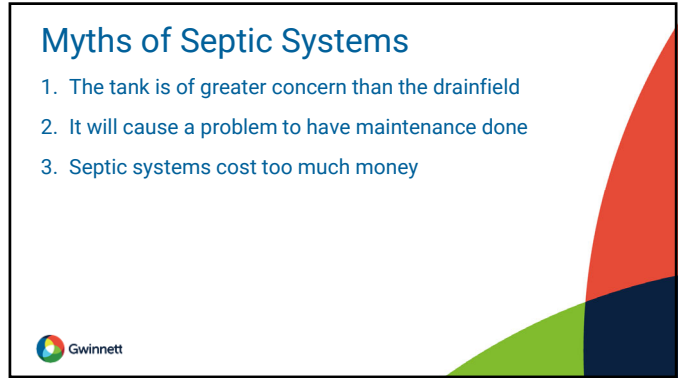
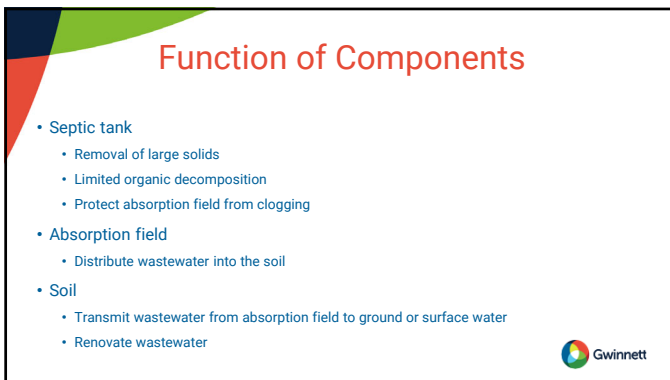


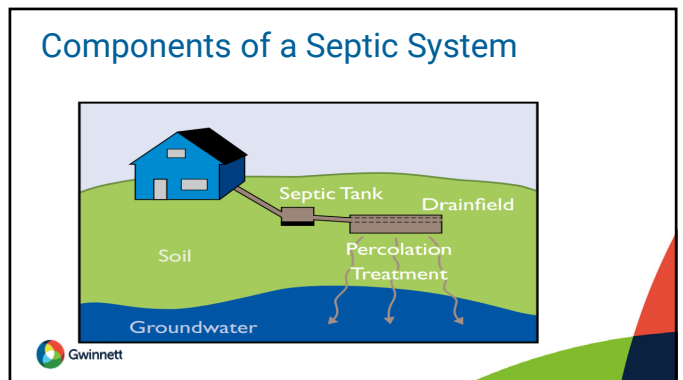
27



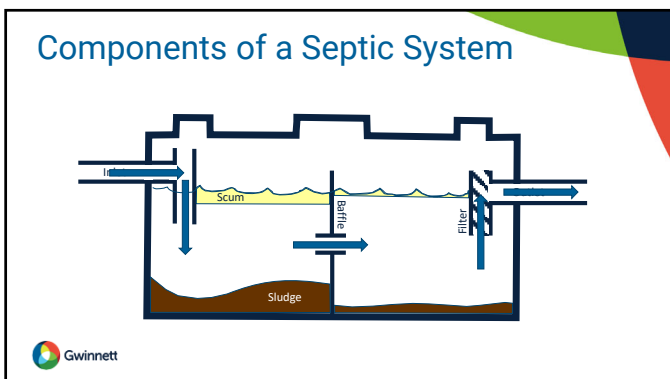
28



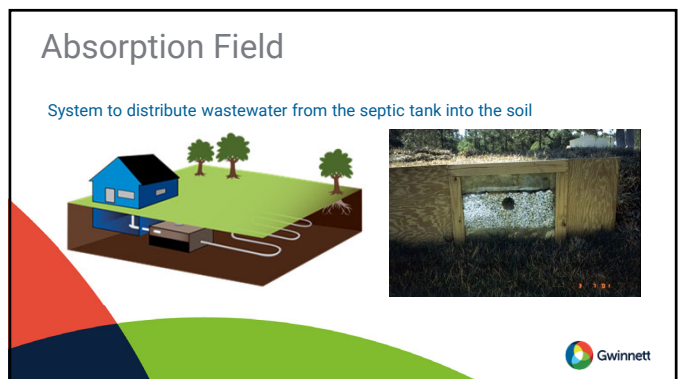
29 The drain field is actually where most problems come from. When wastewater can't get into the soil, the system fails. Soil is the most important part because that is where treatment occurs.



30 Treatment in the soil is what makes the system safe. Wastewater eventually rejoins nature as groundwater and needs to be properly treated by soil microbes.



31 If not properly maintained, the sludge and scum layers thicken. With constant flow, adequate settling does not occur and sludge/scum reaches the second chamber.



32 Many older systems are in this serpentine layout. Some are even in a "pitchfork" shape with a distribution box. Most older systems are pipe and gravel as shown above.



Common Causes of Long-term Failure

Nothing lasts forever

- Properly sited, sized, and maintained system should last 30+ years



33 Many systems with good soils, proper maintenance and care may last even longer!



Common Causes of Long-term Failure

- Under-designed system
- Bedroom addition
- Abnormally high water use
- Leaky plumbing



34 Septic systems are sized based on bedrooms (# of people). Additions often exceed capacity for the system. Constant flow from leaks does not allow the soil in the drain field to rest.



Common Causes of Long-term Failure

- Lack of maintenance



35 Think about motor oil in your car. You could drive for thousands of miles without changing the oil, but when the engine fails, it will be catastrophic. You don't wait until you have a problem to perform maintenance. Pump every 3-5 years.

Warning Signs

- Very green grass above drain field, even during dry weather




36




Warning Signs

Wet, soggy grass with strong odor


Slow, clogged drains in the home



37

Care Inside the Home

- Avoid pouring fats, oils, grease, rags, and solids down the drain
- The toilet is not a trash can!
- Spread out water use
- Additives are not needed



38 Put FOG in a can or jar and throw away with the trash. Only Toilet paper goes in the toilet (besides the obvious). Do a load of laundry each day rather than all at once on the weekend. Split showers between nights and mornings for different people in the house. Additives don't always work, cost \$ and can even harm the system.

Fats, Oils and Grease



- 
POUR
 Allow FOG to cool. Pour any liquids into a sealable, disposable container and place in trash.
- 
SCRAPE
 Use a spatula or a similar utensil to scrape any solid FOG and food particles into the trash.
- 
DRY WIPE
 Use a paper towel to dry wipe any remaining FOG residue into the trash. Place used paper towels in trash.
- 
Use a Sink Strainer
 Use a sink strainer to catch any food particles that may be left on dishware and place in trash.



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What Not to Flush?

- Wipes
- Rags
- Cotton Balls
- Q-Tips
- Dental Floss
- Paper Towels
- Paper Cups
- Feminine Products

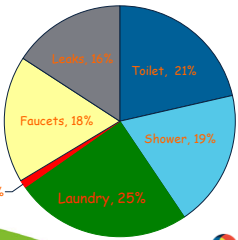
- Medication
- Cigarette Butts
- Sponges/Brushes
- Rubber Gloves
- Cat Litter
- Keys
- Toys
- Cell Phones




40

Reduce Water Use

Or, at least be aware of amount used



Category	Percentage
Toilet	21%
Shower	19%
Laundry	25%
Faucets	18%
Leaks	16%
Dishwasher	1%




41

Water Conservation

- First step is to fix leaks
 - Leaking toilet can add 10-50 gpd to on-site system
- Use water saving fixtures






42

Water Conservation

- Wash only full loads in the dishwasher and washing machine
- Don't allow faucets to run while completing task
- Reduce water pressure





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WaterSense Products

- Showerheads
- Toilets
- Urinals
- Irrigation controls
- Sink faucets and accessories
- Pre-rinse spray valves

- Flushometer-valve toilets
- WaterSense New Homes





44 Many high efficiency fixtures retain adequate pressure while reducing the gallons per minute.

Reduce Contaminant Loads in Wastewater

- Do not dispose of household waste (cleaners, cosmetics, pesticides, preservatives, etc.) by flushing down the toilet or sink
- Do not
 - Use "every flush" toilet bowl cleaners
 - Flush unwanted medicines down toilet
 - Drain chlorine-treated water into on-site systems




45

Reduce Contaminant Loads in Wastewater


- Use recommended amounts of cleaners, bleach, detergents, drain cleaners, etc.
- Minimize use of garbage disposal
 - Increased amounts of fats and oils
 - Increased solids



46 Cleaning products are okay, but not in excess. The system relies on bacteria to function. So, if the bottle calls for a teaspoon, don't use a whole cup!

Care Outside the Home

- Have your system pumped every 3-5 years
- Do not plant, park or build on top of the drainage field
- Divert downspout water away from septic system



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