



Jim Perras <jperras@hbact.org>

Sewage Working Group

Stuart Fairbank <almgps-sjf@snet.net>
To: Jim Perras <jperras@hbact.org>

Thu, Sep 18, 2025 at 2:45 PM

Jim,

I'm writing to share my thoughts on how the Working Group might move forward. If you think there's merit to these suggestions, please share with the other co-chairs and/or group members.

As you know, my company designs subsurface sewage disposal systems (SSDS) as an integral component of virtually every site development plan we produce for single and multi-family residential, commercial, and governmental sites. The size of those systems ranges from 2-bedroom single family homes up to condominiums, healthcare facilities and schools discharging up to roughly 50,000 gallons per day (GPD). I mention this because we are dealing every day with the same issues the working group is charged with studying and reporting upon. What I'm suggesting, I've been thinking about for 40 years.

I recognize that we're short on time, with the February deadline not very far away given the broad scope of what the group is charged with considering. Rather than lose the forest for the trees early in the process, I suggest starting at the top of the regulatory pyramid and work down from there.

As the first step I believe that the group should rethink the delegation of regulatory authority between DEEP and DOH, specifically the 7,500 GPD (or any other gallon) per day/property threshold which kicks the discharge up to DEEP. This issue is the driving force behind why we are here as a working group, as the 2025 DOH proposed regs included an increase from 7,500 GPD to 10,000 GPD/lot including the need for Nitrogen analysis above 5,000 GPD.

As an alternative to the 2025 DOH proposed regs, I would suggest that the DEEP/DOH delegation threshold be revised in two ways:

1. DOH currently regulates any individual SSDS up to a 7,500 GPD on any one property. Eliminate the arbitrary 7,500 GPD per property threshold, which has historically resulted in subdivision of land to avoid going to DEEP. Note that DOH regulates this size SSDS today, the DOH Design Standards are already in place and scalable to accommodate SSDS designs of this size. This would mean that an applicant with a single large property might propose an integrated large development of over 7,500 GPD (or 10,000 GPD if that threshold is preferred) with more than one SSDS design, each by itself at or below the maximum permitted GPD. Instead of a per lot maximum to trigger the DEEP threshold, suggest a GPD per acre maximum over some baseline such as 5 acres. In other words, an applicant would be entitled to the permitted maximum on a lot of any size, provided an SSDS design meeting the PHC can be installed. The GPD/acre figure for lots over, say 5 acres, would be tied to the Nitrogen discharge regulations in #2 below.

and

2. DOH regulates the SSDS in #1 provided the discharge doesn't exceed a GPD per acre of total land area to be specified in the regs. The Nitrogen regs proposed by DOH this spring are area based calculations which can easily be converted to a GPD/acre figure. Most Nitrogen models for non-pretreated septic tank effluent subsurface discharge are area based, since they depend on infiltration of rainwater for dilution of the Nitrogen discharge. In addition, a map of Nitrogen sensitive areas of the State can be produced, within which additional, more stringent Nitrogen discharge compliance regulations may apply.

Result:

- The above proposal would utilize the existing or revised DOH Technical Standards for any individual SSDS under the specified maximum. The group certainly may recommend revisions to the standards, such as those related to concerns voiced during the last Zoom meeting, but the group need not reinvent the wheel.
- Very large SSDS, and multi-family or commercial systems requiring Nitrogen reduction pretreatment (AT) would still be permitted by DEEP. A lot area vs. proposed discharge based regulatory threshold is based more on science and

established regulatory practice, rather than an arbitrary number.

- Nitrogen sensitive areas of the State are identified, and Nitrogen regulations specific to those areas can be implemented.
- Promote efficient development by reducing the subdivision of land. Subdivision introduces various regulatory setbacks, such as Zoning and Health Code, which reduce area available for housing and infrastructure. Subdivision also results in regulator headaches, as they are tasked with policing adjacent common ownership sites which in combination exceed the arbitrary threshold.
- Streamline the regulatory process for the applicant so that it's prescriptive rather than subjective. An applicant considering an affordable housing project needs a clearly defined path forward and predictable timeline in order to estimate project financial viability.
- Eliminates the annual clamor at the Legislature to increase the regulatory GPD threshold, providing long term stability to the regulations.

In summary, moving to a lot area vs. discharge based regulatory threshold as outlined above accomplishes key objectives in the statute.

1. It considers Nitrogen using a lot area based model, which is a standard methodology in much of the country.
2. It identifies Nitrogen sensitive areas of the State and provides additional protection in those areas.
3. It makes more efficient use of property and provides more certainty and timeliness in the regulatory review process, reducing cost compared to the current structure.

There are many additional details to be discussed and worked out, but I think moving in the direction suggested provides a path forward for the group. Please contact me if you wish to discuss.

Stuart Fairbank, P.E.
Principal Engineer
Angus McDonald/Gary Sharpe & Associates
245 Boston Post Road
P.O. Box 608
Old Saybrook, CT 06475
(860)388-4671 x 23
(860)388-3962 fax