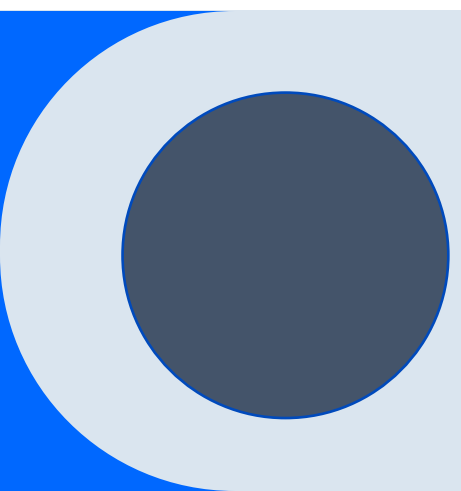





Title 5 Potpourri

**For those Title 5 issues that need to be discussed
but which don't warrant their own presentation.**



Claire Golden, MassDEP/NERO
MassDEP/MHOA Spring Seminar
March 9, 2023 in Devens, MA
March 21, 2023 virtually



Agenda

Nitrogen: Why bother?

System inspections and private well issues

Composting toilet refresher

Title 5 setbacks in reverse

Marijuana processing/growing facilities

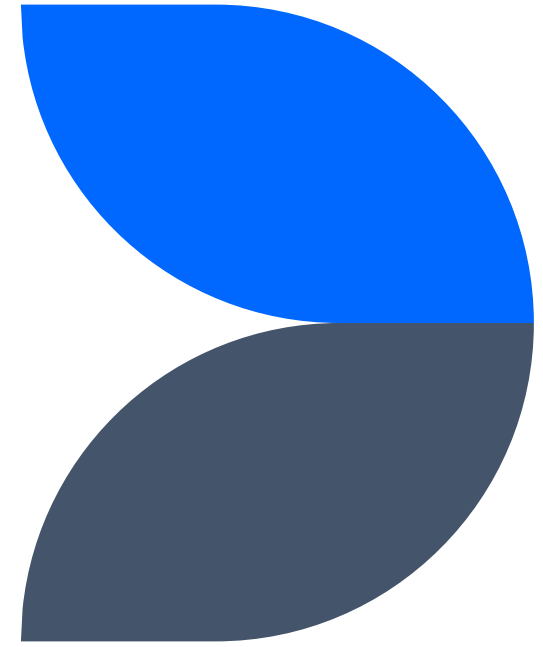
Mixed-use facilities and Title 5

Questions and answers

Disclaimer

- This presentation relates solely to 310 CMR 15.000, Title 5 of the State Environmental Code.
- Many municipalities have regulations that are more restrictive than Title 5.
- Reference of any technology in this presentation or in answer to a question posed does not constitute a comment on or endorsement of the technology by the presenter or MassDEP.

Nitrogen: Why Bother?



Why is nitrogen an issue?

- One of the most common contaminants in rural areas.
- The nutrient that impacts coastal waters.
- It poses a health risk for infants (methemoglobinemia).
- It acts as an indicator of other contaminants (bacteria, viruses, etc.).

**What
areas are
subject to
nitrogen
loading
limits?**

Nitrogen Sensitive Areas

- Zone II
- IWPA

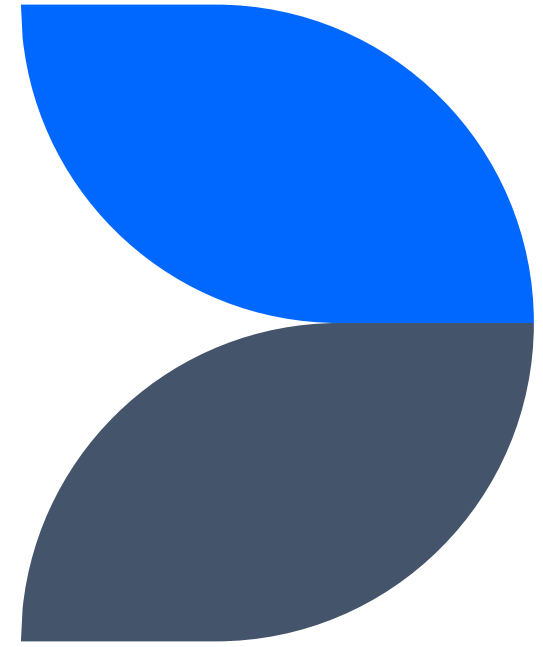
Private well areas

What are those restrictions?

- 440 gpd/acre*
- RSF/equivalency for >2,000 gpd systems (new and upgrade)

* Acre = 40,000 sf

System Inspections and Private Well Issues



If SAS is 50 to 100 ft to well, it is a failure unless the following tests are successful:

Fecal
Coliform
Bacteria

Ammonia
Nitrogen

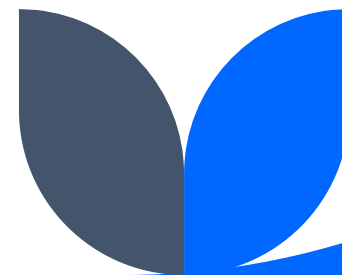
Nitrate
Nitrogen

Can the well be (re)tested after treatment?

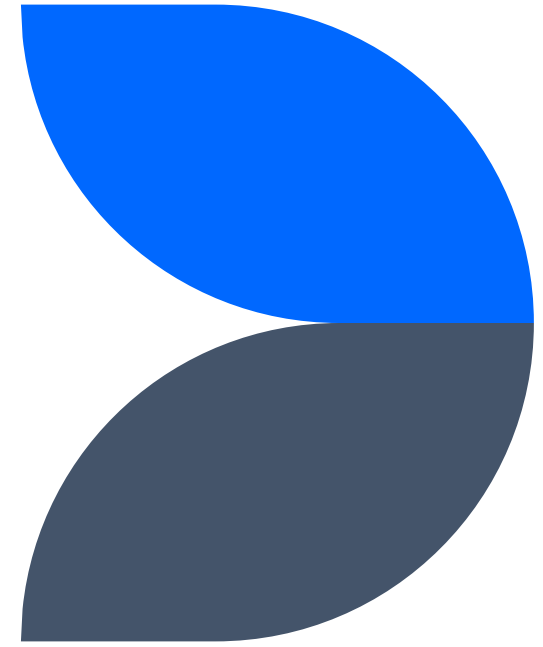
NO! The septic system is failed!

Well samples shall always be taken prior to any treatment provided.

The tests are a measure of groundwater quality and must document untreated quality.



Composting Toilet Refresher



A few things to remember...

310 CMR 15.289

General Use Approval regarding new construction:

- Residential Use – demonstration plan

- Commercial/public facilities – no demonstration plan

No liquid discharge (“tea” tank)

If there is greywater:

- Septic tank and SAS required

- Tight tank only if 310 CMR 15.260 is met

- No discharge to the composting toilets

Why bring this up now?

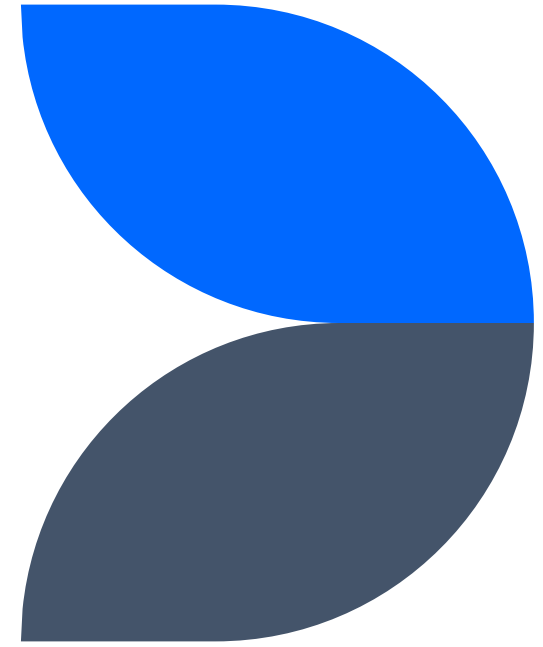
At least one out-of-state company has approached several BOHs

Looking to install (or teach homeowners how to build) composting toilets that do not meet 310 CMR 15.289

Advocating on-site use of compost – direct application on ground surface to trees and plants (violation of Code)

If BOH is approached, please contact regional office with information regarding the company

Title 5 Setbacks in Reverse



Applies to Existing Structures

Addition is planned:

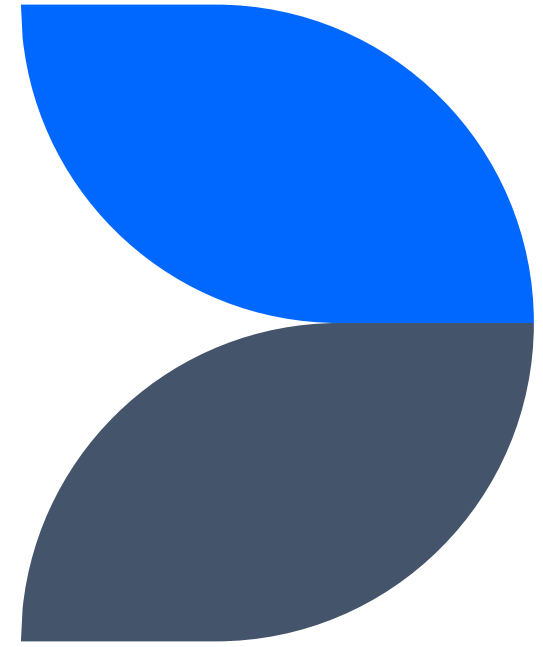
- ❖ Building addition
- ❖ Pool
- ❖ Shed/Garage
- ❖ Deck

If no plans on file, locational inspection of septic system is required

310 CMR 15.301(5) states that an addition may not be:

- ❖ Placed on any component; or
- ❖ Within any setback distance of 310 CMR 15.211

Marijuana Growing/Processing Facilities



TYPE OF FACILITY

- Medical
- Recreational
- Combination



WASTEWATER SOURCES

- Watering of crop
 - Reuse of runoff from watering for further watering is preferred;
 - Otherwise handle as process wastewater
- Processing, including oil extraction

Wastewater from marijuana growing/ processing facilities

Non-sanitary wastewater

310 CMR 15.004 (4) and (5)

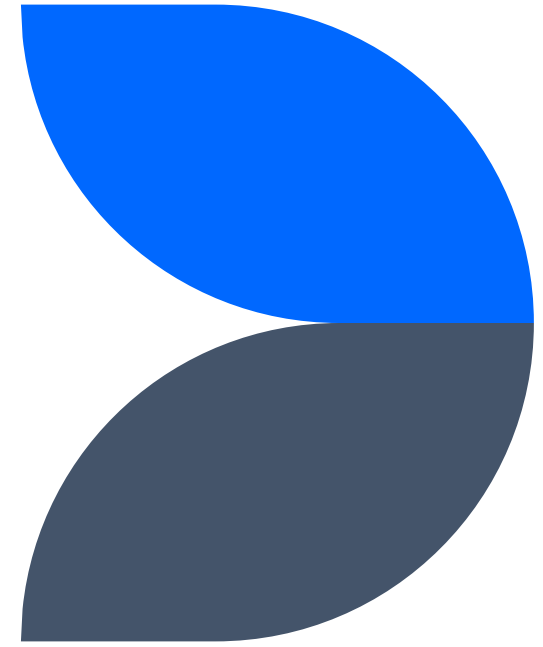
- Pharmaceutical
- Tobacco

Holding tank is required – WP56 (after-the-fact certification)

Sewer connection is preferred.



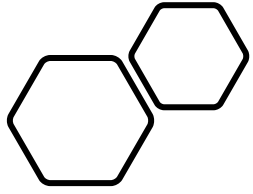
Mixed-use Facilities and Title 5





TITLE 5 POTPOURRI





Design Flows for Mixed Use Facilities

Can be confusing
Minimum design flows
definitely complicate things
You need to have a system

Let's consider the following mixed-use facility with the following:

FACILITY	FACILITY SIZE	DESIGN FLOW/UNIT	DESIGN FLOW	MINIMUM DESIGN FLOW
Office	400 sf	75 gpd/1,000 sf	30 gpd	200 gpd
Dentist	2 dentists	200 gpd/dentist	400 gpd	400 gpd
Residential (5 apts.)	10 bedrooms	110 gpd/bedroom	1,100 gpd	1,100 gpd
Retail	2,500 sf	50 gpd/1,000 sf	125 gpd	200 gpd
Restaurant	26 seats	35 gpd/seat	910 gpd	1,000 gpd
TOTALS			2,565 gpd	1,000 gpd

Because the aggregate design flow of the system exceeds the maximum “minimum size” of 1,000 gpd, the design flow of 2,565 gpd is the design flow.



TITLE 5 POTPOURRI

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*The End*¹