

Matthew Peterson

From: lewis.h2o@comcast.net
Sent: Wednesday, June 28, 2023 9:38 AM
To: Matthew Peterson; 'Terrence Dolan'; 'Steve Desmarais'
Cc: rashidamin246@gmail.com; Paul Chisholm
Subject: ZBA - Gas Station
Attachments: Definitions and examples of terms associated with the siting and developing new water supply wells 06 27 23.pdf

Good morning:

After speaking with Matt, and reviewing his exhibits, I would offer the following for consideration:

- 1. This new gas station project will have Town water for its water supply.**
- 2. Rules from NHDES address what is required for a new well when it needs to be approved through the NH Drinking Water / Groundwater Bureau (DWGB). In the case of a daycare with 70 students and staff the design number for the well is 70 x 10gpm/day = 700 gpd. The SPA is 1.5 x 700 = 1,050 gallons. This SPA from the rules is a 100' radius around the well.**
- 3. There are also rules and information after a well has been approved and is in service relative to maintenance. A summary comparison of these terms is attached and is based on Exhibit 16.**
- 4. During a new well siting application a well location for the project needs to be determined, and it must be located where there is room for a Sanitary Protective Area (SPA) around the well that is based on the amount of water is required to meet design criteria. When the design amount is higher, the SPA increases, based on DWGB rules. A second item, the Well Head Protection Area (WHPA) also comes into play. This only during the new design and testing of the well. This is an area where Potential Contamination Sources (PCS's) are identified, as well as other existing sources of water use. The State sometimes requires that wells within that larger zone, up to a 1,000' radius, may require monitoring during testing of the new well. PCS's are evaluated relative to any potential danger for groundwater contamination.**
- 5. Once a new well has been drilled and tested a Final Well Report is provided to DWGB for review and approval. Once the well has been approved and is in use, best management practices are suggested relative to the area with in the SPA, which has to**

all be on the property or under control of the well owner by an easement or if DWGB has allowed a waiver.

6. Based on the above, nearby wells to the proposed project, especially with Town water available, are not part of the DWGB approval process.
7. In addition, new gas stations also have to be in compliance with the Rules and Regulations of the Underground Storage Tank (UST) division of NHDES to insure proper design, installation, and safe operations of their facilities.

Please review and let me know if any additional information would be helpful. If the Town of Milford has additional / more stringent regulations than the State that apply to the entire town, I am not familiar with them to be able to you assist further.

Respectfully,

Bruce W. Lewis, Manager

Lewis Engineering

44 Stark Lane

Litchfield, NH 03052

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Please read & consider saving electronically & not printing this email

John 3:17



From: Matthew Peterson <mpeterson@keachnordstrom.com>

Sent: Tuesday, June 27, 2023 12:39 PM

To: Terrence Dolan <tdolan@milford.nh.gov>; Steve Desmarais <nhcustombuilder@gmail.com>

Definitions and examples of terms associated with the siting and developing new water supply wells -

2. Protection Areas

Sanitary Protective Radius - This area should receive the greatest attention. The sanitary protective radius is a 75' to 400' radius around the well that under current law must be controlled by the water supplier through ownership or easements. The extent of the sanitary protective radius depends on the maximum daily amount of water withdrawn from the well. Know the extent of your sanitary protective radius, and be sure only activities that are both directly related to your water system and non-threatening to the water quality occur within the radius.

Daycare with 70 students + staff by State Regs. has a Design Number of 10 gpm/day x 70 = 700 gal./day
The SPR is 1.5 x 700 = 1,050 gal. SPR = 100'

Sanitary Protective Radius	
Volume (gal)	Radius (feet)
0-750	75
751-1,440	100
1,441 - 4,320	125
4,321 - 14,400	150*
14,401 - 28,800	175
28,801 - 57,600	200
57,601 - 86,400	250
86,401 - 115,200	300
115,201 - 144,000	350
> 144,000	400

*minimum SPR for new community wells under Env-Dw 305.10 (a) and Env-Dw 302.10(b).

The WHPA is a State set arbitrary radius requiring the examination of nearby activities to be reviewed during the siting of a new well associated with a new water supply.

Wellhead Protection Area - The area under which groundwater flows to a producing well is known as the wellhead protection area (WHPA). For bedrock wells producing less than 57,600 gallons in any 24-hour period, the WHPA is a circle whose radius depends on the maximum daily amount of water withdrawn from the well. For small overburden wells within unconfined aquifers, the WHPA is typically calculated based on existing hydrogeological information.

Wellhead Protection Area	
Volume (gal)	Radius* (feet)
0 - 7,200	1,300
7,201 - 14,400	1,500
14,401 - 28,800	2,150
28,801 - 43,200	2,850
43,201 - 57,599	3,600

* for bedrock and small overburden production wells only
Env-Dw 305.11 (b)

3. Examine Activities

Look carefully at activities and businesses within the wellhead protection area. Identify any threats to water quality and develop strategies to address them. Be sure to include:

Good Management "Do's and Don't's" are focused on the Sanitary Radius around the well located on the subject property, which is almost always located on the subject property.

DO:

- Regularly inspect activities in the sanitary protective radius.
- Restrict access to the well.
- Clearly label any **hazardous materials** essential to your treatment system located near the well.
- Cap and/or screen all vents, access ports, and other openings of the well or nearby monitoring wells.
- Check the condition of sanitary seals and replace those that are not intact.
- Slope parking areas and concrete pads under storage areas away from the well; periodically

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Subject: ZBA Gas Station

Good afternoon team,

So, I have done some more research on the possible process the Town of Milford took to produce the 2002 Groundwater Protection Area Map of users of 20,000 gallons per day – (Exhibit 17).

Also because I am only a Civil Engineer (which know a little of everything) I have reached out to Bruce Lewis of Lewis Engineering, who is one of the top experts in the water world in New Hampshire and as such I have obtained and reviewed this information with him and an email will be forth coming that probably explains this information better and verifies our submittal.

“Bruce W. Lewis, Manager, Lewis Engineering, 44 Stark Lane, Litchfield, NH 03052, Office 603-886-4985, lewis.h2o@comcast.net”

With that this is what I intend to present to the board next Thursday for the proposed variance.

1. The State of NH produced a report in 1996 and revised in 2008 that outlined to towns answers to questions about groundwater protection in New Hampshire and how to protect it. (Exhibit 10)
 - a. The steps are outlined on pages 16 through 21 and talk about who should be involved with the decision making process, from water supplier, planning board members, health officer, and developer – because all will have different opinions.
 - b. This report in section 2 on page 17 outlines that the state sent towns a list of public water systems in their Towns (called a “Source Assessment Report”) and what the classification of them is. (Exhibit 11)
 - i. Exhibit 11 outlines the Community wells the Transient wells and the Non-Transient, Non-Community wells.
 - ii. Both of the Little Arrows and Childrens Choice show up as “P” – Non -Transient, Non-Community wells.
2. Now I pull the State permit to operate for both of these wells and find:
 - a. Childrens Choice well was last giving the permit to operate in 2012 and currently on the One Stop portal the well is listed as inactive. (Exhibit 13)
 - b. So, at a the minimum the groundwater protection map is outdated because the Childrens Choice daycare well is inactive and last permit was over 10 years ago. (Exhibit 17)
 - c. As for the Little Arrows Daycare, they are current with their permit – March 17, 2023 – they are a Public Water supply classified as a Non-Transient, Non-Community Well that serves 70 people, per the State. (Exhibit 14)
 - i. And per the State regulations on Gallons per day per employee the numbers are between 10GPD and 25GPD – which would yield an average gallons per day or 700 to 1,750 Gallons per day. So even if we rounded up to the maximum required well radius for the Little arrows daycare, we would be at 125’ and not the 600’ plus that is shown on the Groundwater protection map (even if both wells are added together, which at the time they would have been, the max radius might have been 150’ and again not 600’) (Exhibit 15)
 - ii. Next our site is 645’ from Little Arrows and 930’ from the Childrens Choice property, well over the 150’ that may have been required in 2002.
 - iii. Lastly the largest radius per State requirement (not for a community well) is 400 feet, which again the 2002 plan showed over 600 feet and as stated at the previous hearing, that was a land grab without our client knowing it.
3. (Exhibit 16) outlines the Protection areas for wells and the largest is 400 feet, so again not sure where the town came up with over 600 feet but its not any state requirement at this time.

- a. There are Wellhead Protection areas, but I have been informed by Bruce that those are not for this type of well in our area. (if Bruce could add to this that would be great.
4. (Exhibit 12) outlines at the State level the Groundwater classification area map, which I believe relates to the soils that are potential under the Route 101 and Route 13 interchange, that was pointed out by the conservation commission, and the area actually stops before Hammond Road, so our site is not over this area.

Thanks all for your input and help through this process.

Enjoy the day all.

Matthew J. Peterson

Senior Project Manager

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