



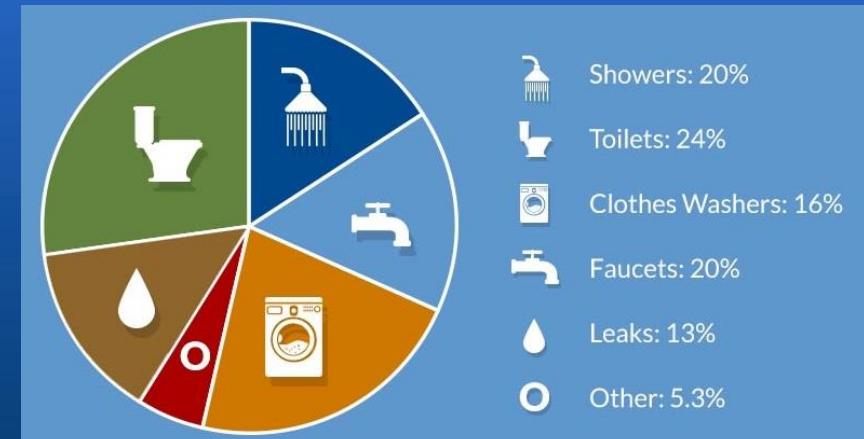
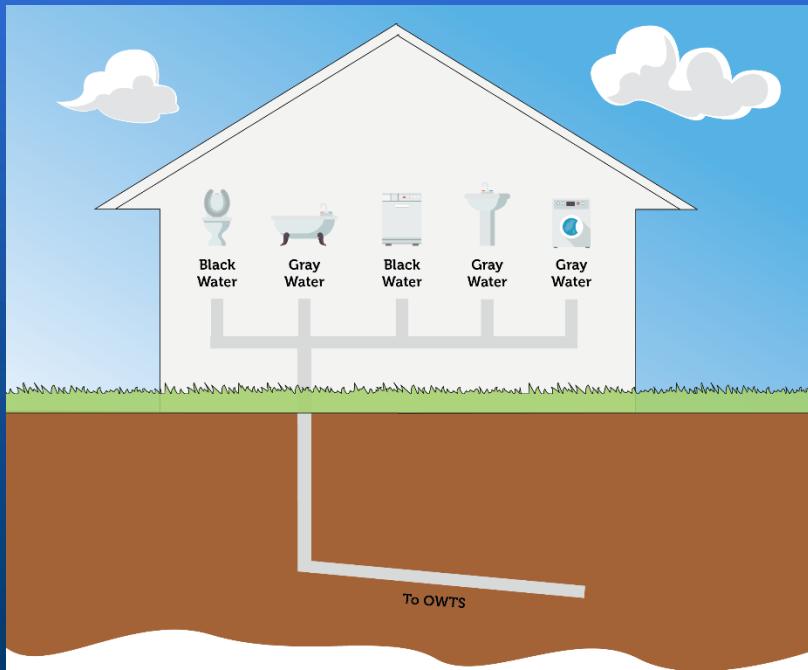
Module 3

Home Management Tips

Learning Objective

Implement changes in your home to
reduce the load to your OWTS

Wastewater Sources and Usage



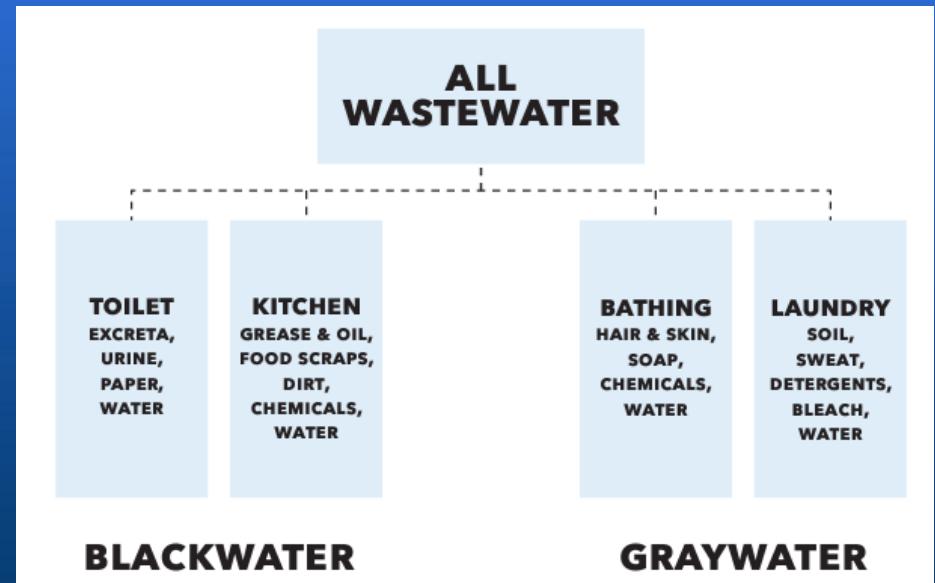
DeOreo et al. (2016)

Wastewater Estimates and Generation

- Residential systems typically use bedrooms to predict maximum occupancy/use
- Assuming two people per bedroom, most regulatory agencies specify a hydraulic loading rate in the range of 100 to 150 gallons per day per bedroom
- Try to conserve water
- Based on annual estimates of actual use
 - Per person per year = 27,000 gal/year
 - Typical home \sim 3 persons = 58,000 gal/yr
 - 250 homes in an area = 14.5 million gallons/year

What is added to the water?

- **Pathogens**
 - Virus, Bacteria
- **Solids**
 - Organic
 - Inorganics
- **Nutrients**
 - Phosphorus
 - Nitrogen
- **Chemicals**
 - Cleaning products
 - Water treatment
 - Medications





Tips to lessen the load for septic system longevity





EPA Video – Don't Strain Your Drain!



General Recommendations

- Listen for drips and leaks and fix all internal pumping leaks
- Choose appliances that offer water and energy efficient cycles
- Do not use your toilet or septic system as a garbage can – place this waste in the garbage
- Limit the use of harsh cleaners and sanitizers as they kill beneficial bacteria in the OWTS
- Use products that are natural/biodegradable
 - Look up products that get an “A”
www.ewg.org/guides/cleaners/



Quick Tip #6

DON'T OVERLOAD THE COMMODE!

EPA Video: Don't Overload Your Commode!

Bathroom Recommendations

- Toilet is #1 water user in a homes (24%)
 - Replace old 5+ gallon flush toilets with low or dual flush toilets to use 1.6 gallons per flush or less
- Fix leaking problems
 - Typically, a simple gasket that if not replaced can add 100s of gallons of water per day





Bathroom Recommendations Cont'd

- Many toilet cleaners are very hard on OWTS
- Do not use automatic sanitizers
- Small amount with “elbow grease”
- Only put human waste and toilet paper in the toilet
 - No kleenex, q-tips, cigarettes, hair, cotton balls, wipes, condoms, feminine products, unused medication

Bathroom Cont'd Bathing

- Take shorter showers versus baths
- Use low flow fixtures (< 2 gpm)
- Avoid daily cleaners
 - Daily cleaners are hard on system
- Avoid anti-bacterial soaps
 - They are no more effective than regular soap
- The less soap and cleaners the better





Clearing Clogged Drains

- Use adequate strainers in all drains from sinks, showers, tubs, laundry, etc.
 - Inexpensive metal or plastic drain screens
- When drains do plug, it's usually in trap below sink
 - Take it apart, use a plunger or snake
- Majority of products sold to clear drains will damage the microbes in your OWTS

Laundry Recommendations

- Install front loading machines
 - 65% less water
 - 12 – 20 gallons
 - Less electricity to dry clothes
- Spread out FULL loads
 - think even
 - throughout week
 - throughout day



Laundry Cont'd

- Add a washing machine lint filters:
 - Washing clothing release a lot of lint much of which is inorganic
 - Options:
 - Simple screen on discharge line
 - Purchase and install an after market lint filter





Laundry Cont'd

- Limit bleach and other sanitizing products (less than 1 load/week)
- Limit detergent to the minimal amount needed to get clothing clean
- Inexpensive powders contain clay as a filler
- Do not use liquid fabric softeners
 - May prevent natural 3-layer stratification from occurring
- Recommendations:
 - Add a $\frac{1}{2}$ cup of baking soda or vinegar or both
 - Drier balls
 - Anti-static - aluminum foil ball

Kitchen Recommendations

- Run FULL dishwasher or fill the sink to wash dishes
 - do not let water run
- Detergents - Choose phosphate free
- Sink:
 - Scrape plates into compost/garbage
 - Fix leaks
 - Fats and oils are solid waste!
- Thaw food in refrigerator versus under running water
- Eliminate or reduce the use of a garbage disposal/grinder
 - Adds more solids
 - Undigested food is harder to break down
 - Chopped into small pieces which do not settle out as well



Video from EPA – Think at the Sink!



Utility Room Recommendations

- Do not allow clean water from sump pumps or tile lines to drain into system
- Do not run water to prevent a system from freezing
- Consider routing other uncontaminated sources out of your system such as furnace condensate, dehumidifiers, water treatment devices (water softeners, iron filters, reverse osmosis)



Hazardous Waste

- Can not go into your system so find a hazardous waste drop off
- Unused medicine drop off
 - *[fda.gov/drugs/disposal-unused-medicines-what-you-should-know/drug-disposal-drug-take-back-locations](https://www.fda.gov/drugs/disposal-unused-medicines-what-you-should-know/drug-disposal-drug-take-back-locations)*

Outside the Home Recommendations

- Assure no treated water from hot tubs or pools enter the OWTS
- Route roof drains away from the OWTS
- Do not park vehicles over the OWTS





EPA Video – Shield Your Field!



Landscaping Considerations

- Do not irrigate or fertilize over the OWTS
- Do not drive anything larger than a riding lawn mower over your OWTS
- Do not grade or add soil over the system without consulting the Installer/Permitting authority

Vegetation Do's and Don'ts

Do's

- Do establish vegetation to protect the system from erosion and freezing
- Do use native drought-tolerant plants on and near the soil treatment area
- Do frame the system with dwarf trees and shrubs at a distance

Don'ts

- Don't plant edible plants such as vegetables and herbs over the system
- Don't place trees and shrubs on the soil dispersal system or near other components
- Don't place plastic landscaping sheets over the soil treatment area

Vegetation Recommendations

Avoid

- Avoid thirsty plants that set deep roots
- Avoid planting aggressive dense ground covers that will interfere with the evaporation process

Choose

- Drought tolerant plants
- Plants with short, fibrous root systems
- Hardy/tolerate of your climate
- Tolerant of sun and shade conditions



Setbacks from the OWTS

- Most rules have required setback from building, structures, and other architectural features to allow for protection of resources along with maintenance access and repairs
 - Wells, lakes, rivers, ponds and streams
 - Property features such as retaining walls, stone walkways, pools, hot tubs, decks and patios, or fire pits
 - Swimming pools, sports courts, storage sheds, swing sets, sand boxes, driveways, vehicles
- Fencing and gate placement can affect septic pumper truck access



Key Take Aways

- Conserve water
- Stagger water usage to spread it out over the day and week
- Be mindful of the products you use and limit cleaners
- Do not use OWTS as a garbage can
- Evaluate your vegetation, obstructions, and traffic over the OWTA

RCAP

Rural
Community
Assistance
Partnership

NOWRA

National Onsite Wastewater Recycling Association



Conclusion of Module 3

QUESTIONS

INSTRUCTOR NAME
CONTACT INFORMATION