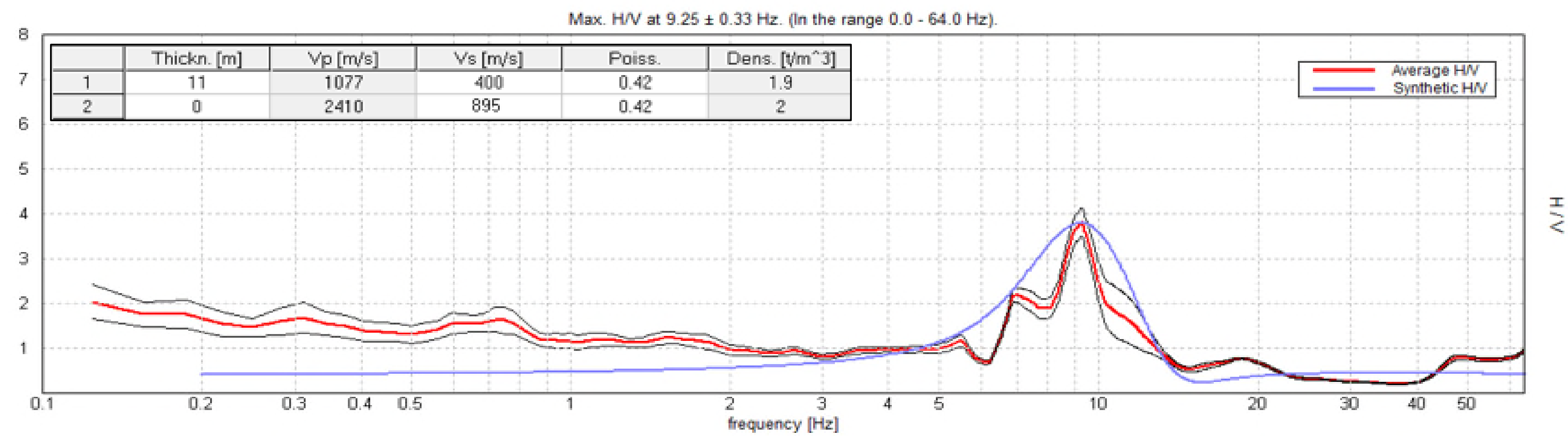
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S8
New London-Springfield Water System Precinct
New London, New Hampshire



Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

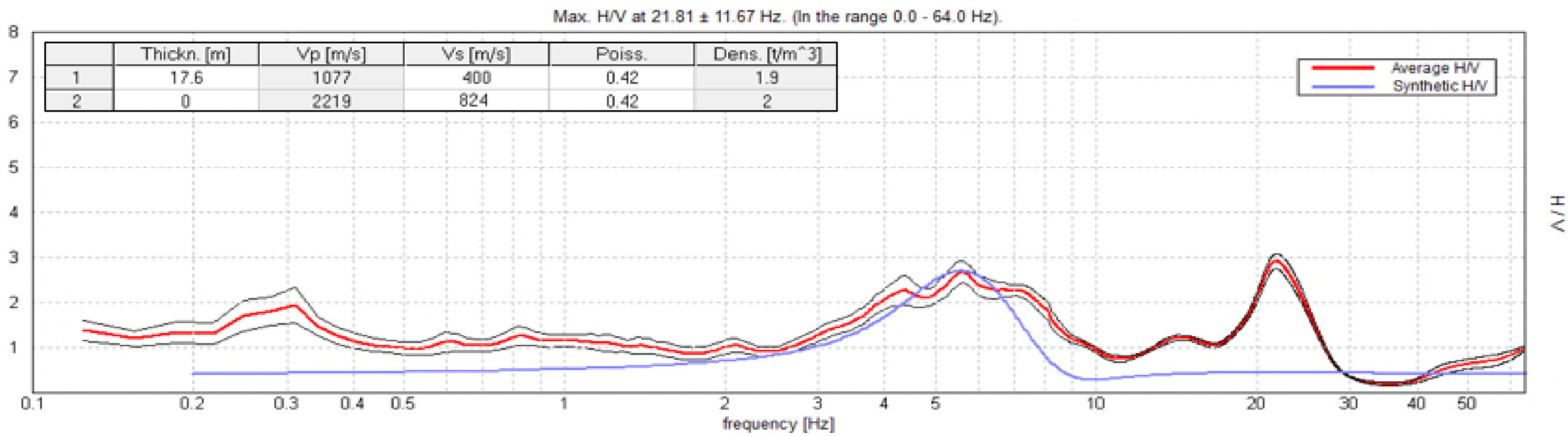
Passive Seismic Data Collection Point S9
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	11	1077	400	0.42	1.9
2	0	2410	895	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

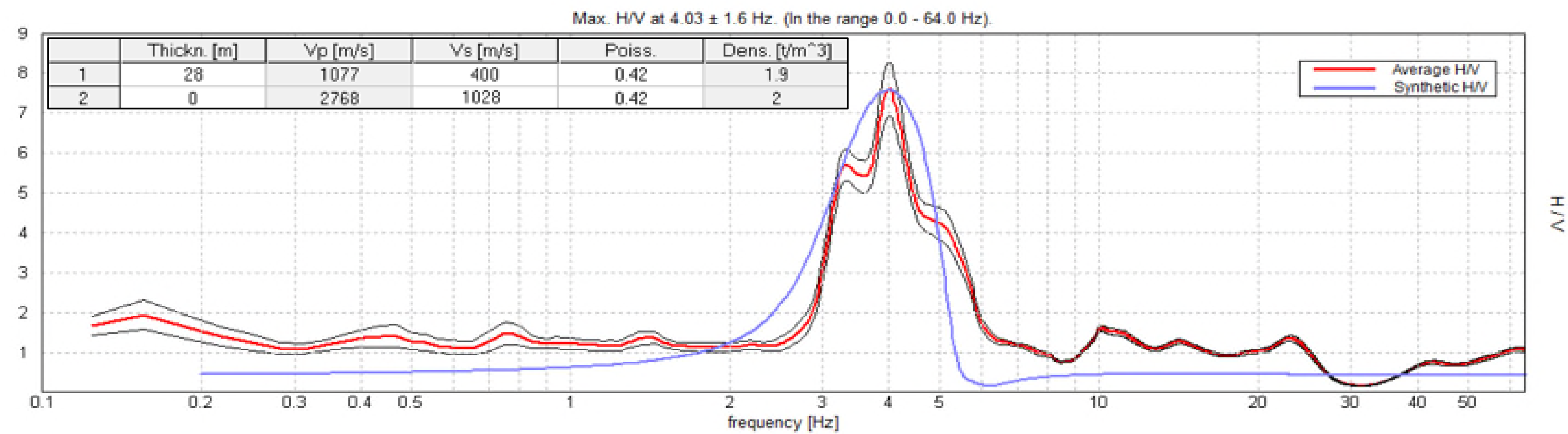
Passive Seismic Data Collection Point S10
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	17.6	1077	400	0.42	1.9
2	0	2219	824	0.42	2

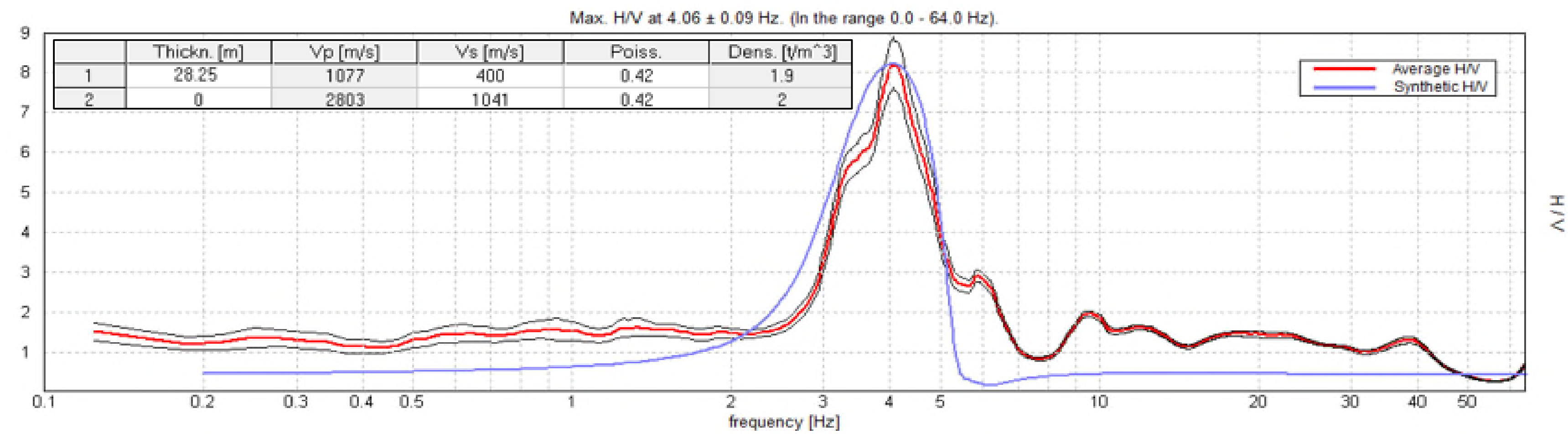
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S11
New London-Springfield Water System Precinct
New London, New Hampshire



Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

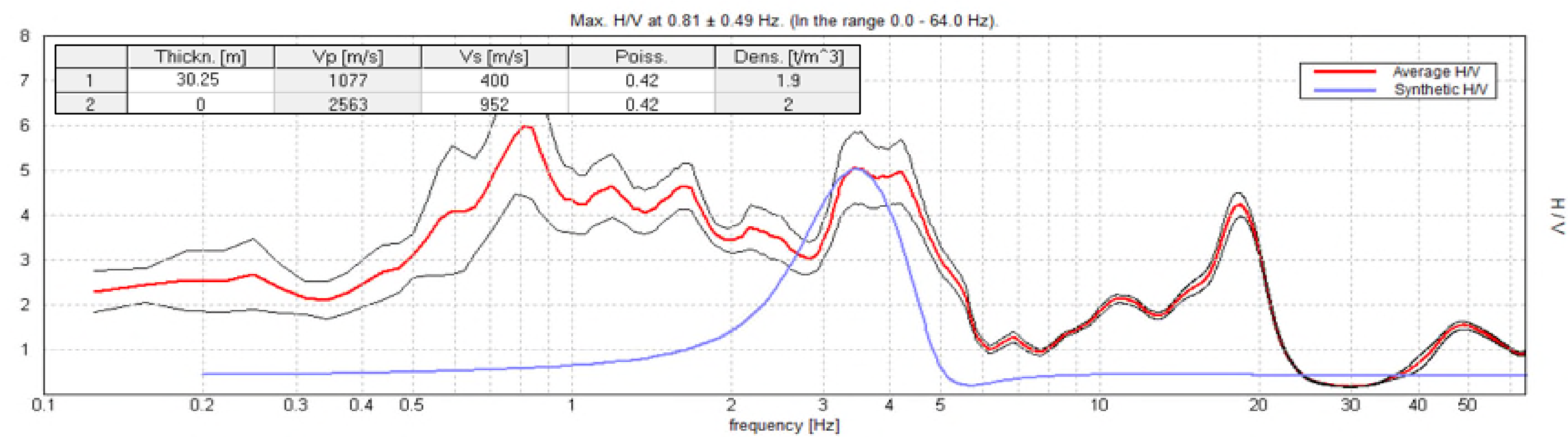
Passive Seismic Data Collection Point S12
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	28.25	1077	400	0.42	1.9
2	0	2803	1041	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

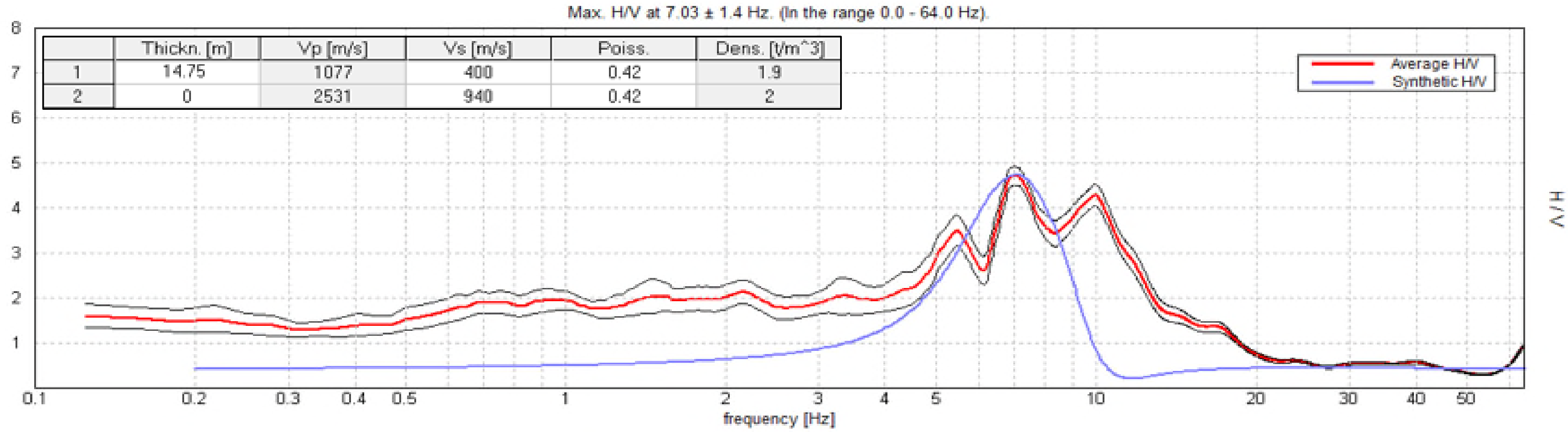
Passive Seismic Data Collection Point S13
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	30.25	1077	400	0.42	1.9
2	0	2563	952	0.42	2

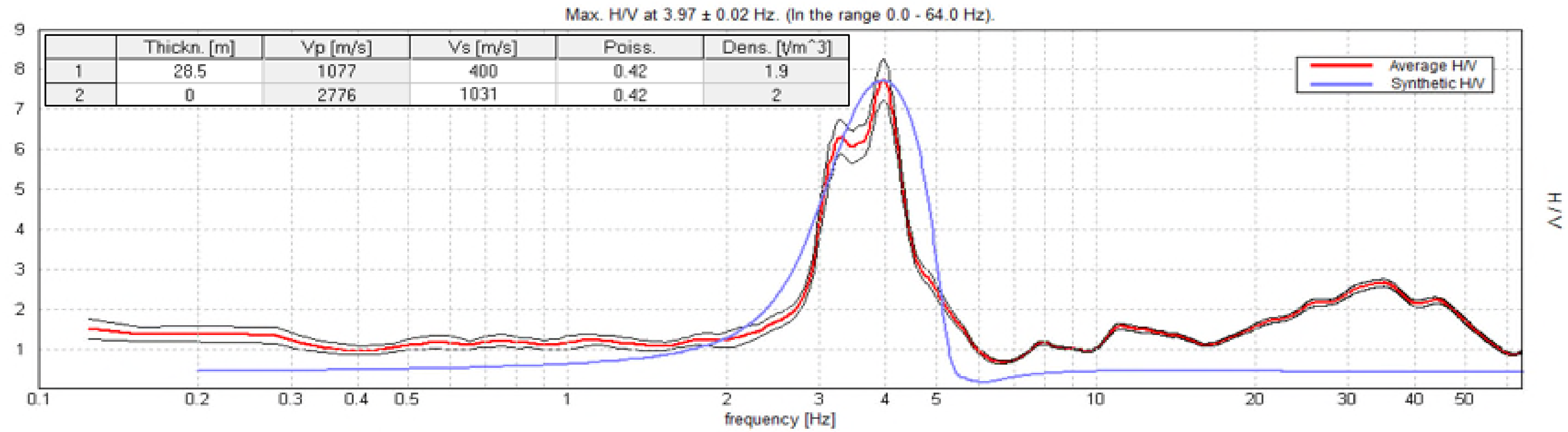
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S14
New London-Springfield Water System Precinct
New London, New Hampshire



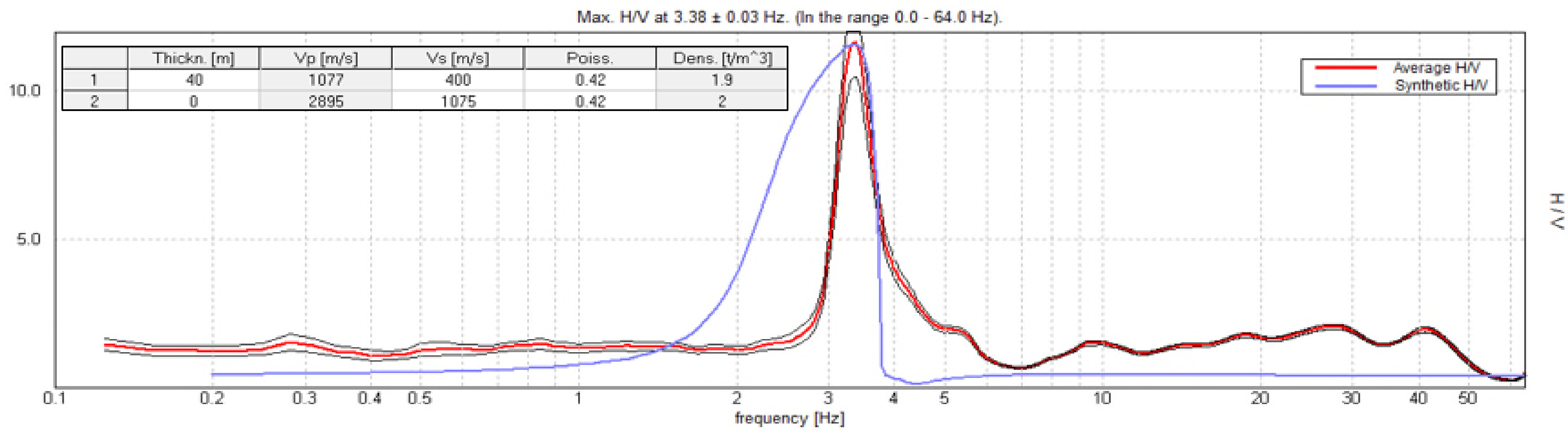
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S15
New London-Springfield Water System Precinct
New London, New Hampshire



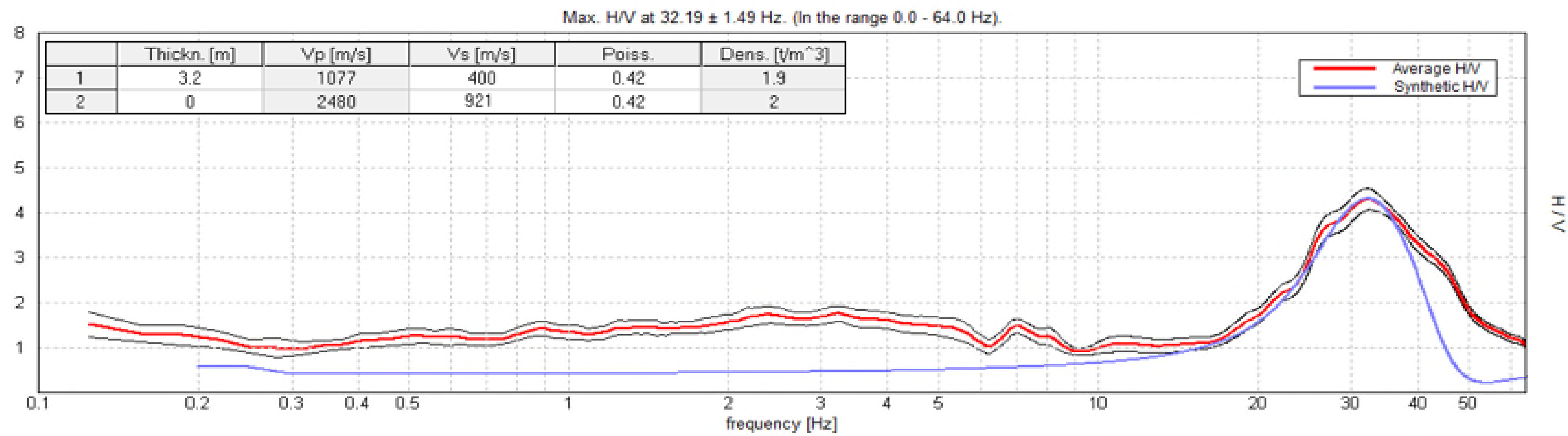
Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S16
New London-Springfield Water System Precinct
New London, New Hampshire



Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

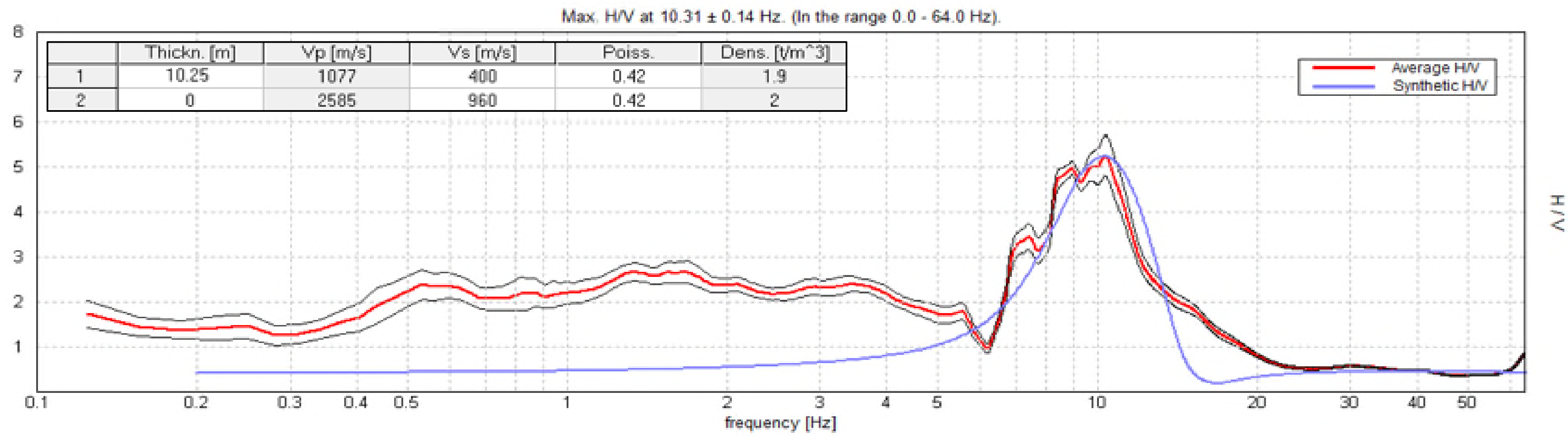
Passive Seismic Data Collection Point S17
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	3.2	1077	400	0.42	1.9
2	0	2480	921	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

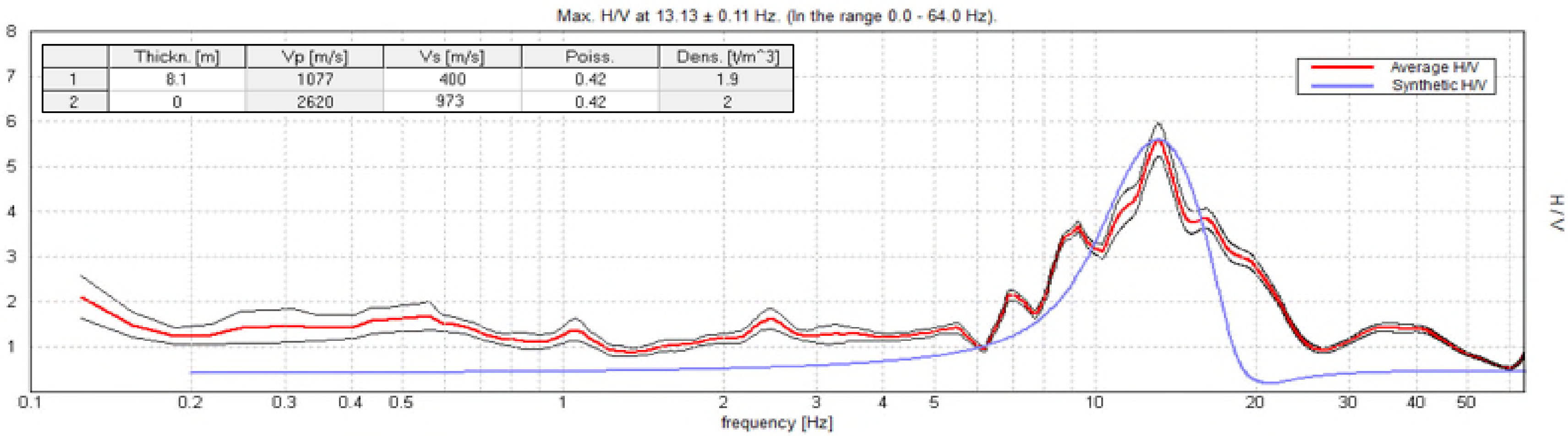
Passive Seismic Data Collection Point S18
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	10.25	1077	400	0.42	1.9
2	0	2585	960	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

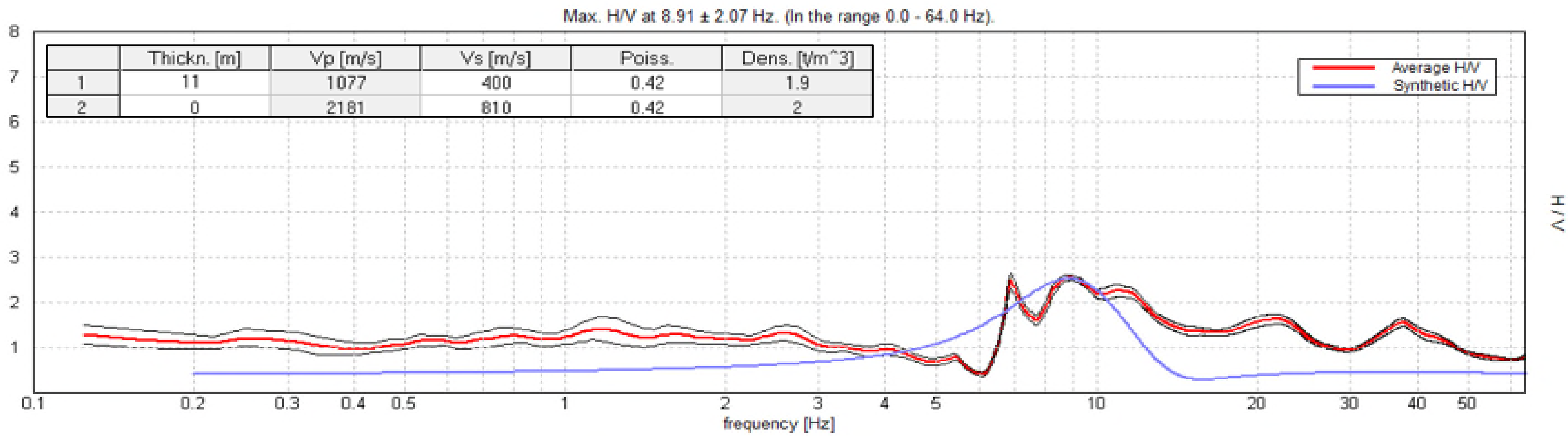
Passive Seismic Data Collection Point S19
New London-Springfield Water System Precinct
New London, New Hampshire



	Thickn. [m]	Vp [m/s]	Vs [m/s]	Poiss.	Dens. [t/m^3]
1	8.1	1077	400	0.42	1.9
2	0	2620	973	0.42	2

Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

Passive Seismic Data Collection Point S20
New London-Springfield Water System Precinct
New London, New Hampshire



Thickn [m] = Thickness of Unconsolidated Material [meters]
Vp [m/s] = P-wave Velocity [meters per second]
Vs [m/s] = Shear Wave Velocity [meters per second]
Poiss. = Poisson's Ratio
Dens. [t/m^3] = Density [Tonne per cubic meter]

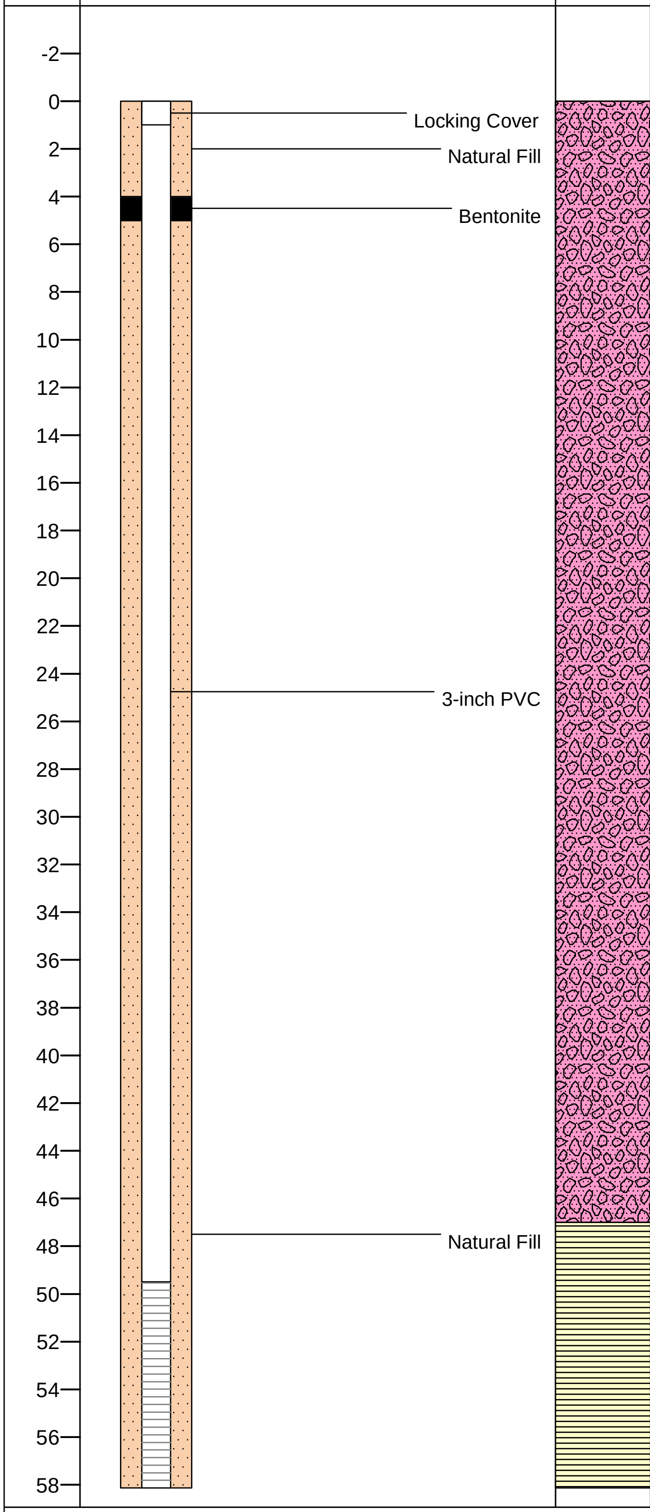
Appendix D – Hydrogeologic Logs

HYDROGEOLOGIC LOG FOR MONITORING WELL LON-1
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH

Project: *Groundwater Assessment of the Colby Point Wellfield*
Driller: *S.W. Cole Engineering, Inc.*
Geologist: *Mike O'Brien / Pete Young*
Drill Start: 03/26/2025 **Drill Stop:** 03/27/2025
Drill Method: *Drive and Wash*
Northing (ft): *340983.09* **Easting (ft):** *890329.17* **Elevation (ft):** *380.00*

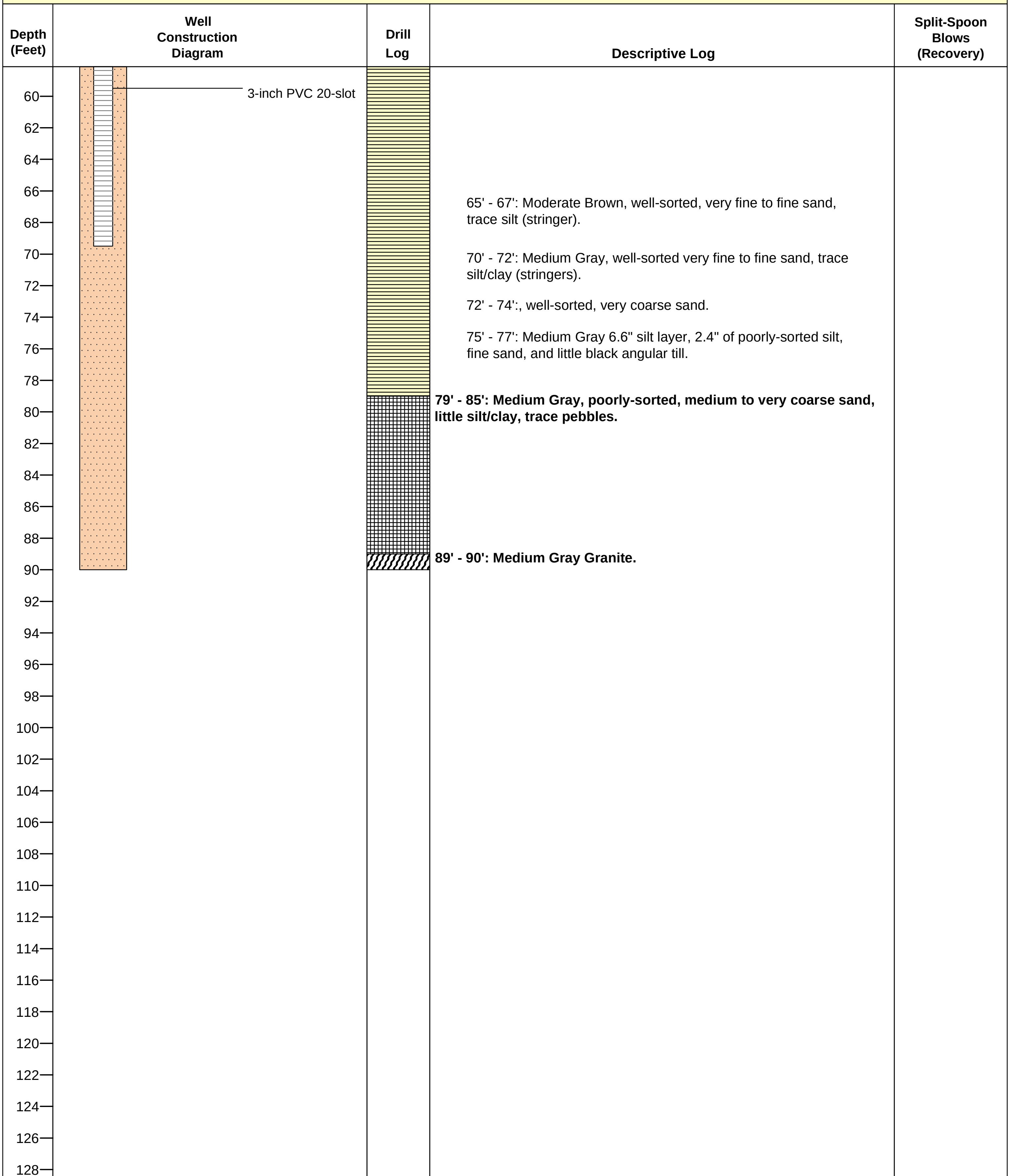
Depth of Boring (ft): *90.0*
Depth to Bedrock (ft): *89*
Depth to Till (ft): *79*
Depth to Refusal (ft): *0*
Static Water Level (ft): *35.17*

Depth of Installed Well (ft): *69.5*
Screen Interval (Slot Size): *49.5' - 69.5' (0.02")*



Descriptive Log	Split-Spoon Blows (Recovery)
0' - 47': Brownish Gray, moderately-sorted, fine to coarse sand, little sub-rounded to rounded pebbles.	
20' - 22': Brownish Gray, poorly-sorted, medium to very coarse sand, little well-rounded pebbles.	8-5-6-8 (6.5")
30' - 32': Brownish Gray, poorly-sorted, fine to coarse sand, little sub-rounded to rounded pebbles.	9-8-7-7 (7")
35' - 37': Brownish Gray, poorly-sorted, fine to coarse sand, little sub-rounded to rounded pebbles.	3-2-3-4 (4")
40' - 42': Brownish Gray, poorly-sorted, fine to coarse sand, little sub-rounded to rounded pebbles.	5-4-4-5 (7")
45' - 47': No Return.	6-7-7-10 (0")
47' - 79': Grayish Brown, well-sorted, very fine to fine sand, trace silt.	10-10-11-12 (4")
50' - 52': Brownish Gray, well-sorted, medium sand.	7-6-7-9 (7")
55' - 57': Grayish Brown, well-sorted, very fine to fine sand, trace silt.	8-5-8-8 (6")

HYDROGEOLOGIC LOG FOR MONITORING WELL LON-1
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH



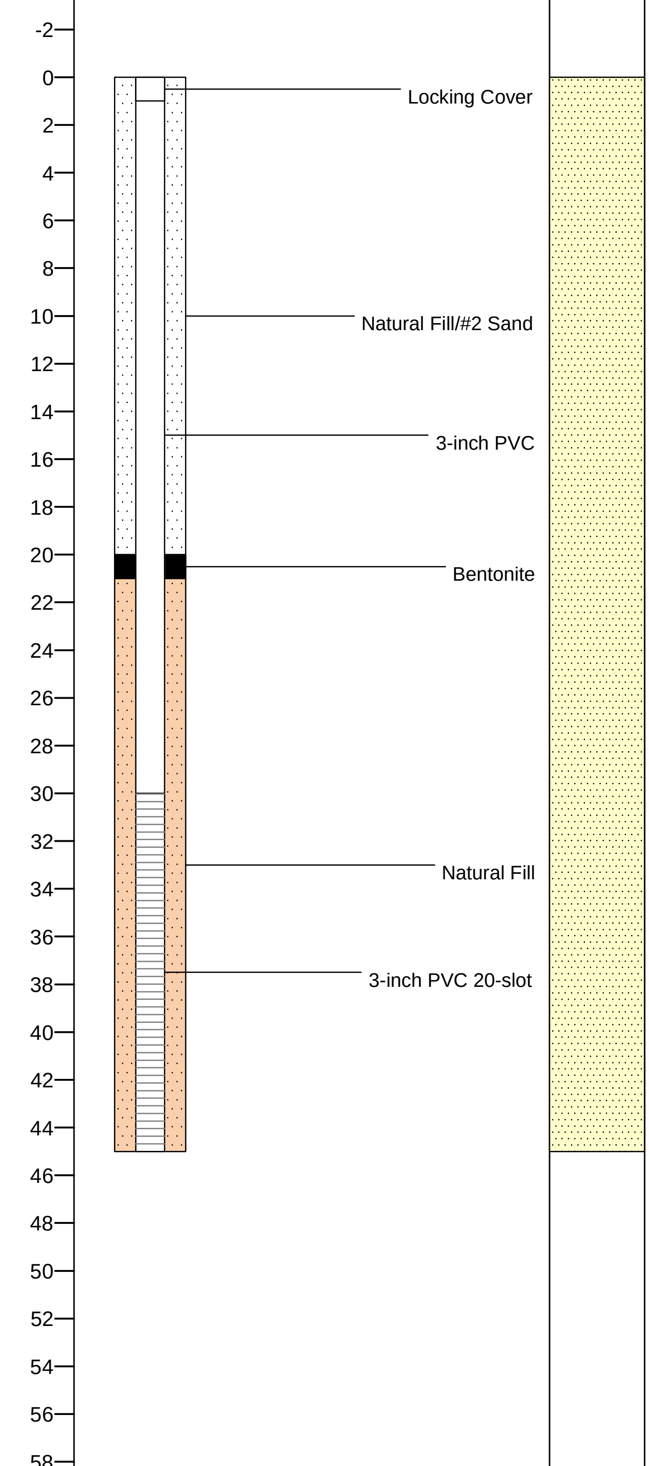
HYDROGEOLOGIC LOG FOR MONITORING WELL LON-2
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH

Project: *Groundwater Assessment of the Colby Point Wellfield*
Driller: *S.W. Cole Engineering, Inc.*
Geologist: *Pete Young*
Drill Start: 04/15/2025 **Drill Stop:** 04/15/2025
Drill Method: *Drive and Wash*
Northing (ft): *341246.58* **Easting (ft):** *890480.85* **Elevation (ft):** *377.00*

Depth of Boring (ft): *45.0*
Depth to Bedrock (ft): *N/A*
Depth to Till (ft): *N/A*
Depth to Refusal (ft): *N/A*
Static Water Level (ft): *19.94*

Depth of Installed Well (ft): *45*
Screen Interval (Slot Size): *30' - 45' (0.02")*

Depth (Feet) | **Well Construction Diagram** | **Drill Log**



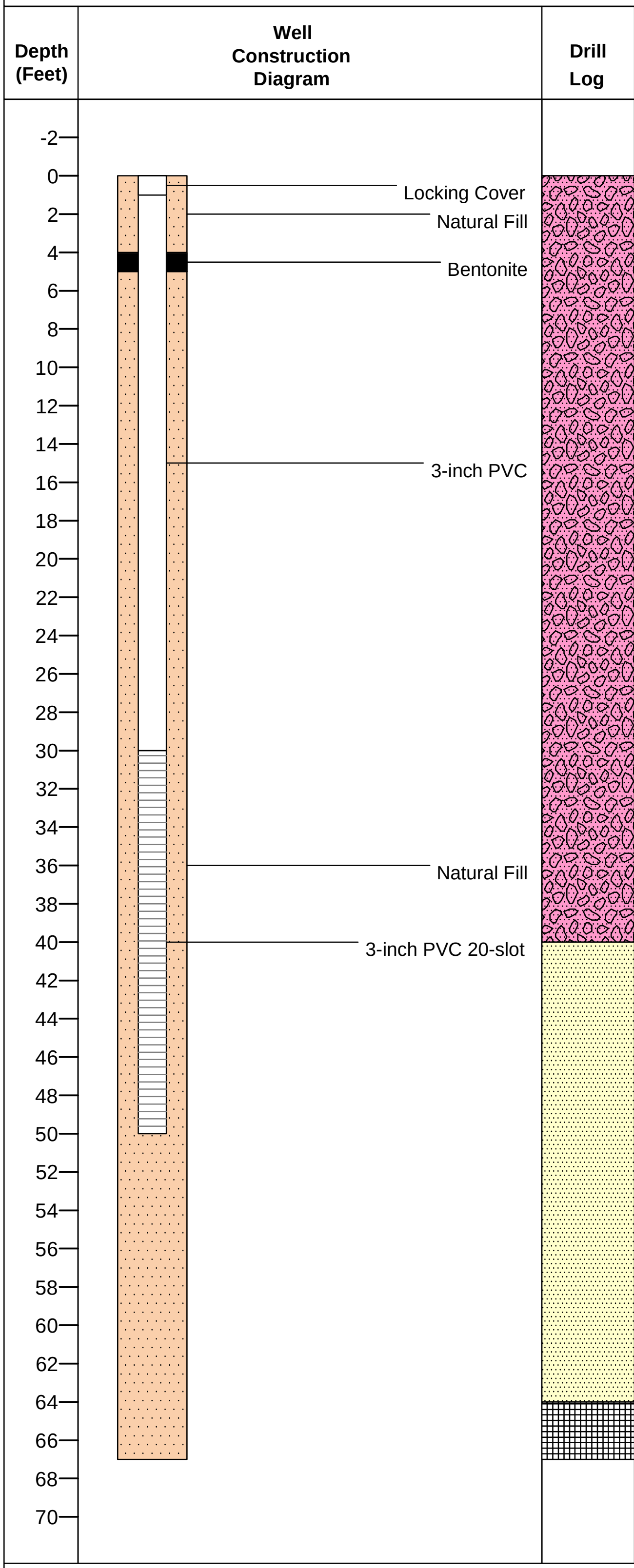
Descriptive Log	Split-Spoon Blows (Recovery)
0' - 45': Moderate Brown, well-sorted, medium to coarse sand, trace pebbles.	
20' - 22': Moderate Brown, well-sorted, medium to very coarse sand, trace pebbles.	6-4-4-6 (7.88")
25' - 27': Moderate Brown, well-sorted, medium sand.	6-2-2-5 (12")
30' - 32': Moderate Brown, well-sorted, medium sand.	10-8-9-12 (9")
35' - 37': Moderate Brown, well-sorted, medium sand.	4-4-6-10 (7")
40' - 42': Moderate Brown, well-sorted, medium sand.	6-8-11-12 (12")

HYDROGEOLOGIC LOG FOR MONITORING WELL LON-4S
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH

Project: *Groundwater Assessment of the Colby Point Wellfield*
Driller: *S.W. Cole Engineering, Inc.*
Geologist: *Pete Young / Mike O'Brien*
Drill Start: 03/27/2025 **Drill Stop:** 03/28/2025
Drill Method: *Drive and Wash*
Northing (ft): *340896.12* **Easting (ft):** *890256.33* **Elevation (ft):** *381.00*

Depth of Boring (ft): *67.0*
Depth to Bedrock (ft): *N/A*
Depth to Till (ft): *64*
Depth to Refusal (ft): *N/A*
Static Water Level (ft): *36.04*

Depth of Installed Well (ft): *50*
Screen Interval (Slot Size): *30' - 50' (0.02")*



Descriptive Log	Split-Spoon Blows (Recovery)
0'-40' Moderate Brown, poorly-sorted, medium to very coarse sand, little pebbles.	
20' - 22':, well-sorted, fine to coarse sand.	7-5-6-6 (6.48")
30' - 32':, moderately-sorted, fine to medium sand, trace rounded pebbles.	9-9-10-11 (8.16")
35' - 35':, moderately-sorted, medium to coarse sand.	
40' - 64': Moderate Brown, well-sorted, fine to medium sand.	
50' - 52': Light Brown, well-sorted, medium sand, trace coarse sand.	10-8-11-12 (12")
55' - 57': Light Brown, well-sorted, medium sand, trace fine sand.	6-5-6-7 (8")
60' - 62': Light Brown, moderately-sorted, fine to coarse sand. Steel casing broke off from 45 to 65 feet.	5-4-4-5 (9")
64' - 67': Grayish Brown, poorly-sorted, medium to very coarse sand, little pebbles, trace silt.	

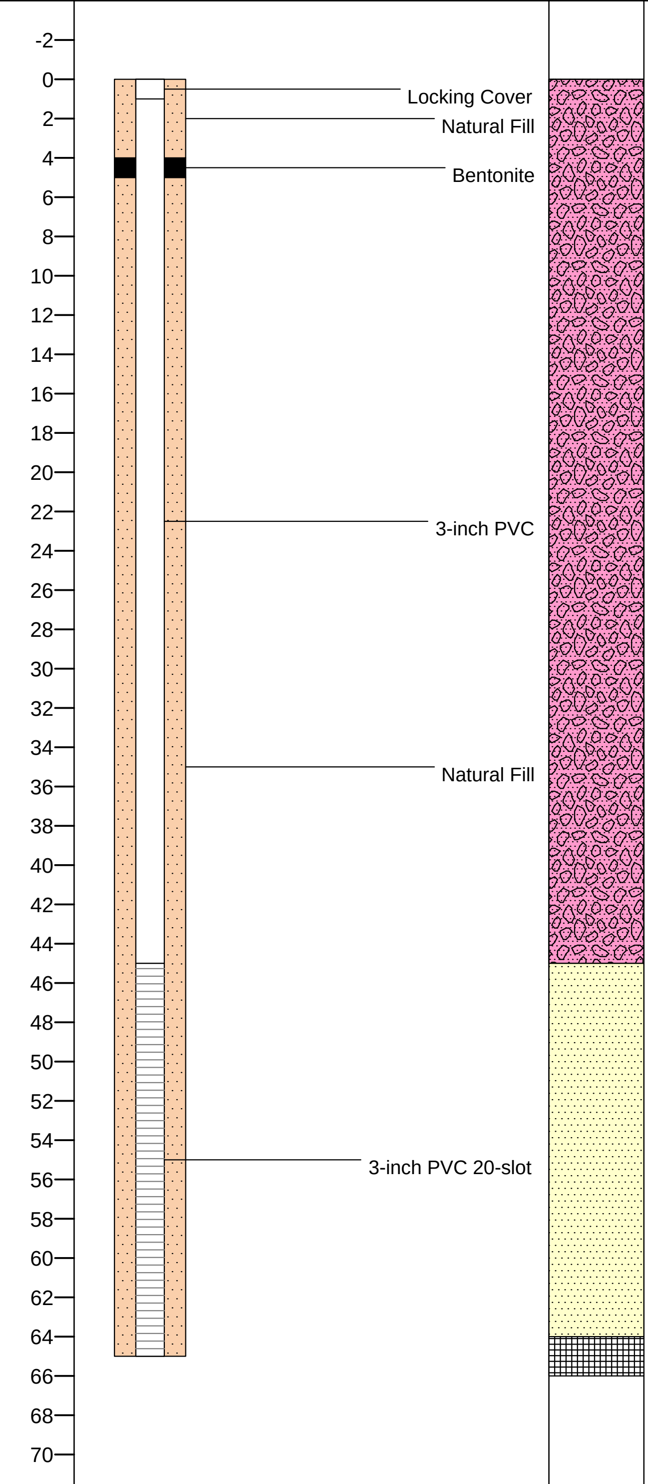
HYDROGEOLOGIC LOG FOR MONITORING WELL LON-4D
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH

Project: *Groundwater Assessment of the Colby Point Wellfield*
Driller: *S.W. Cole Engineering, Inc.*
Geologist: *Isabelle Peress / Mike O'Brien*
Drill Start: 03/28/2025 **Drill Stop:** 03/28/2025
Drill Method: *Drive and Wash*
Northing (ft): *340911.27* **Easting (ft):** *890257.32* **Elevation (ft):** *381.00*

Depth of Boring (ft): *65.0*
Depth to Bedrock (ft): *N/A*
Depth to Till (ft): *64*
Depth to Refusal (ft): *N/A*
Static Water Level (ft): *36.06*

Depth of Installed Well (ft): *65*
Screen Interval (Slot Size): *45' - 65' (0.02")*

Depth (Feet)	Well Construction Diagram	Drill Log	Descriptive Log	Split-Spoon Blows (Recovery)



0' - 45': Moderate Brown, poorly-sorted, medium to very coarse sand, little pebbles.

45' - 64': Brownish Gray, moderately-sorted, medium to coarse sand, trace sub-rounded to rounded pebbles.

64' - 66': Medium Dark Gray, poorly-sorted, medium to very coarse sand, little pebbles, trace silt.

Appendix E – Water Quality Results

Informational Water Quality Report

Watercheck w/PO

Client:

Ordered By:
Emery & Garrett Groundwater Investigations, LLC 56 Main Street PO Box 1578 Meredith, NH 03253

National Testing Laboratories, Ltd.
Quality Water Analysis

6571 Wilson Mills Rd
Cleveland, Ohio 44143
1-800-458-3330

Sample Number: 971309

Location:	LON-1
Type of Water:	Well Water
Collection Date and Time:	4/1/2025 2:00 PM
Received Date and Time:	4/7/2025 10:53 AM
Date Completed:	4/30/2025

Revised Report 4/29/2025: EPA Primary Standard for Arsenic has been added to the report.

Metals Not Filtered
1 Hour PT

Definition and Legend

This informational water quality report compares the actual test result to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

Primary Standards:	Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.
Secondary standards:	Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor,or color) in drinking water. Individual states may choose to adopt them as enforceable standards.
Action levels:	Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.
mg/L (ppm):	Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.
Minimum Detection Level (MDL):	The lowest level that the laboratory can detect a contaminant.
ND:	The contaminant was not detected above the minimum detection level.
NA:	The contaminant was not analyzed.

✓ The contaminant was not detected in the sample above the minimum detection level.

● The contaminant was detected at or above the minimum detection level, but not above the referenced standard.

▲ The contaminant was detected above the standard, which is not an EPA enforceable MCL.

✚ The contaminant was detected above the EPA enforceable MCL.

✖ These results may be invalid.

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
	Microbiologicals					
	Total Coliform by P/A	No bacteria sample was submitted.				
	Inorganic Analytes - Metals					
✓	Aluminum	ND	mg/L	0.20	EPA Secondary	0.05
✓	Arsenic	ND	mg/L	0.010	EPA Primary	0.001
✓	Barium	ND	mg/L	2.0	EPA Primary	0.1
✓	Beryllium	ND	mg/L	0.004	EPA Primary	0.001
✓	Cadmium	ND	mg/L	0.0050	EPA Primary	0.0002
●	Calcium	4.10	mg/L	--		0.10
✓	Chromium	ND	mg/L	0.100	EPA Primary	0.005
✓	Copper	ND	mg/L	1.300	EPA Action Level	0.004
●	Iron	0.10	mg/L	0.30	EPA Secondary	0.02
✓	Lead	ND	mg/L	0.010	EPA Action Level	0.003
●	Magnesium	0.500	mg/L	--		0.100
●	Manganese	0.030	mg/L	0.050	EPA Secondary	0.020
✓	Mercury	ND	mg/L	0.0020	EPA Primary	0.0002
✓	Nickel	ND	mg/L	--		0.020
●	Potassium	1.300	mg/L	--		0.100
✓	Selenium	ND	mg/L	0.050	EPA Primary	0.005
✓	Silver	ND	mg/L	0.1000	EPA Secondary	0.0002
●	Sodium	13.00	mg/L	--		1.00
✓	Thallium	ND	mg/L	0.002	EPA Primary	0.002
✓	Vanadium	ND	mg/L	--		0.004
✓	Zinc	ND	mg/L	5.000	EPA Secondary	0.010
	Physical Factors					
✓	Alkalinity (Total as CaCO3)	ND	mg/L	--		20
●	Hardness	12	mg/L	100	NTL Internal	10
✓	pH	6.8	pH Units	6.5 to 8.5	EPA Secondary	

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
●	Total Dissolved Solids	34	mg/L	500	EPA Secondary	20
●	Turbidity	0.2	NTU	1.0	EPA Action Level	0.1
	Inorganic Analytes - Other					
✓	Bromide	ND	mg/L	--		0.5
●	Chloride	15.0	mg/L	250	EPA Secondary	5.0
✓	Fluoride	ND	mg/L	4.0	EPA Primary	0.5
✓	Nitrate as N	ND	mg/L	10	EPA Primary	0.5
✓	Nitrite as N	ND	mg/L	1	EPA Primary	0.5
✓	Ortho Phosphate	ND	mg/L	--		2.0
✓	Sulfate	ND	mg/L	250	EPA Secondary	5.0
	Organic Analytes - Trihalomethanes					
✓	Bromodichloromethane	ND	mg/L	--		0.002
✓	Bromoform	ND	mg/L	--		0.004
✓	Chloroform	ND	mg/L	--		0.002
✓	Dibromochloromethane	ND	mg/L	--		0.004
✓	Total THMs	ND	mg/L	0.080	EPA Primary	0.002
	Organic Analytes - Volatiles					
✓	1,1,1,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,1-Trichloroethane	ND	mg/L	0.2	EPA Primary	0.001
✓	1,1,2,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,2-Trichloroethane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,1-Dichloroethane	ND	mg/L	--		0.002
✓	1,1-Dichloroethene	ND	mg/L	0.007	EPA Primary	0.001
✓	1,1-Dichloropropene	ND	mg/L	--		0.002
✓	1,2,3-Trichlorobenzene	ND	mg/L	--		0.002
✓	1,2,3-Trichloropropane	ND	mg/L	--		0.002
✓	1,2,4-Trichlorobenzene	ND	mg/L	0.07	EPA Primary	0.002
✓	1,2-Dichlorobenzene	ND	mg/L	0.6	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	1,2-Dichloroethane	ND	mg/L	0.005	EPA Primary	0.001
✓	1,2-Dichloropropane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,3-Dichlorobenzene	ND	mg/L	--		0.001
✓	1,3-Dichloropropane	ND	mg/L	--		0.002
✓	1,4-Dichlorobenzene	ND	mg/L	0.075	EPA Primary	0.001
✓	2,2-Dichloropropane	ND	mg/L	--		0.002
✓	2-Chlorotoluene	ND	mg/L	--		0.001
✓	4-Chlorotoluene	ND	mg/L	--		0.001
✓	Acetone	ND	mg/L	--		0.01
✓	Benzene	ND	mg/L	0.005	EPA Primary	0.001
✓	Bromobenzene	ND	mg/L	--		0.002
✓	Bromomethane	ND	mg/L	--		0.002
✓	Carbon Tetrachloride	ND	mg/L	0.005	EPA Primary	0.001
✓	Chlorobenzene	ND	mg/L	0.1	EPA Primary	0.001
✓	Chloroethane	ND	mg/L	--		0.002
✓	Chloromethane	ND	mg/L	--		0.002
✓	cis-1,2-Dichloroethene	ND	mg/L	0.07	EPA Primary	0.002
✓	cis-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	DBCP	ND	mg/L	--		0.001
✓	Dibromomethane	ND	mg/L	--		0.002
✓	Dichlorodifluoromethane	ND	mg/L	--		0.002
✓	Dichloromethane	ND	mg/L	0.005	EPA Primary	0.002
✓	EDB	ND	mg/L	--		0.001
✓	Ethylbenzene	ND	mg/L	0.7	EPA Primary	0.001
✓	Methyl Tert Butyl Ether	ND	mg/L	--		0.004
✓	Methyl-Ethyl Ketone	ND	mg/L	--		0.01
✓	Styrene	ND	mg/L	0.1	EPA Primary	0.001
✓	Tetrachloroethene	ND	mg/L	0.005	EPA Primary	0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Tetrahydrofuran	ND	mg/L	--		0.01
✓	Toluene	ND	mg/L	1	EPA Primary	0.001
✓	trans-1,2-Dichloroethene	ND	mg/L	0.1	EPA Primary	0.002
✓	trans-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	Trichloroethene	ND	mg/L	0.005	EPA Primary	0.001
✓	Trichlorofluoromethane	ND	mg/L	--		0.002
✓	Vinyl Chloride	ND	mg/L	0.002	EPA Primary	0.001
✓	Xylenes (Total)	ND	mg/L	10	EPA Primary	0.001
			Organic Analytes - Others			
✓	2,4-D	ND	mg/L	0.07	EPA Primary	0.010
✓	Alachlor	ND	mg/L	0.002	EPA Primary	0.001
✓	Aldrin	ND	mg/L	--		0.002
✓	Atrazine	ND	mg/L	0.003	EPA Primary	0.002
✓	Chlordane	ND	mg/L	0.002	EPA Primary	0.001
✓	Dichloran	ND	mg/L	--		0.002
✓	Dieldrin	ND	mg/L	--		0.001
✓	Endrin	ND	mg/L	0.002	EPA Primary	0.0001
✓	Heptachlor	ND	mg/L	0.0004	EPA Primary	0.0004
✓	Heptachlor Epoxide	ND	mg/L	0.0002	EPA Primary	0.0001
✓	Hexachlorobenzene	ND	mg/L	0.001	EPA Primary	0.0005
✓	Hexachlorocyclopentadiene	ND	mg/L	0.05	EPA Primary	0.001
✓	Lindane	ND	mg/L	0.0002	EPA Primary	0.0002
✓	Methoxychlor	ND	mg/L	0.04	EPA Primary	0.002
✓	Pentachloronitrobenzene	ND	mg/L	--		0.002
✓	Silvex 2,4,5-TP	ND	mg/L	0.05	EPA Primary	0.005
✓	Simazine	ND	mg/L	0.004	EPA Primary	0.002
✓	Total PCBs	ND	mg/L	0.0005	EPA Primary	0.0005
✓	Toxaphene	ND	mg/L	0.003	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards	Min. Detection Level
✓	Trifluralin	ND	mg/L	--	0.002

We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.

556 South Mansfield Street • Ypsilanti • Michigan •

Informational Water Quality Report

Watercheck w/PO

Client:

Ordered By:
Emery & Garrett Groundwater Investigations, LLC 56 Main Street PO Box 1578 Meredith, NH 03253

National Testing Laboratories, Ltd.
Quality Water Analysis
6571 Wilson Mills Rd
Cleveland, Ohio 44143
1-800-458-3330

Sample Number: 971310

Location:	LON-4S
Type of Water:	Well Water
Collection Date and Time:	4/2/2025 12:30 PM
Received Date and Time:	4/7/2025 10:53 AM
Date Completed:	5/1/2025

Revised Report 4/29/2025: EPA Primary Standard for Arsenic has been added to the report.

Metals Not Filtered

Definition and Legend

This informational water quality report compares the actual test result to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

Primary Standards: Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.

Secondary standards: Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor,or color) in drinking water. Individual states may choose to adopt them as enforceable standards.

Action levels: Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.

mg/L (ppm): Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

Minimum Detection Level (MDL): The lowest level that the laboratory can detect a contaminant.

ND: The contaminant was not detected above the minimum detection level.

NA: The contaminant was not analyzed.

✓ The contaminant was not detected in the sample above the minimum detection level.

● The contaminant was detected at or above the minimum detection level, but not above the referenced standard.

▲ The contaminant was detected above the standard, which is not an EPA enforceable MCL.

✚ The contaminant was detected above the EPA enforceable MCL.

✖ These results may be invalid.

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
			Microbiologicals			
	Total Coliform by P/A	No bacteria sample was submitted.				
			Inorganic Analytes - Metals			
✓	Aluminum	ND	mg/L	0.20	EPA Secondary	0.05
✓	Arsenic	ND	mg/L	0.010	EPA Primary	0.001
✓	Barium	ND	mg/L	2.0	EPA Primary	0.1
✓	Beryllium	ND	mg/L	0.004	EPA Primary	0.001
✓	Cadmium	ND	mg/L	0.0050	EPA Primary	0.0002
●	Calcium	4.30	mg/L	--		0.10
✓	Chromium	ND	mg/L	0.100	EPA Primary	0.005
✓	Copper	ND	mg/L	1.300	EPA Action Level	0.004
●	Iron	0.08	mg/L	0.30	EPA Secondary	0.02
✓	Lead	ND	mg/L	0.010	EPA Action Level	0.003
●	Magnesium	0.600	mg/L	--		0.100
▲	Manganese	0.220	mg/L	0.050	EPA Secondary	0.020
✓	Mercury	ND	mg/L	0.0020	EPA Primary	0.0002
✓	Nickel	ND	mg/L	--		0.020
●	Potassium	0.700	mg/L	--		0.100
✓	Selenium	ND	mg/L	0.050	EPA Primary	0.005
✓	Silver	ND	mg/L	0.1000	EPA Secondary	0.0002
●	Sodium	9.00	mg/L	--		1.00
✓	Thallium	ND	mg/L	0.002	EPA Primary	0.002
✓	Vanadium	ND	mg/L	--		0.004
✓	Zinc	ND	mg/L	5.000	EPA Secondary	0.010
			Physical Factors			
✓	Alkalinity (Total as CaCO3)	ND	mg/L	--		20
●	Hardness	13	mg/L	100	NTL Internal	10
✓	pH	6.8	pH Units	6.5 to 8.5	EPA Secondary	

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
●	Total Dissolved Solids	31	mg/L	500	EPA Secondary	20
●	Turbidity	0.7	NTU	1.0	EPA Action Level	0.1
	Inorganic Analytes - Other					
✓	Bromide	ND	mg/L	--		0.5
●	Chloride	16.0	mg/L	250	EPA Secondary	5.0
✓	Fluoride	ND	mg/L	4.0	EPA Primary	0.5
✓	Nitrate as N	ND	mg/L	10	EPA Primary	0.5
✓	Nitrite as N	ND	mg/L	1	EPA Primary	0.5
✓	Ortho Phosphate	ND	mg/L	--		2.0
✓	Sulfate	ND	mg/L	250	EPA Secondary	5.0
	Organic Analytes - Trihalomethanes					
✓	Bromodichloromethane	ND	mg/L	--		0.002
✓	Bromoform	ND	mg/L	--		0.004
✓	Chloroform	ND	mg/L	--		0.002
✓	Dibromochloromethane	ND	mg/L	--		0.004
✓	Total THMs	ND	mg/L	0.080	EPA Primary	0.002
	Organic Analytes - Volatiles					
✓	1,1,1,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,1-Trichloroethane	ND	mg/L	0.2	EPA Primary	0.001
✓	1,1,2,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,2-Trichloroethane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,1-Dichloroethane	ND	mg/L	--		0.002
✓	1,1-Dichloroethene	ND	mg/L	0.007	EPA Primary	0.001
✓	1,1-Dichloropropene	ND	mg/L	--		0.002
✓	1,2,3-Trichlorobenzene	ND	mg/L	--		0.002
✓	1,2,3-Trichloropropane	ND	mg/L	--		0.002
✓	1,2,4-Trichlorobenzene	ND	mg/L	0.07	EPA Primary	0.002
✓	1,2-Dichlorobenzene	ND	mg/L	0.6	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	1,2-Dichloroethane	ND	mg/L	0.005	EPA Primary	0.001
✓	1,2-Dichloropropane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,3-Dichlorobenzene	ND	mg/L	--		0.001
✓	1,3-Dichloropropane	ND	mg/L	--		0.002
✓	1,4-Dichlorobenzene	ND	mg/L	0.075	EPA Primary	0.001
✓	2,2-Dichloropropane	ND	mg/L	--		0.002
✓	2-Chlorotoluene	ND	mg/L	--		0.001
✓	4-Chlorotoluene	ND	mg/L	--		0.001
✓	Acetone	ND	mg/L	--		0.01
✓	Benzene	ND	mg/L	0.005	EPA Primary	0.001
✓	Bromobenzene	ND	mg/L	--		0.002
✓	Bromomethane	ND	mg/L	--		0.002
✓	Carbon Tetrachloride	ND	mg/L	0.005	EPA Primary	0.001
✓	Chlorobenzene	ND	mg/L	0.1	EPA Primary	0.001
✓	Chloroethane	ND	mg/L	--		0.002
✓	Chloromethane	ND	mg/L	--		0.002
✓	cis-1,2-Dichloroethene	ND	mg/L	0.07	EPA Primary	0.002
✓	cis-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	DBCP	ND	mg/L	--		0.001
✓	Dibromomethane	ND	mg/L	--		0.002
✓	Dichlorodifluoromethane	ND	mg/L	--		0.002
✓	Dichloromethane	ND	mg/L	0.005	EPA Primary	0.002
✓	EDB	ND	mg/L	--		0.001
✓	Ethylbenzene	ND	mg/L	0.7	EPA Primary	0.001
✓	Methyl Tert Butyl Ether	ND	mg/L	--		0.004
✓	Methyl-Ethyl Ketone	ND	mg/L	--		0.01
✓	Styrene	ND	mg/L	0.1	EPA Primary	0.001
✓	Tetrachloroethene	ND	mg/L	0.005	EPA Primary	0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Tetrahydrofuran	ND	mg/L	--		0.01
✓	Toluene	ND	mg/L	1	EPA Primary	0.001
✓	trans-1,2-Dichloroethene	ND	mg/L	0.1	EPA Primary	0.002
✓	trans-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	Trichloroethene	ND	mg/L	0.005	EPA Primary	0.001
✓	Trichlorofluoromethane	ND	mg/L	--		0.002
✓	Vinyl Chloride	ND	mg/L	0.002	EPA Primary	0.001
✓	Xylenes (Total)	ND	mg/L	10	EPA Primary	0.001
			Organic Analytes - Others			
✓	2,4-D	ND	mg/L	0.07	EPA Primary	0.010
✓	Alachlor	ND	mg/L	0.002	EPA Primary	0.001
✓	Aldrin	ND	mg/L	--		0.002
✓	Atrazine	ND	mg/L	0.003	EPA Primary	0.002
✓	Chlordane	ND	mg/L	0.002	EPA Primary	0.001
✓	Dichloran	ND	mg/L	--		0.002
✓	Dieldrin	ND	mg/L	--		0.001
✓	Endrin	ND	mg/L	0.002	EPA Primary	0.0001
✓	Heptachlor	ND	mg/L	0.0004	EPA Primary	0.0004
✓	Heptachlor Epoxide	ND	mg/L	0.0002	EPA Primary	0.0001
✓	Hexachlorobenzene	ND	mg/L	0.001	EPA Primary	0.0005
✓	Hexachlorocyclopentadiene	ND	mg/L	0.05	EPA Primary	0.001
✓	Lindane	ND	mg/L	0.0002	EPA Primary	0.0002
✓	Methoxychlor	ND	mg/L	0.04	EPA Primary	0.002
✓	Pentachloronitrobenzene	ND	mg/L	--		0.002
✓	Silvex 2,4,5-TP	ND	mg/L	0.05	EPA Primary	0.005
✓	Simazine	ND	mg/L	0.004	EPA Primary	0.002
✓	Total PCBs	ND	mg/L	0.0005	EPA Primary	0.0005
✓	Toxaphene	ND	mg/L	0.003	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards	Min. Detection Level
✓	Trifluralin	ND	mg/L	--	0.002

We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.

556 South Mansfield Street • Ypsilanti • Michigan •

Informational Water Quality Report

Watercheck w/PO

Client:

Ordered By:
Emery & Garrett Groundwater Investigations, LLC 56 Main Street PO Box 1578 Meredith, NH 03253

National Testing Laboratories, Ltd.
Quality Water Analysis
6571 Wilson Mills Rd
Cleveland, Ohio 44143
1-800-458-3330

Sample Number: 971311

Location:	LON-4D
Type of Water:	Well Water
Collection Date and Time:	4/2/2025 1:45 PM
Received Date and Time:	4/7/2025 10:53 AM
Date Completed:	5/1/2025

Revised Report 4/29/2025: EPA Primary Standard for Arsenic has been added to the report.

Metals Not Filtered
1 Hour PT

Definition and Legend

This informational water quality report compares the actual test result to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

Primary Standards: Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.

Secondary standards: Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor,or color) in drinking water. Individual states may choose to adopt them as enforceable standards.

Action levels: Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.

mg/L (ppm): Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

Minimum Detection Level (MDL): The lowest level that the laboratory can detect a contaminant.

ND: The contaminant was not detected above the minimum detection level.

NA: The contaminant was not analyzed.

✓ The contaminant was not detected in the sample above the minimum detection level.

● The contaminant was detected at or above the minimum detection level, but not above the referenced standard.

▲ The contaminant was detected above the standard, which is not an EPA enforceable MCL.

✚ The contaminant was detected above the EPA enforceable MCL.

✖ These results may be invalid.

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
	Microbiologicals					
	Total Coliform by P/A	No bacteria sample was submitted.				
	Inorganic Analytes - Metals					
▲	Aluminum	0.61	mg/L	0.20	EPA Secondary	0.05
✓	Arsenic	ND	mg/L	0.010	EPA Primary	0.001
✓	Barium	ND	mg/L	2.0	EPA Primary	0.1
✓	Beryllium	ND	mg/L	0.004	EPA Primary	0.001
✓	Cadmium	ND	mg/L	0.0050	EPA Primary	0.0002
●	Calcium	4.00	mg/L	--		0.10
✓	Chromium	ND	mg/L	0.100	EPA Primary	0.005
✓	Copper	ND	mg/L	1.300	EPA Action Level	0.004
▲	Iron	1.10	mg/L	0.30	EPA Secondary	0.02
✓	Lead	ND	mg/L	0.010	EPA Action Level	0.003
●	Magnesium	0.600	mg/L	--		0.100
●	Manganese	0.030	mg/L	0.050	EPA Secondary	0.020
✓	Mercury	ND	mg/L	0.0020	EPA Primary	0.0002
✓	Nickel	ND	mg/L	--		0.020
●	Potassium	1.200	mg/L	--		0.100
✓	Selenium	ND	mg/L	0.050	EPA Primary	0.005
✓	Silver	ND	mg/L	0.1000	EPA Secondary	0.0002
●	Sodium	10.00	mg/L	--		1.00
✓	Thallium	ND	mg/L	0.002	EPA Primary	0.002
✓	Vanadium	ND	mg/L	--		0.004
✓	Zinc	ND	mg/L	5.000	EPA Secondary	0.010
	Physical Factors					
✓	Alkalinity (Total as CaCO3)	ND	mg/L	--		20
●	Hardness	12	mg/L	100	NTL Internal	10
✓	pH	8.1	pH Units	6.5 to 8.5	EPA Secondary	

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
●	Total Dissolved Solids	33	mg/L	500	EPA Secondary	20
▲	Turbidity	15.0	NTU	1.0	EPA Action Level	0.1
	Inorganic Analytes - Other					
✓	Bromide	ND	mg/L	--		0.5
●	Chloride	15.0	mg/L	250	EPA Secondary	5.0
✓	Fluoride	ND	mg/L	4.0	EPA Primary	0.5
✓	Nitrate as N	ND	mg/L	10	EPA Primary	0.5
✓	Nitrite as N	ND	mg/L	1	EPA Primary	0.5
✓	Ortho Phosphate	ND	mg/L	--		2.0
✓	Sulfate	ND	mg/L	250	EPA Secondary	5.0
	Organic Analytes - Trihalomethanes					
✓	Bromodichloromethane	ND	mg/L	--		0.002
✓	Bromoform	ND	mg/L	--		0.004
✓	Chloroform	ND	mg/L	--		0.002
✓	Dibromochloromethane	ND	mg/L	--		0.004
✓	Total THMs	ND	mg/L	0.080	EPA Primary	0.002
	Organic Analytes - Volatiles					
✓	1,1,1,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,1-Trichloroethane	ND	mg/L	0.2	EPA Primary	0.001
✓	1,1,2,2-Tetrachloroethane	ND	mg/L	--		0.002
✓	1,1,2-Trichloroethane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,1-Dichloroethane	ND	mg/L	--		0.002
✓	1,1-Dichloroethene	ND	mg/L	0.007	EPA Primary	0.001
✓	1,1-Dichloropropene	ND	mg/L	--		0.002
✓	1,2,3-Trichlorobenzene	ND	mg/L	--		0.002
✓	1,2,3-Trichloropropane	ND	mg/L	--		0.002
✓	1,2,4-Trichlorobenzene	ND	mg/L	0.07	EPA Primary	0.002
✓	1,2-Dichlorobenzene	ND	mg/L	0.6	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	1,2-Dichloroethane	ND	mg/L	0.005	EPA Primary	0.001
✓	1,2-Dichloropropane	ND	mg/L	0.005	EPA Primary	0.002
✓	1,3-Dichlorobenzene	ND	mg/L	--		0.001
✓	1,3-Dichloropropane	ND	mg/L	--		0.002
✓	1,4-Dichlorobenzene	ND	mg/L	0.075	EPA Primary	0.001
✓	2,2-Dichloropropane	ND	mg/L	--		0.002
✓	2-Chlorotoluene	ND	mg/L	--		0.001
✓	4-Chlorotoluene	ND	mg/L	--		0.001
✓	Acetone	ND	mg/L	--		0.01
✓	Benzene	ND	mg/L	0.005	EPA Primary	0.001
✓	Bromobenzene	ND	mg/L	--		0.002
✓	Bromomethane	ND	mg/L	--		0.002
✓	Carbon Tetrachloride	ND	mg/L	0.005	EPA Primary	0.001
✓	Chlorobenzene	ND	mg/L	0.1	EPA Primary	0.001
✓	Chloroethane	ND	mg/L	--		0.002
✓	Chloromethane	ND	mg/L	--		0.002
✓	cis-1,2-Dichloroethene	ND	mg/L	0.07	EPA Primary	0.002
✓	cis-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	DBCP	ND	mg/L	--		0.001
✓	Dibromomethane	ND	mg/L	--		0.002
✓	Dichlorodifluoromethane	ND	mg/L	--		0.002
✓	Dichloromethane	ND	mg/L	0.005	EPA Primary	0.002
✓	EDB	ND	mg/L	--		0.001
✓	Ethylbenzene	ND	mg/L	0.7	EPA Primary	0.001
✓	Methyl Tert Butyl Ether	ND	mg/L	--		0.004
✓	Methyl-Ethyl Ketone	ND	mg/L	--		0.01
✓	Styrene	ND	mg/L	0.1	EPA Primary	0.001
✓	Tetrachloroethene	ND	mg/L	0.005	EPA Primary	0.002

Status	Contaminant	Results	Units	National Standards		Min. Detection Level
✓	Tetrahydrofuran	ND	mg/L	--		0.01
✓	Toluene	ND	mg/L	1	EPA Primary	0.001
✓	trans-1,2-Dichloroethene	ND	mg/L	0.1	EPA Primary	0.002
✓	trans-1,3-Dichloropropene	ND	mg/L	--		0.002
✓	Trichloroethene	ND	mg/L	0.005	EPA Primary	0.001
✓	Trichlorofluoromethane	ND	mg/L	--		0.002
✓	Vinyl Chloride	ND	mg/L	0.002	EPA Primary	0.001
✓	Xylenes (Total)	ND	mg/L	10	EPA Primary	0.001
			Organic Analytes - Others			
✓	2,4-D	ND	mg/L	0.07	EPA Primary	0.010
✓	Alachlor	ND	mg/L	0.002	EPA Primary	0.001
✓	Aldrin	ND	mg/L	--		0.002
✓	Atrazine	ND	mg/L	0.003	EPA Primary	0.002
✓	Chlordane	ND	mg/L	0.002	EPA Primary	0.001
✓	Dichloran	ND	mg/L	--		0.002
✓	Dieldrin	ND	mg/L	--		0.001
✓	Endrin	ND	mg/L	0.002	EPA Primary	0.0001
✓	Heptachlor	ND	mg/L	0.0004	EPA Primary	0.0004
✓	Heptachlor Epoxide	ND	mg/L	0.0002	EPA Primary	0.0001
✓	Hexachlorobenzene	ND	mg/L	0.001	EPA Primary	0.0005
✓	Hexachlorocyclopentadiene	ND	mg/L	0.05	EPA Primary	0.001
✓	Lindane	ND	mg/L	0.0002	EPA Primary	0.0002
✓	Methoxychlor	ND	mg/L	0.04	EPA Primary	0.002
✓	Pentachloronitrobenzene	ND	mg/L	--		0.002
✓	Silvex 2,4,5-TP	ND	mg/L	0.05	EPA Primary	0.005
✓	Simazine	ND	mg/L	0.004	EPA Primary	0.002
✓	Total PCBs	ND	mg/L	0.0005	EPA Primary	0.0005
✓	Toxaphene	ND	mg/L	0.003	EPA Primary	0.001

Status	Contaminant	Results	Units	National Standards	Min. Detection Level
✓	Trifluralin	ND	mg/L	--	0.002

We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.

556 South Mansfield Street • Ypsilanti • Michigan •

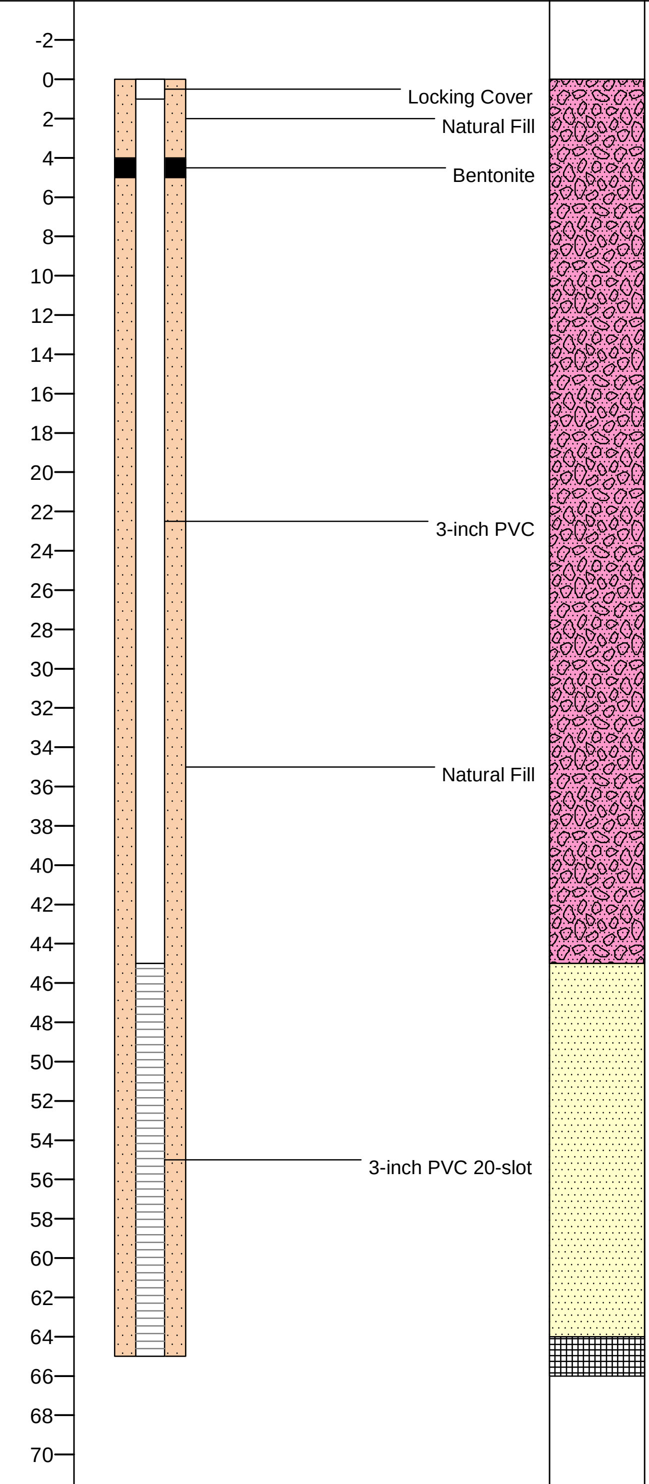
HYDROGEOLOGIC LOG FOR MONITORING WELL LON-4D
COLBY POINT WELLFIELD – LITTLE LAKE SUNAPEE
New London-Springfield Water Supply Precinct – New London, NH

Project: *Groundwater Assessment of the Colby Point Wellfield*
Driller: *S.W. Cole Engineering, Inc.*
Geologist: *Isabelle Peress / Mike O'Brien*
Drill Start: 03/28/2025 **Drill Stop:** 03/28/2025
Drill Method: *Drive and Wash*
Northing (ft): *340911.27* **Easting (ft):** *890257.32* **Elevation (ft):** *381.00*

Depth of Boring (ft): *65.0*
Depth to Bedrock (ft): *N/A*
Depth to Till (ft): *64*
Depth to Refusal (ft): *N/A*
Static Water Level (ft): *36.06*

Depth of Installed Well (ft): *65*
Screen Interval (Slot Size): *45' - 65' (0.02")*

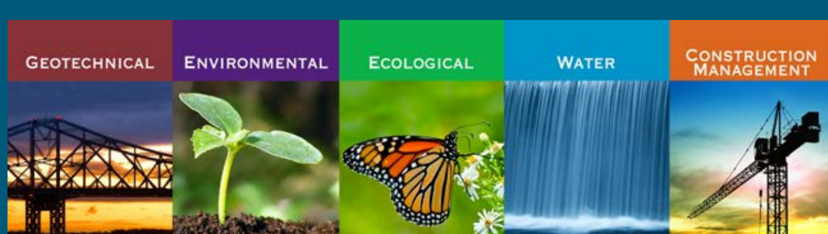
Depth (Feet)	Well Construction Diagram	Drill Log	Descriptive Log	Split-Spoon Blows (Recovery)



0' - 45': Moderate Brown, poorly-sorted, medium to very coarse sand, little pebbles.

45' - 64': Brownish Gray, moderately-sorted, medium to coarse sand, trace sub-rounded to rounded pebbles.

64' - 66': Medium Dark Gray, poorly-sorted, medium to very coarse sand, little pebbles, trace silt.



Emery & Garrett Groundwater Investigations
A Division of GZA GeoEnvironmental, Inc.