

From: "Wagner, Kristie (Gersley)" <WagnerKG@cdmsmith.com>
Date: Monday, August 2, 2019 at 7:55 AM
To: Bud Butler
Subject: RE: Septic System Analysis - Points To Ponder - Pine Meadow

Hi Bud, I hope you are well. It has been a while since we corresponded on the Pine Meadow project and I wanted to check in.

I did end up connecting with Bob Scully at DPH and had a nice talk with him in density of development and nitrogen concerns. The 2000 Circular letter I referenced earlier (attached again for easy reference) was expanded upon in another circular letter dated Jan 22, 2002 (attached). The January 2002 circular letter reiterates the 0.167 acre/bedroom threshold as a screening tool for nitrogen analysis and further explains that the EPA and CT DEEP "continue to promote reduction of nitrogen discharges into the groundwaters of our state..." Further, the letter lists several areas that warrant specific consideration, including "densely developed small lot subdivisions, environmentally sensitive sites adjacent to.... inland lakes, ponds and other water courses....[and] development in public water supply aquifer protection areas".

It is again important to note that this is not a regulation, but it can be considered guidance from DPH that has never been retracted or superseded. DPH and DEEP have discussed the issue and the need for corresponding regulations numerous times since these Circular Letters but due to other competing priorities, it is still up to local health departments and districts to develop regulations and/or ordinances addressing density of development in areas served by septic systems.

Please let me know if you would like to discuss planning for any public presentations, or anything else! I am actually away next week but fairly open later in August. Thank you!
Kristie

From: Bud Butler
Sent: Wednesday, June 19, 2019 1:02 PM
To: Wagner, Kristie (Gersley) <WagnerKG@cdmsmith.com>
Subject: Re: Septic System Analysis - Points To Ponder - Pine Meadow

Kristie:

My apology for the delay in acknowledging your email. This is a good starting point and I think it puts the issue into "measured proportion." It is one benchmark that gives us some indications that our concerns for the protection of the aquifer are warranted. BTW, DPH is now issued a directive to us to begin source well monitoring for E. coli beginning in July at BB and Church ST. because of the non-compliance of easements to preclude the possibility of pollution from septic systems with 200 feet of our well heads.

From: "Wagner, Kristie (Gersley)" <WagnerKG@cdmsmith.com>
Date: Monday, June 10, 2019 at 1:35 PM
To: Bud Butler
Subject: RE: Septic System Analysis - Points To Ponder - Pine Meadow

Hi Bud-

As a follow-up to our conversations- we looked at the lot size and bedroom info a few different ways.

Lot Size/Density of Development:

- To date I have not received any further reference information from DPH on density of development. I am almost certain this is not covered in the Public Health Code, since that is really intended to address individual lots and not community-wide issues. Theoretically DEEP would get involved in community issues but usually in the context of a Consent Order which we do not want to invite! I am still looking and waiting for a return call from DPH to see if there is anything more firm out there.
- So, the DPH "Circular Letter" from 2000 may be the only written guidance from the State on this issue. We will have to carefully explain this to the public. This suggested nitrogen analysis for development density greater than 6 bedrooms; this is a good starting point for discussions.
- Pine Meadow Project Area density statistics: (Note that we excluded any property that did not have # of bedrooms listed).
 - The entire area averages around 6.4 bedrooms per acre.
 - West of Main Street is about 5.5 bedrooms/acre, and east of Main St is about 7 bedrooms/acre.
 - By street we have:
 - Ten St: 9.7 BR/acre
 - Main St: 7.9 BR/acre
 - Wickett St: 6.1 BR/acre
 - Church St: 5.5 BR/acre
 - Black Bridge: 2.2 BR/acre (this jumps to 12 BR/acre if we exclude the single large parcel, #25, at the edge of the project area; however there are only 3 lots with Black Bridge Rd address so I wouldn't rely on this statistic)

Septic System Costs:

Health Districts and the State are hesitant to publish cost information since it can vary widely depending on lot conditions and the type of system. We did find a few reasonable references though:

North Central Health District -<http://www.ncdhd.org/septic-homeowners>: "The average cost of replacing a septic system within our district is anywhere from **\$15,000 to \$20,000**. This number varies by contractor and the extent of the replacement."

Cape Cod Commission – This is obviously not specific to CT but it is an organization that has pulled together a lot of comparative information in areas that do not have ideal conditions for septic systems: <http://www.capecodcommission.org/index.php?id=338&maincatid=332> (first link under "Cost" brings you to a pdf document, dated 2013, titled Cape Cod Regional Wastewater Management Plan – Understanding the Cost Factors of Wastewater Treatment and Disposal" – Section 1-3 discusses costs). Some key numbers: Conventional systems for 3-4 bedroom homes range from **\$8,000 to \$15,000**, with mounded systems up to **\$30,000**. Advanced (nitrogen-attenuating) treatment systems (which are still not

allowed by CT on individual residential lots but people may inquire about them) average around **\$24,000** plus have annual O&M costs.

After you have a chance to look/think about this we can talk again about how to present it. We can present this graphically on a map, a table, or in a presentation as needed. I'm available to discuss later this week if you'd like.

Thanks,
Kristie