



# **The Need to Mandate Openings at Surface on Septic Tanks**

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All material presented reflects the opinion(s) of the presenter and do not reflect the opinion of NOWRA

# Introduction

- ▶ Septic tanks are an excellent example of recycling.
  - ▶ Water is extracted from the ground by the way of well/public water and is reintroduced as wastewater which gets filtered back, often into the same area of its extraction.
- ▶ This process of natural cleansing is what leads to the importance of proper care of wastewater disposal.
  - ▶ Only through appropriate maintenance of on-site wastewater disposal systems can we safeguard, and improve, our ground water.
- ▶ Unfortunately, lack of practical access to septic tanks for service technicians leads to potential issues of improper maintenance, risk of complete neglect, and possible injury to service providers.

# Introduction

- ▶ Septic tanks are often installed without clear indications as to their locations and/or depths, creating several issues that should be addressed in order to properly maintain our waste management systems and lessen the risk of injury to workers.
  - ▶ Potential Risk for Contamination of Ground Water
  - ▶ Injury to workers, homeowners, and/or general public.
- ▶ Proposal: Installing risers with covers to the surface is the most reasonable way to assure proper maintenance.

# Risk Factor #1: Ground Water Contamination

“Septic tank systems must be better maintained and monitored so that they remain effective and do not threaten water quality in environmentally sensitive areas.” (Withers, P. J., Jordan, P., May, L., Jarvie, H. P., & Deal, N. E. (2014).

- ▶ Insignificant design, aging of a septic system, and the failure to clean tanks properly are leading causes in septic system failures and possible water contamination (Mohamed 2009).
- ▶ Without ease of access to the collecting points of liquid waste, there is little chance of proper maintenance, obtaining quality inspections, or testing for migration of contaminants to our water sources. Allowing for the complete and proper cleaning minimizes potential unknown contamination of ground water associated with poorly functioning on-site sewage disposal systems (Canter, & Knox, 1985).

# Risk Factor #1: Ground Water Contamination

- ▶ Poorly performing septic systems pose a significant threat, as they impair the quality of both ground water and surface waters.
  - ▶ Residents who are dependent on nearby, or on site, wells for their water supply may find that groundwater contamination by failing septic systems threatens their health and the welfare of their families (Barnes et al., 2001).
- ▶ “The main purpose of modern septic systems is to offer a way to remove body excretions while not placing ground water at risk of contamination” (Arnade, L. J. 1999).

# Risk Factor #1: Ground Water Contamination

Bleed-out migrating into water course.  
West Suffield, CT



# Risk Factor #1: Ground Water Contamination



Typical septic system bleed-out.  
West Simsbury, CT

# Risk Factor #1: Ground Water Contamination



Overflowing septic tank caused by  
unknown/uncleaned filter.  
Bloomfield, CT



# Risk Factor #2: Injury to workers, homeowners and/or general public

- ▶ The effort it takes to locate, dig, and then repair lawns is substantial.
  - ▶ Septic service provider is the 12th most dangerous occupation with a fatality rate of 34.3 per 100,000 workers in the United States with \$37,950 being reported as the average salary in 2017 (Industrial Safety and Hygiene News, 2019).
  - ▶ Probing and digging to locate access covers to facilitate proper cleaning of the septic tanks can lead to back and shoulder injuries.
  - ▶ A look at one company's workmen's compensation rates in the industry may give some indication as to the severity of injury faced by workers in this field. The rate during year 2022 for office staff at The Christopher Bryant Company is \$ 0.13 per hundred dollars earned while drivers and installers range between \$5.28 and \$6.16 per hundred dollars earned. This works out to 47.38 times the expected rate of injury to the field service provider than to the office worker in this particular company .

# Risk Factor #2: Injury to workers, homeowners and/or general public

- ▶ Many lawsuits stemming from the improper inspection of septic system components, often because of insufficient or difficult access to the openings of the tanks themselves, have been reported (Caliri 2009).
- ▶ One of the best ways to assure proper inspections of systems is to have convenient and easily accessible covers at the surface of the septic tanks and distribution boxes.

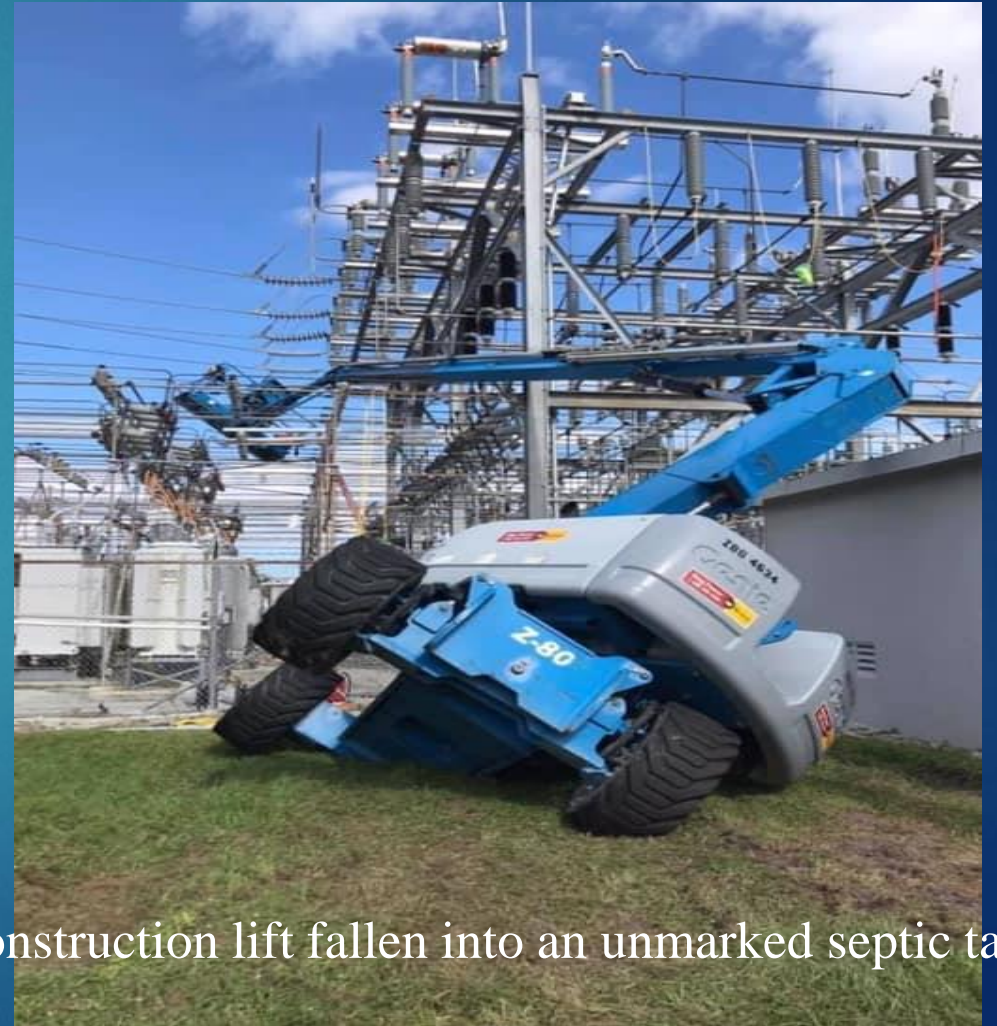
# Risk Factor #2: Injury to workers, homeowners and/or general public

- ▶ There have been more than enough stories of people falling into septic tanks – some exposed at surface - but many reports are of falls into unknown, unmarked septic tanks, and action should be taken by state regulators to mandate upgrades in the way we handle the openings of tanks (McGraw 2009 and Jimenez 2010).

# Risk Factor #2: Injury to workers, homeowners and/or general public



Truck fallen into an unmarked septic tank.



Construction lift fallen into an unmarked septic tank.

# Conclusion & Future Direction

- ▶ Out of sight is truly out of mind
  - ▶ We continue to allow septic tanks to be installed without clear indications as to their locations and depths. This allows them to be installed without easy access to the cleanout ports – even though regulators often mandate the cleaning and inspecting of them on a scheduled basis.
- ▶ Regulators should mandate proper access to septic tanks which will allow for the ease of proper cleanings and inspections.
  - ▶ Septic tank cleanouts should be brought to the soil surface.

# Conclusion & Future Direction

- ▶ Future Direction: Develop public awareness to explain the relationship between household wastewater disposal and ground water.
- ▶ Future Direction: Explore the concerns of regulators, homeowners, and other interested parties (homebuilders etc.) as it relates to cost, appearances, etc.
  - ▶ This might be best accomplished by offering informational seminars through the local health districts/departments and at local libraries. Photo displays of creative designs showing the ease at which the covers can be left at surface and yet camouflaged along with realistic examples of costs will help many understand this is in everyone's best interest.



# Conclusion & Future Direction

- ▶ “Not having risers on your septic tank would be like welding the hood of your car shut. You need easy access to your septic tank to service it.” ([Flo Hawks Plumbing](#), June 7, 2016).

Covers to surface.

Southwick, MA