

# OWTS Looking Back, Moving Forward...



Designed & Presented By:  
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# History of Onsite Wastewater

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OWTS: Onsite Wastewater Treatment Systems

Old  
Testament  
Deuteronomy  
23:13

“As part of your equipment have something to dig with, and when you relieve yourself, dig a hole and cover up your excrement.”

# Communal Living

- Shift from Nomadic living forced change in how humans dealt with Wastewater.
- Ancient Greece and the Roman Empire were some of the first to address Sanitation with makeshift Sewers.
- Latrines with open pipe to gutter.
- Often piped to Fields, or Streams.



# Population Growth

- Sanitation was forgotten in Middle Ages & Renaissance period
- Communal Cesspools/ Privy's Began in Cities
- Often Overflowed or Wastewater Dumped into Streets
- Disease from Cholera, Typhoid Fever drove need for change in Wastewater

# Privy's, Outhouse's

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- While Cities were overpopulated with cesspools and privy's overflowing into the streets. Areas in the countryside made use of private privy's
- What we know as the outhouse today was used for hundreds of years as the best method of disposing of Human Waste In Rural Areas
- A Simple Pit in the ground with seating over it.
- No treatment/Poor Sanitation Practice



# Privy/Outhouse was our first Septic System

However, not much treatment happening here



1860 France

- John Mouras invented the Septic Tank
- Had an Inlet pipe and Outlet pipe
- Discharged to a Pit that soaked in the ground
- Around 20 years later Septic Tanks began arriving in the United States

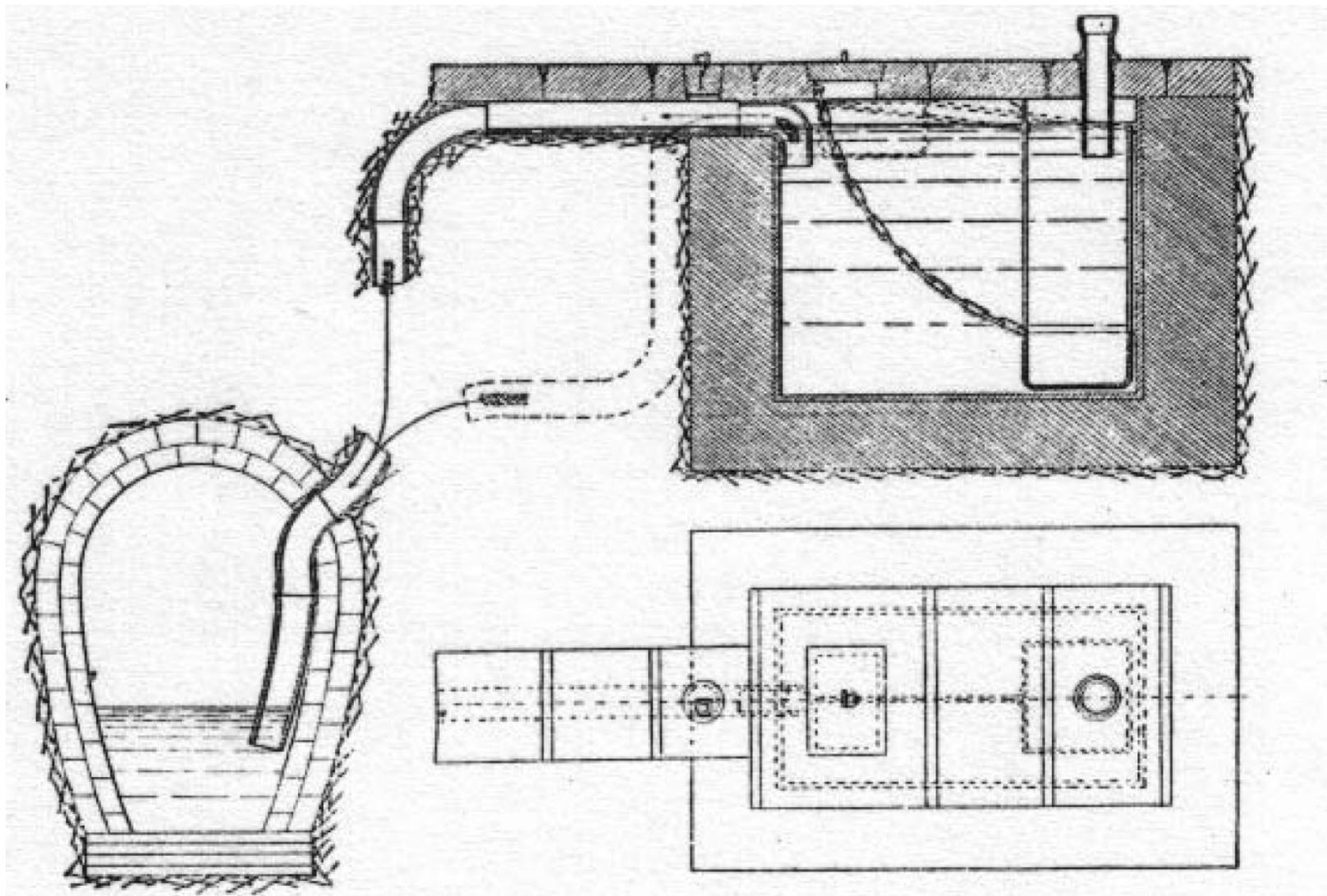


FIG. 64.—Fosse Mouras. La vidangeuse automatique.

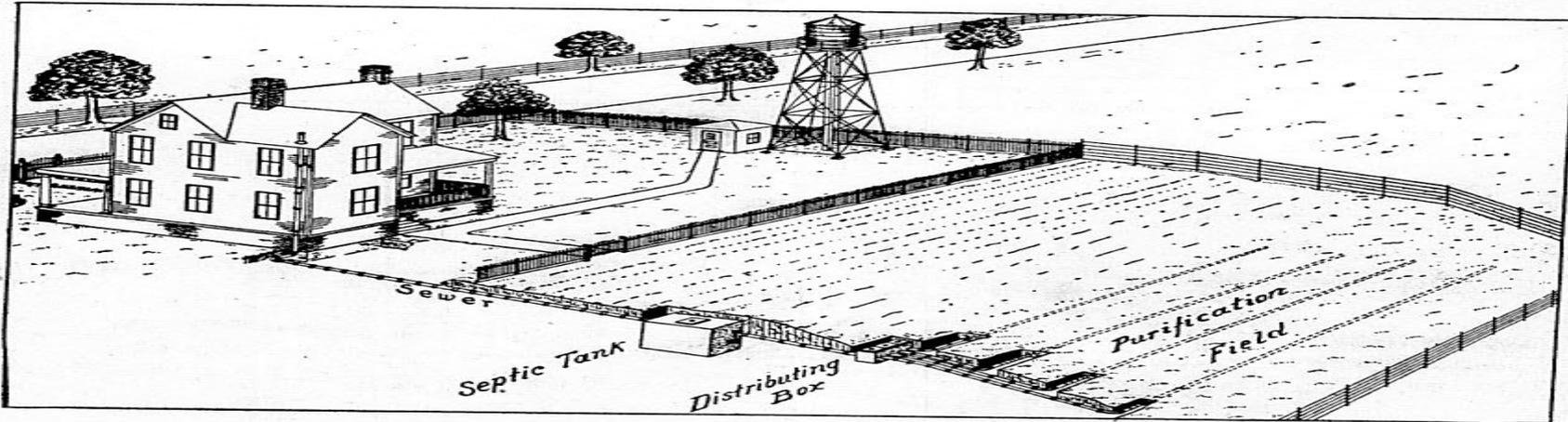
# Early Septic Tanks

- First Method of Onsite providing any Treatment
- Allows time for Separation of Contents in Wastewater
- Early Versions of Septic Tanks are familiar to some tanks still in use today
- Post WW2 Industrial Advancements made Pre-Cast Septic Tanks more readily available

# Early Dispersal/ Absorption Methods

- Early 20<sup>th</sup> Century Saw discovery of Dispersal Methods
- Pipe in trenches (Laterals)
- First examples of Secondary Treatment following Anaerobic Septic Tanks

# SEPTIC TANKS



For Suburban and Country Homes  
Built in Place Concrete Septic Tanks

Virginia State Department of Health—Richmond, Virginia

1945

# Late 20<sup>th</sup> Century - Present

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- Onsite Wastewater Technology Explodes
  - Aerobic Treatment – 1950'S
  - Alternative Wastewater Treatment Systems
  - Mounds, LPP's, Drips, Leaching Chambers, Media Filters, Evaporation Ponds
  - Soil Testing

# OWTS: Today

- Able to remove majority of Pathogens, Bacteria, & Viruses
- Numerous Treatment Options at our disposal
- There is a System for nearly every Site/Soil Condition

# OWTS: Today

- Many systems from the past, do not meet today's standards.
- Huge growth of US homes expected in Rural Areas where Onsite Systems will be needed
- Are we ready, capable as an industry of handling an influx of work?

# OWTS: Today

- Most Health Departments, Installers, Manufacturers and Service Providers are understaffed, overworked.
- How can we attract people to our industry and develop our workforce with skilled professionals?

# OWTS: Today

- Some areas of our Nation are further ahead in terms of regulation than other areas
- Some Counties are further ahead than other Counties in some States
- How can we come together as states, regions and a nation to ensure our regulation is up to date?

# Public Education & Awareness

- It is our responsibility as professionals to spread and raise awareness for our industry and to the public.
- How can we work with other industries to help spread our message that OWTS work with proper maintenance?

# Moving Forward

- Industry Wide Collaboration
- Manufacturer, Regulator, Engineer, Soil Scientist, Installer, Inspector
- We must work together
- We all want the same end result..

## Collaboration

Onsite Wastewater Treatment Systems that protect public health, protect drinking water, and have long term acceptance of wastewater that last the life of a home.

Permanent Infrastructure!

# Contact Information

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