

# FIRST TIME PUMPERS

May 2<sup>nd</sup> and 3<sup>rd</sup> 2003

Steve Meeks

Meeks Environmental Services

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# History Lesson

- We make waste.



# History Lesson

- We make waste.
- We always have.



# History Lesson

- We make waste.
- We always have.
- We always will.



# History Lesson

- How we get rid of this waste has been debated for many years.



# History Lesson

- For the most part the removal of waste from our home or our immediate environment has been by the use of water.
- This would be called waterborne waste disposal.

# History Lesson

- I bring this up only to point out that in some area's and in some case's people have and still do use dry waste disposal.
- The idea of composting toilets is as old as septic tanks themselves.



# History Lesson

- Many early settlements were along waterways
- The water coming down stream was used for drinking and cooking



# History Lesson

- The water leaving was for carrying away daily waste



# History Lesson

- A couple of problems arose
  - ◆ Someone up stream probably had the same idea

# History Lesson

- A couple of problems arose
  - ◆ Someone up stream probably had the same idea
  - ◆ With heavy rains came flooding

# History Lesson

- As people began to move away from the water, only what was needed for the essentials was carried home, drinking and cooking.

# History Lesson

Waste disposal was mainly dry, such as outhouses.

# History Lesson

As the need to move waste away became more important, water again was the choice.

Waterborne waste.

That's what we do.



# What We Do!!!

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Wastewater





# What We Do!!!

## Wastewater

“ I could never do what you do  
for a living”

# FIRST THINGS FIRST

Matt 16:24-26

24 Then Jesus said to His disciples, "If anyone desires to come after Me, let him deny himself, and take up his cross, and follow Me.

25 "For whoever desires to save his life will lose it, but whoever loses his life for My sake will find it.

26 "For what profit is it to a man if he gains the whole world, and loses his own soul? Or what will a man give in exchange for his soul?

(NKJ)

# Topics of Discussion

## ■ PUMP TRUCKS

- ◆ Trucks, Pumping Equipment, and Assembly
- ◆ Pump Truck Cleaning & Maintenance
- ◆ Permitting and Inspections – Pump Trucks
- ◆ Disposal Issues?



# Topics of Discussion

- Pumping onsite systems
- Inspections
  - ◆ What every job should be.
- Review for exam
  - ◆ Example questions



# WHO ARE YOU?

- PUMPERS
- INSTALL AND REPAIR
- PORTABLES
- PLUMBERS
- ENGINEERS

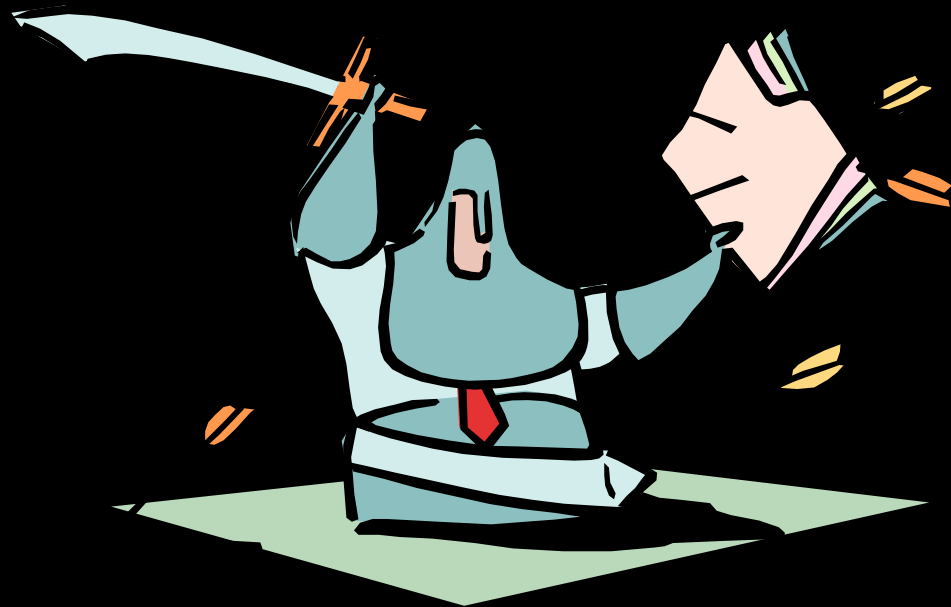


# HOW LONG ?

- 1 YEAR
- 5 YEARS
- 10 YEARS
- 20 YEARS
- OVER 25 YEARS

# WHAT ABOUT THE BAD JOBS?

Our War Stories !





# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned



# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned
- Deepest underground

# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned
- Deepest underground
- Furthest from your truck

# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned
- Deepest underground
- Furthest from your truck
- Greatest lift

# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned
- Deepest underground
- Furthestest from your truck
- Greatest lift
- Strangest thing found

# WHAT ABOUT THE BAD JOBS?

- Biggest tank cleaned
- Deepest underground
- Furthestest from your truck
- Greatest lift
- Strangest thing found
- Longest since last cleaned

# Onsite Wastewater Inspections

What every cleaning should be.





# Onsite Wastewater Inspections

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What every cleaning should be.

Why?



# Onsite Wastewater Inspections

Why?

- To protect the environment





# Onsite Wastewater Inspections

Why?

- To protect the environment
- To protect public health

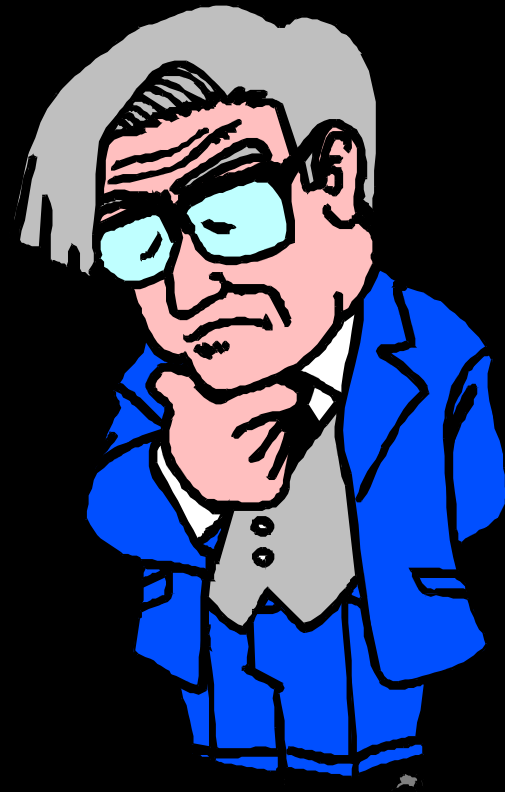


# Onsite Wastewater Inspections

Why?

- To protect the environment
- To protect public health
- For the industry's perception

# What are wastewater systems supposed to do?



# What are wastewater systems supposed to do?

- Take the water away

# What are wastewater systems supposed to do?

- Take the water away.
- Treat it.

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Do city sewer systems do this?

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- Take the water away.
- Treat it.
- Protect public health.

Do city sewer systems do this?

Can a Septic Tank / Onsite system do this?



# Onsite Wastewater Industry

- Onsite can do the job.

# Onsite Wastewater Industry

- Onsite can do the job.
- It can do the job and it can do it better and more cost effective in many cases.



# Onsite Wastewater Industry

- Onsite can do the job.
- It can do the job and it can do it better and more cost effective in many cases.
- It also reintroduces more water back into local aquifers.

# Let's pump!



# Let's pump!

- Park in the street.



# Let's pump!

- Park in the street.
- Why?



# Why would you stay in the street?

- You may not pump the tank.
  - ◆ Empty
  - ◆ Not the problem
  - ◆ Didn't call to cancel



# Why would you stay in the street?

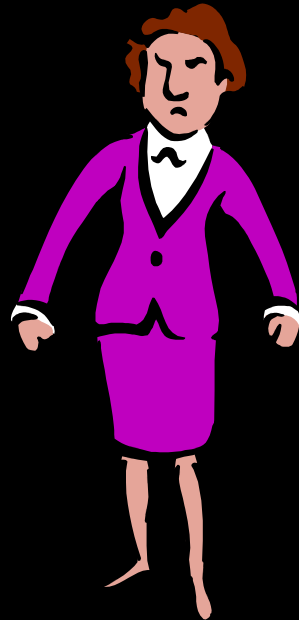
- You may not pump the tank.
- Driveway may be old.





# Why would you stay in the street?

What can a big truck do to a bad driveway?



# Take a Good Look!

What can we see from the street?

How much can you tell about the system?





# Things to look for.

- Dark or discolored areas



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- Wet spots or water running from yard



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- Wet spots or water running from yard
- Is the vent stack in the front?

# Things to look for.

- Dark or discolored areas
- Wet spots or water running from yard
- Is the vent stack in the front?
- Which way does the yard slope?
  - ◆ Is there room for the field?



# Things to look for.

- Does the customer park in the yard?



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- Does the customer park in the yard?
- Does the yard drain the neighborhood?





# Things to look for.

- Does the customer park in the yard?
- Does the yard drain the neighborhood?
- Is the yard in a low area?

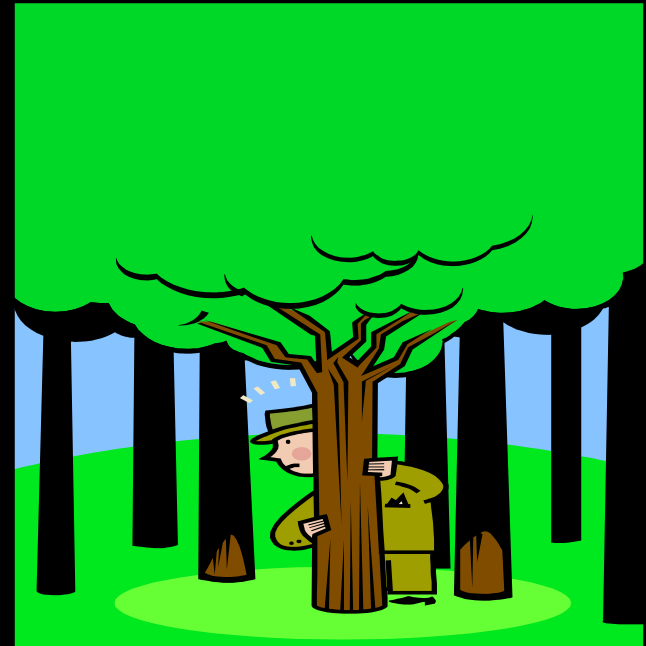


# Things to look for.

- Does the customer park in the yard?
- Does the yard drain the neighborhood?
- Is the yard in a low area?
- Is there standing water?

# Oh where oh where...?

- Where does the homeowner think that it is?



# Oh where oh where...?

- Where does the homeowner think that it is?
- Where would an engineer put it?
  - ◆ Logic helpful, but not required.

# Oh where oh where...?

- Where does the homeowner think that it is?
- Where would an engineer put it?
  - ◆ Logic helpful, but not required.
- Where would you put it?



# Questions for the owner

- How old is the house, or system?



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- How old is the house, or system?
  - ◆ What will this tell you?



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    - ★ Type

# Questions for the owner

- How old is the house, or system?
  - ◆ What will this tell you?
    - ★ Size
    - ★ Type
    - ★ Number of feet of field lines

# Questions for the owner

- How old is the house, or system?
- Are you having trouble?
  - ◆ In or out?
  - ◆ Where and at what level?

# Can't find it? What next?



# Can't find it? What next?

- Look in the basement for...
  - ◆ Drain pipes, 3" or 4"

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- Look in the basement for...
  - ◆ Drain pipes, 3" or 4"
  - ◆ Dampness

# Can't find it? What next?

- Look in the basement for...
  - ◆ Drain pipes, 3" or 4"
  - ◆ Dampness
  - ◆ Odor

# Can't find it? What next?

- Look in the basement for...
  - ◆ Drain pipes, 3" or 4"
  - ◆ Dampness
  - ◆ Odor
  - ◆ How many systems?



# Can't find it? What next?

- Look in the basement for...
  - ◆ Drain pipes, 3" or 4"
  - ◆ Dampness
  - ◆ Odor
  - ◆ How many systems?
  - ◆ Other things....

# Can't find it? What next?

- Look in the basement for...
  - ◆ Other things
    - ★ Broken air ducts
    - ★ Water leaks
    - ★ Dead animals (live animals)
    - ★ Missing kids

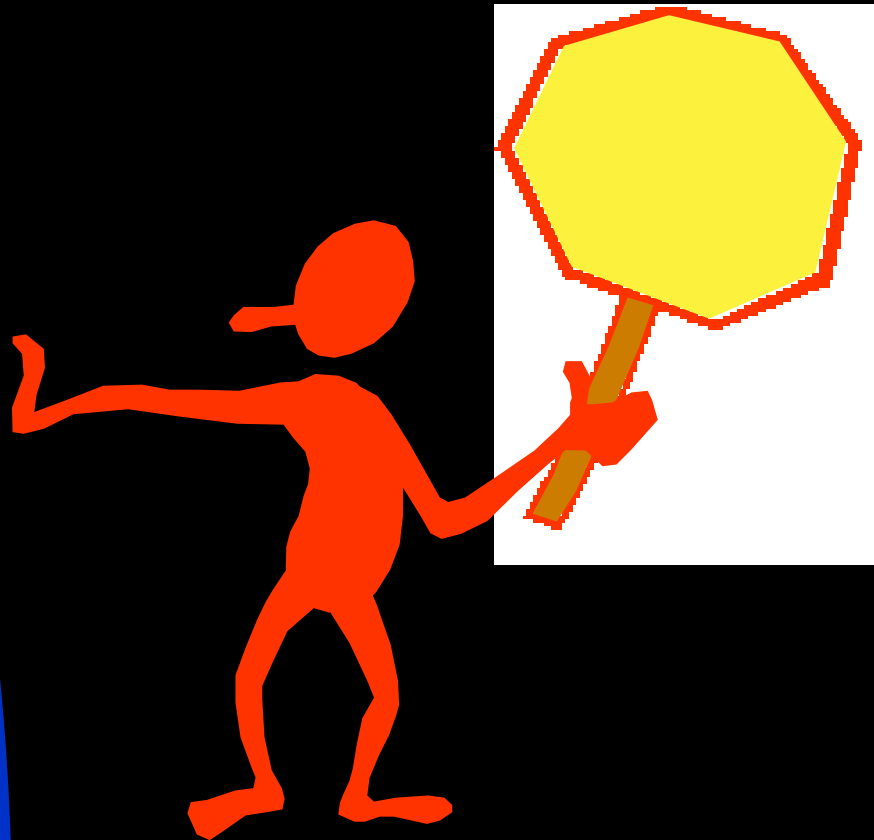
# Now that we know the area...

- Lets take a closer look outside
  - ◆ Gas lines, lights, grills
  - ◆ Power, over and under
  - ◆ Water
  - ◆ Phone, over and under
  - ◆ Cable, over and under
  - ◆ Satellite
  - ◆ Lawn sprinkler
  - ◆ Power supply to out building

# Now that we know the area...

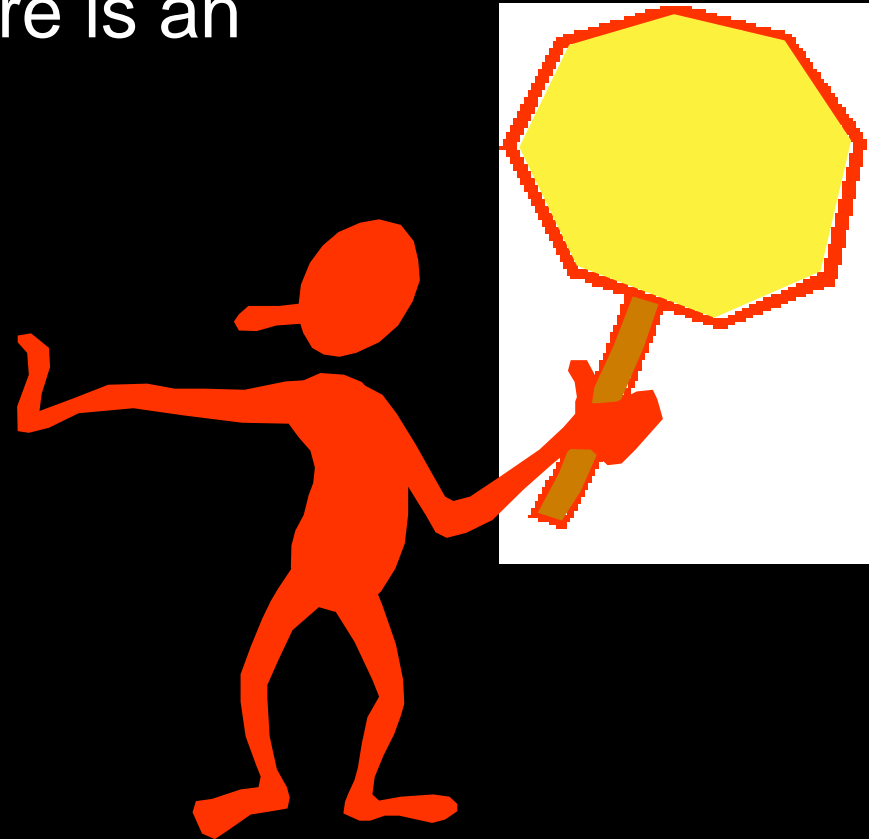
- Lets take a closer look outside
  - ◆ Look for meters
  - ◆ Junction boxes
  - ◆ Wires on the outside of the house

# Danger, danger, or at least trouble



# Danger, danger, or at least trouble

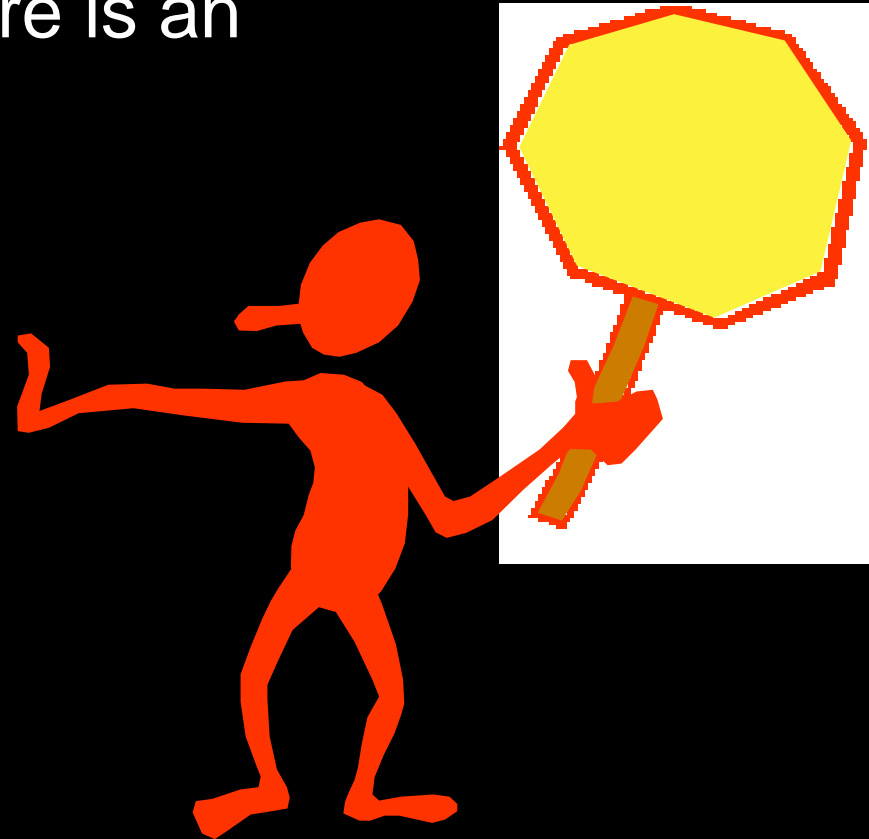
- What if you think there is an underground utility?



# Danger, danger, or at least trouble

- What if you think there is an underground utility?

Call before you dig!  
1-800-292-8525



# Lids and where to dig

- What can the age of a home tell us about the lids?



# Lids and where to dig

- What can the age of a home tell us about the lids?
  - ◆ Size

# Lids and where to dig

- What can the age of a home tell us about the lids?
  - ◆ Size
  - ◆ Number of lids

# Lids and where to dig

- What can the age of a home tell us about the lids?
  - ◆ Size
  - ◆ Number of lids
  - ◆ Plugs or not. That is the question!

# Lids and where to dig

- What can the age of a home tell us about the lids?
  - ◆ Size
  - ◆ Number of lids
  - ◆ Plugs or not. That is the question!

What tools do you use?

# Tools of the trade...



# Tools of the trade...

- Probe

# Tools of the trade...

- Probe
- Can't hook

# Tools of the trade...

- Probe
- Can't hook
- Pry bar



# Tools of the trade...

- Probe
- Can't hook
- Pry bar
- Shovel

# Tools of the trade...

- Probe
- Can't hook
- Pry bar
- Shovel
- Electronic locators

# When you pop the top

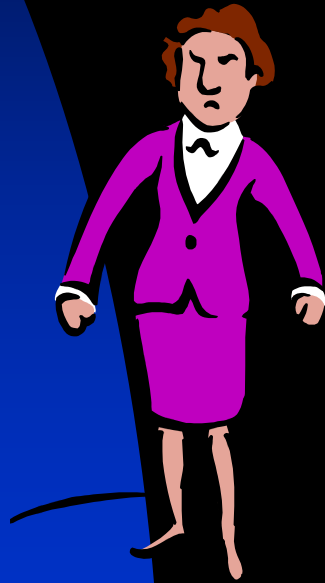
- What's the first thing you notice?
  - ◆ Water level
    - ★ Too high
    - ★ Too low
    - ★ Just right

# “Question time”



- Does a high water level in the tank always mean there is trouble in the house?

“well I never had a  
problem until you dug it  
up”



My plumber said,  
“It must be the tank”

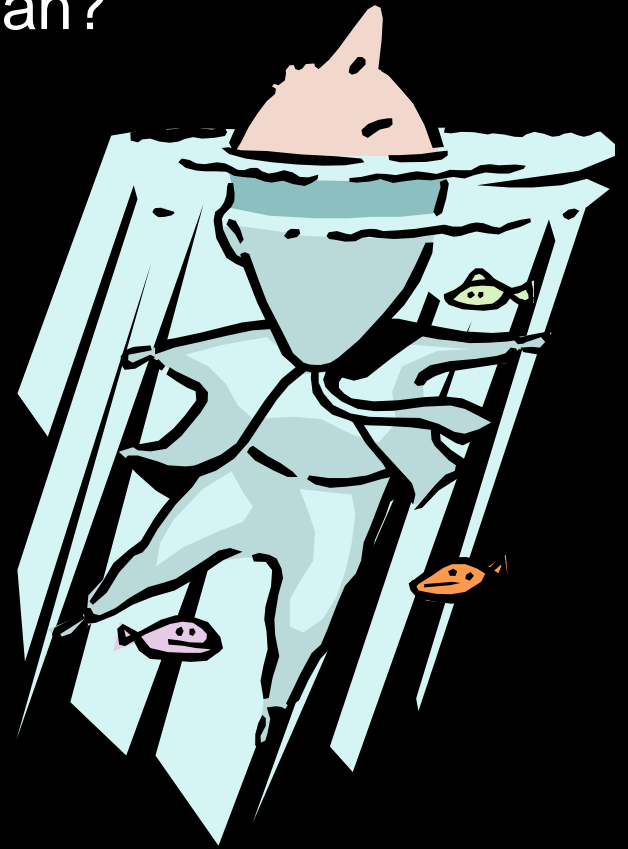
# FLOODED!!!

- When you start to dig you get water, at or near the top of the tank.



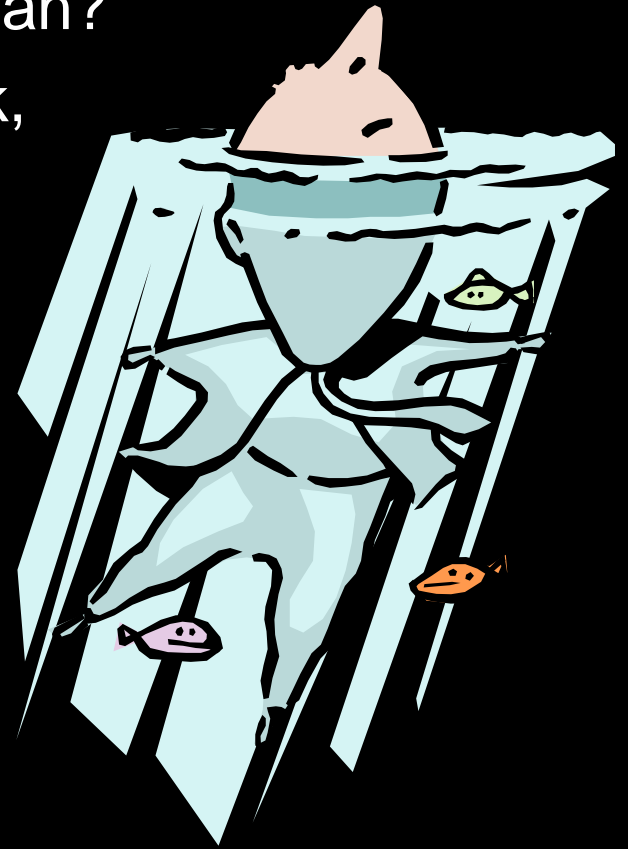
# FLOODED!!!

- What does it mean?



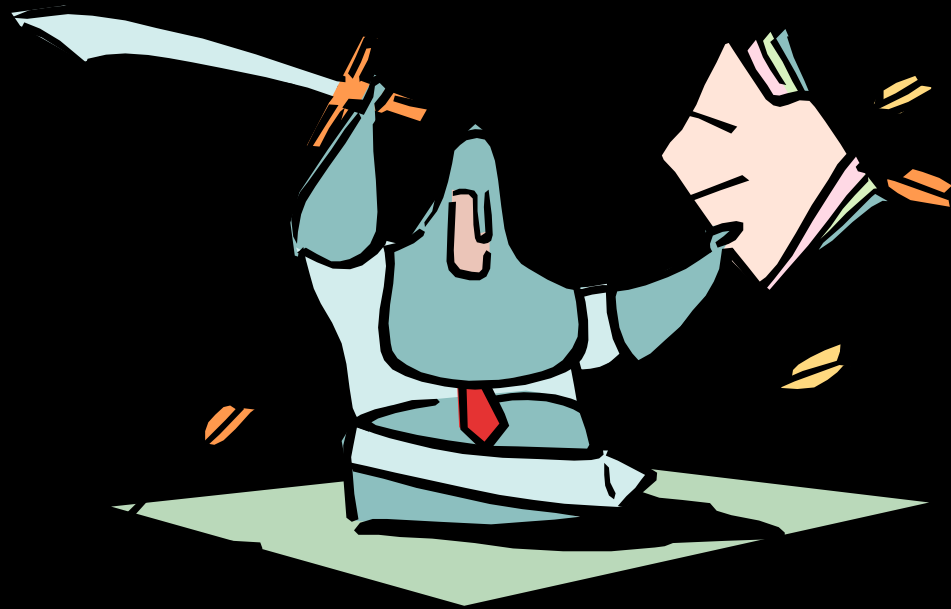
# FLOODED!!!

- What does it mean?
- What about dark, black soil





# War Stories !



How many gallons from  
a 1000 gallon tank?

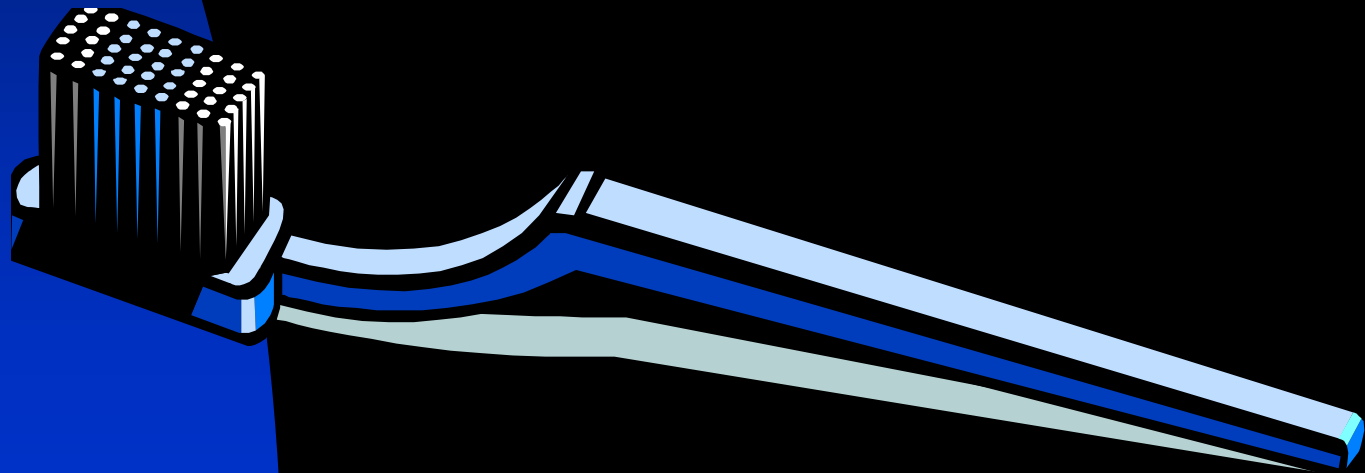


# Water level too low...

## Pass or fail?

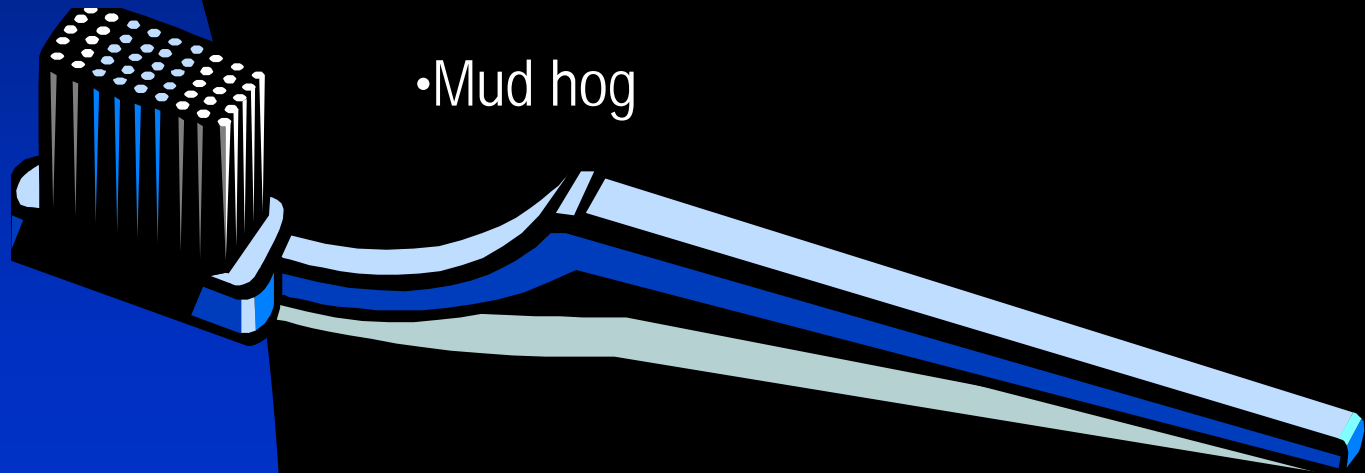


# How do we clean a tank properly?



# How do we clean a tank properly?

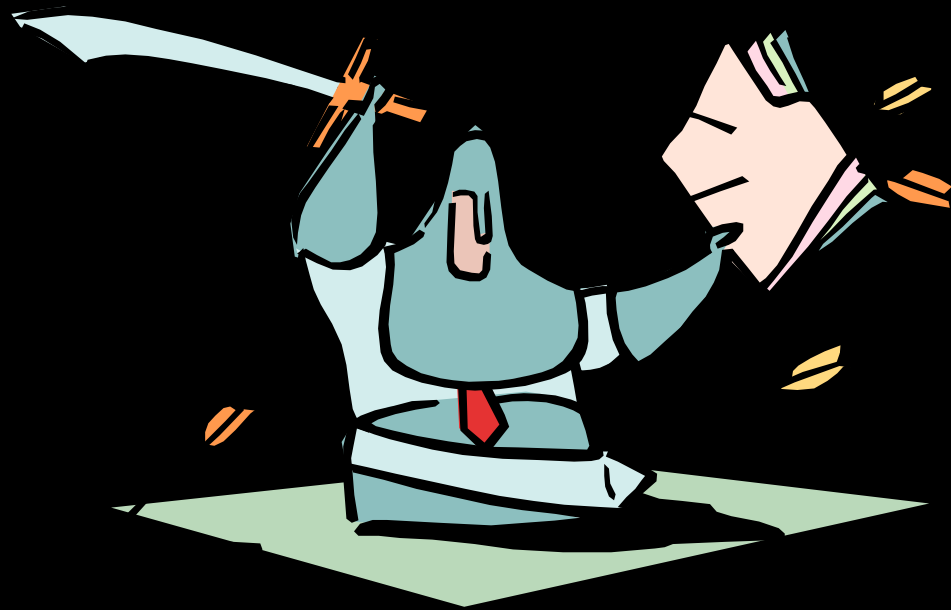
- Back washing
- Crust buster
- Garden hose and a rake
- Mud hog



# How do you clean out your hoses?

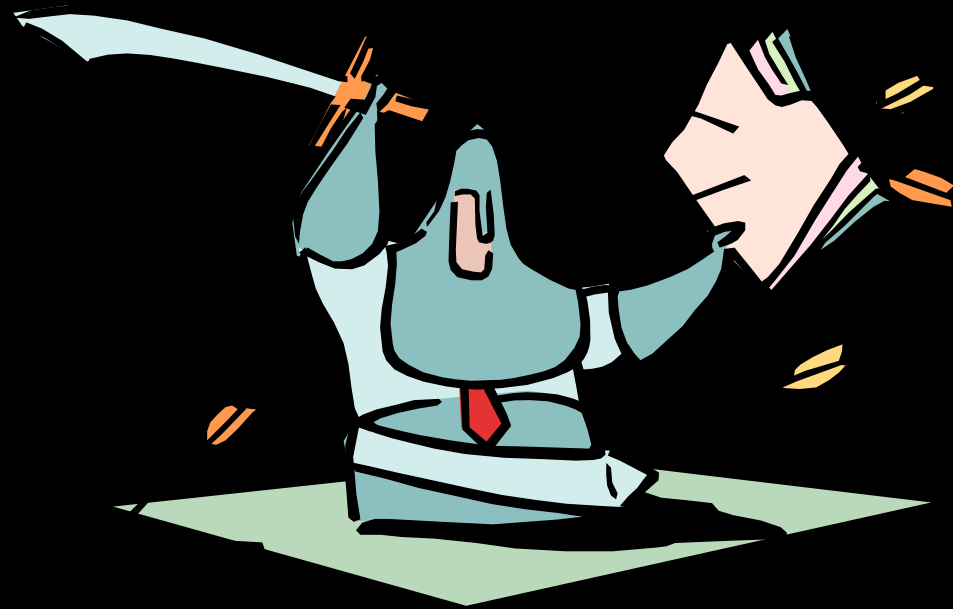
- Garden hose
- 5 gallon bucket

# War Stories !



# War Stories !

What's is the biggest mess you have made?





# How would you clean up a spill?



# Now the tank is clean, what next...



# Now the tank is clean, what next...

- Checking the inlet
  - ◆ Listen



# Now the tank is clean, what next...

- Checking the inlet
  - ◆ Listen
  - ◆ Water noise



# Now the tank is clean, what next...

- Checking the inlet
  - ◆ Listen
  - ◆ Water noise
  - ◆ If in doubt flush paper



# What's left?

- Other lids      Weak/sagging

# What's left?

- Other lids      Weak/sagging
- Outlet Tee      Missing/aging

# What's left?

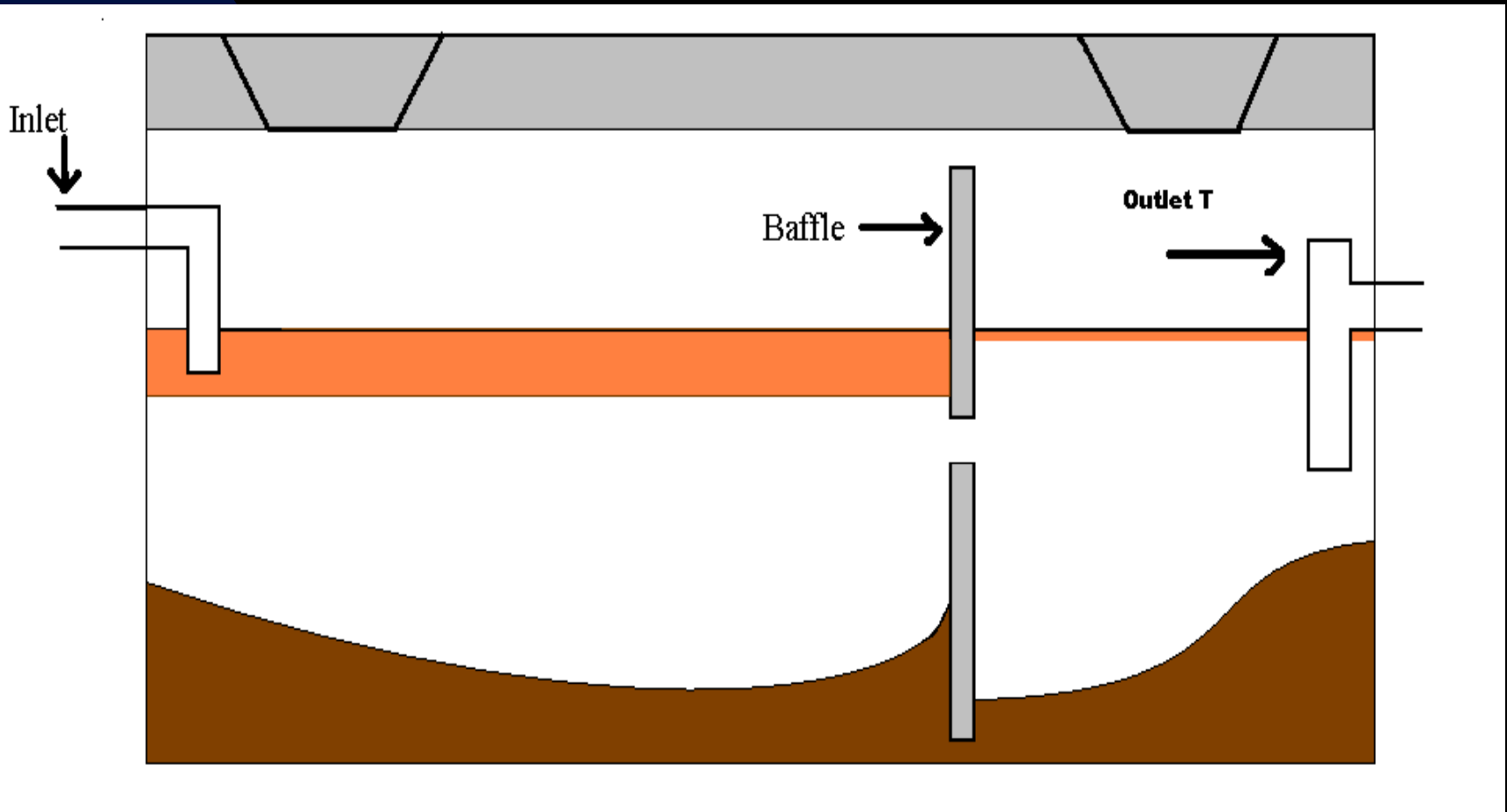
- Other lids Weak/sagging
- Outlet Tee Missing/aging
- Baffle wall Missing/broken



# What's left?

- Other lids Weak/sagging
- Outlet Tee Missing/aging
- Baffle wall Missing/broken
- Side walls  
and floor Cracks/holes

# Let's talk about how septic tanks work...



# More questions...



- What about filters?
- What can I put in my tank?
- If it ain't broke don't fix it!

# More questions...



## How do you answer them?

# More stuff...

- Pumper magazine
- New tools, and gadgets
- Disposal issues