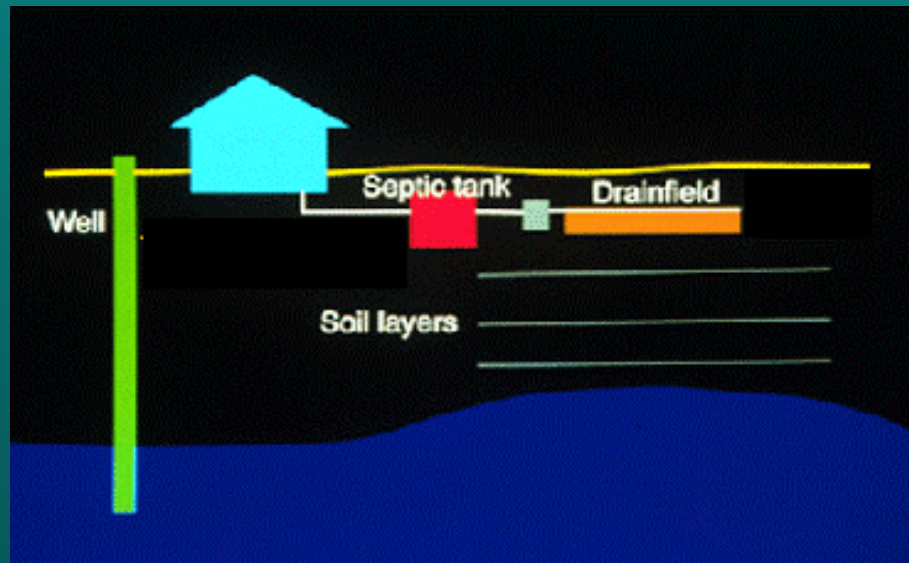


# On-Site Sewage Disposal Systems

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Santa Barbara County  
Environmental Health Services

# On-Site Sewage Disposal Systems

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- **History**
- **Standard Septic Systems**
- **Regulation and Inspection of Septic Systems**
- **Septic System Upgrades and Maintenance**
- **Available Resources**

# Historical Background

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- **Pre-civilization**
- **735 BC**      **Rome**  
**The first sewer system**
- **1370 AD**      **France**  
**The first covered sewer was constructed**
- **1539 AD**      **France**  
**Cesspools were ordered to be built for each new dwelling constructed**
- **1849-1854**      **London**  
**Over 20,000 people died from cholera**
- **1897**      **England**  
**The first tank to be patented as a septic tank was introduced**

# Today

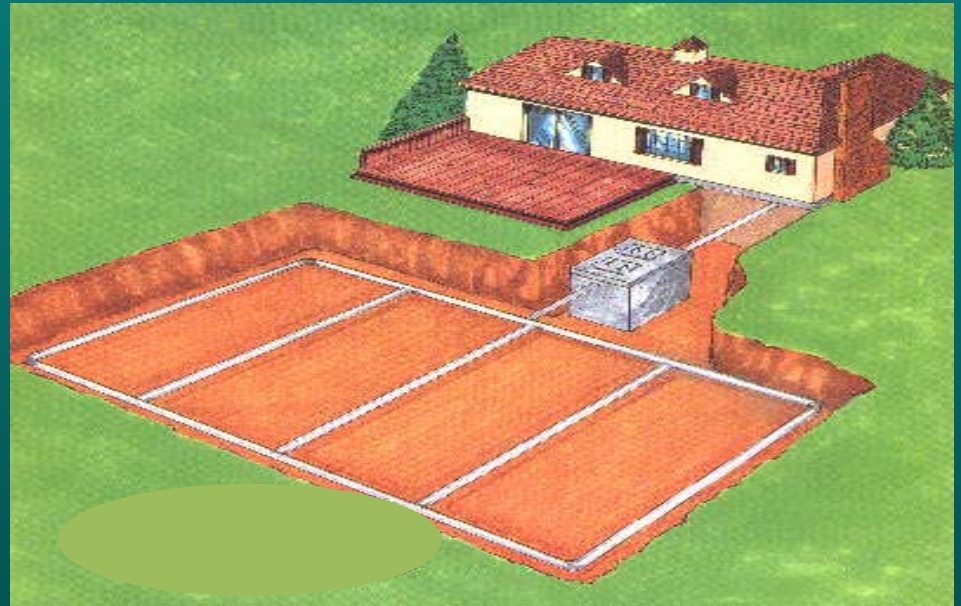
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- Today 25% - 30% of U.S. households use onsite or individual septic disposal systems (OSDS or ISDS)
- One-half million new systems per year
- Only 32% of the total land suitable soil for septic system siting

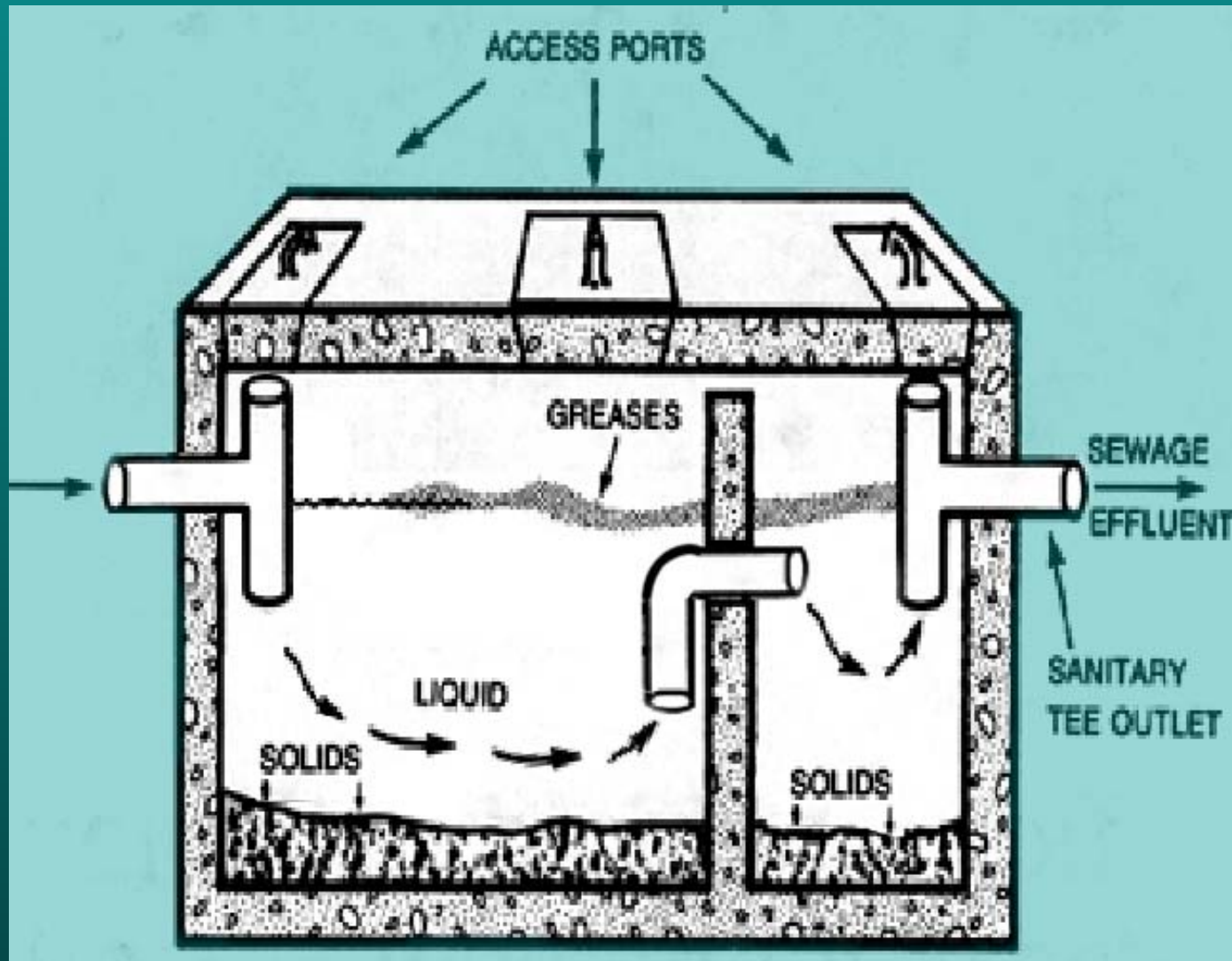
# Standard Septic Systems

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- **An onsite septic disposal system is like a small sewage treatment plant**
- **Septic tank**  
Primary treatment by anaerobic bacteria
- **Disposal field**  
Secondary treatment through aerobic and an aerobic bacterial action



# Onsite septic disposal system



# Disposal Fields

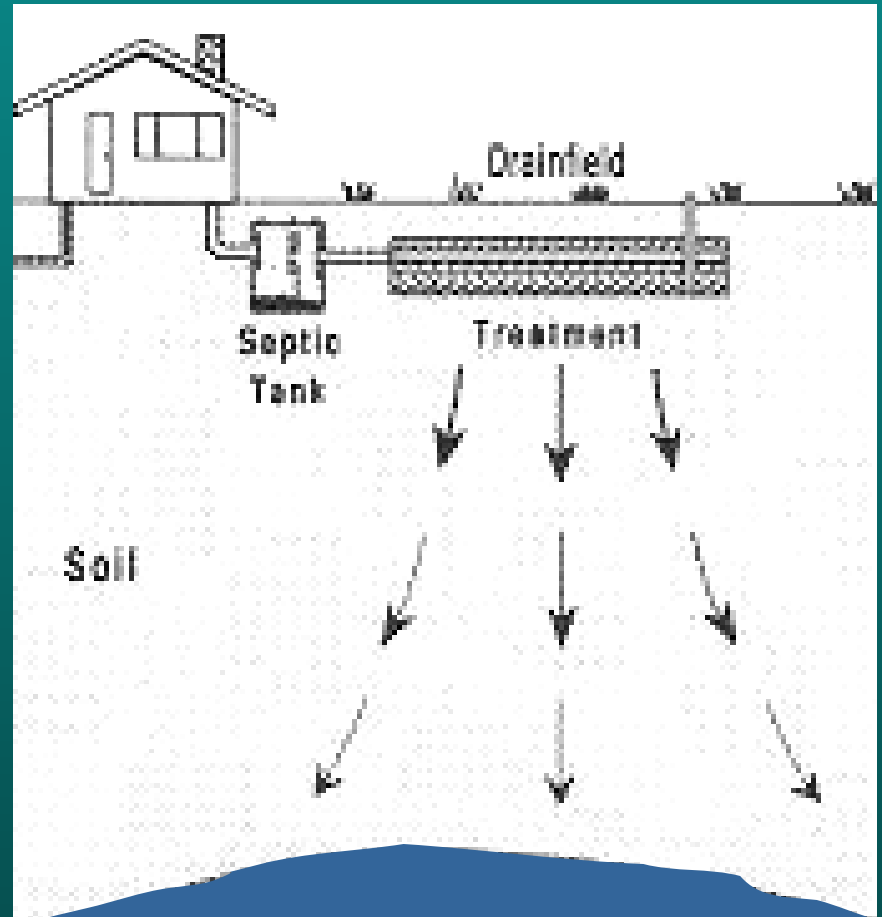
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## Approved methods

- Leach lines
- Drywells

## Currently Unapproved

- Seepage Pits
- Cesspools



# Leach Lines

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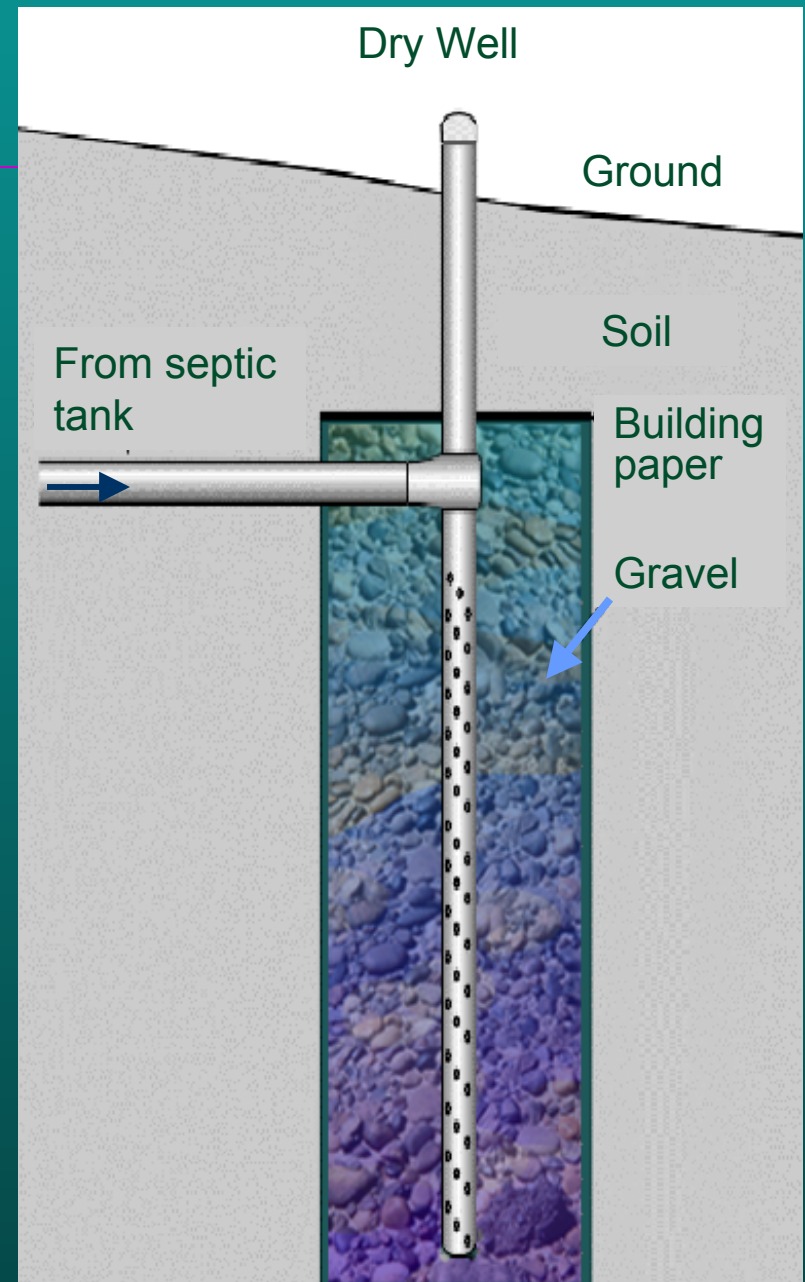
- Always the first choice
- Aerobic bacteria
- Evapo-transpiration





# Drywells

- Deep disposal
- Less area required for installation



# Regulatory Authority

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- **Authority**
- **Permit types**
- **Servicing (pumping)**
  - Voluntary servicing
  - Mandatory reporting
  - Licensed pumpers
  - Recommended frequency

# Inspection Reports

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- **Record system deficiencies**
  - Corroded concrete
  - Lack of risers
  - Conditions that may be hazardous
- **Report to homeowners and EHS (within 30 days)**
- **Qualified inspectors**



# Typical Problems

Terms on a  
septic system  
inspection form

Structural and  
operational  
problems

Solutions

## County of Santa Barbara Septic Tank Inspection Report

### SEPTIC TANK DEFICIENCIES REQUIRING FOLLOW-UP

Deficiency	Typical Corrective Action	Permit Required
Inadequate access to both compartments	Install risers &/or lids to meet current code requirements	No
Access ports deeper than 24 inches	Install risers to within one foot of grade	No
Deteriorated access lid(s)	Replace lids	No
Deteriorated top of tank	Replace / repair	No
Deteriorated baffle between compartments	Replace / repair	No
Other		
Severely damaged or deteriorated septic tank	Replace septic tank	Yes
Unfilled seepage pit	Fill w/ rock or abandon	Yes
Cesspool (permeable sides & bottom)	Abandon & replace with approved septic tank and disposal field	Yes
Failed disposal field with discharge to surface	Add new field w/ diverter valve - match or exceed existing field	Yes
System constructed without required permit	Obtain permit	Yes
Discharge of graywater to ground surface or drainage course	Direct wastewater to approved disposal field	Yes
Disposal field not adequately absorbing septic tank effluent	Clear blockage / repair pipe	No
	Replace / repair disposal field	Yes
Septic tank constructed of metal or wood	Replace with IAPMO listed tank constructed of approved material	Yes
Inadequate tank capacity	Replace with proper size tank	Yes
Missing inlet / outlet tee(s)	Replace missing tee(s)	No
Other		

(Update 10/11/01)

# Mandated System Upgrades

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## Modifications\*

- Cesspools and hollow seepage pits
  - Abandonment/Destruction
  - Conversion to drywell
- Adding system components
  - Septic tank
  - Disposal field
- Upgrading failed systems to current standards

**\*Permit Required**

## Mandated System Upgrades (continued)

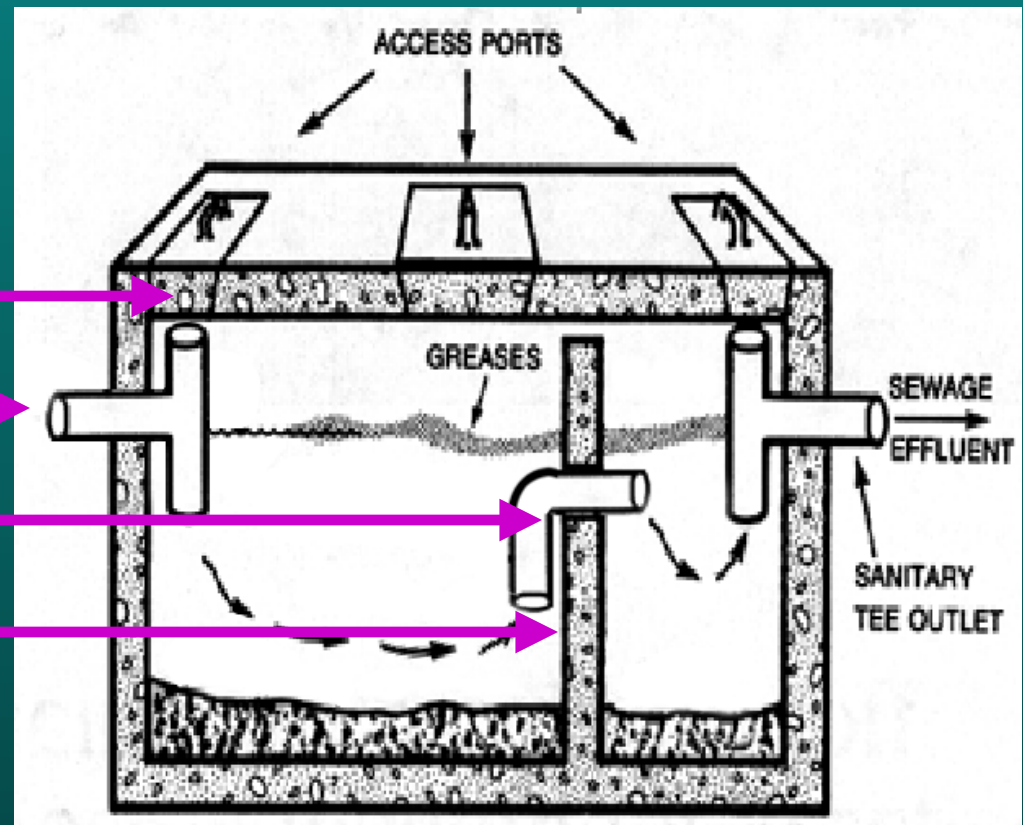
- Repairing deteriorated concrete
  - corroded baffles
  - lids
  - tops
  - inadequate access to tank (unable to inspect)
- Retrofitting access risers to reach grade level

Note: No permit required from EHS for these repairs, but report of maintenance to EHS is required.

# Maintenance and Service

- Maintenance means replacement of any septic tank components:

- lid\*
- tees
- ell
- baffle plate\*
- sewer lateral\*



\* mandatory repair or replacement

# Care and Feeding

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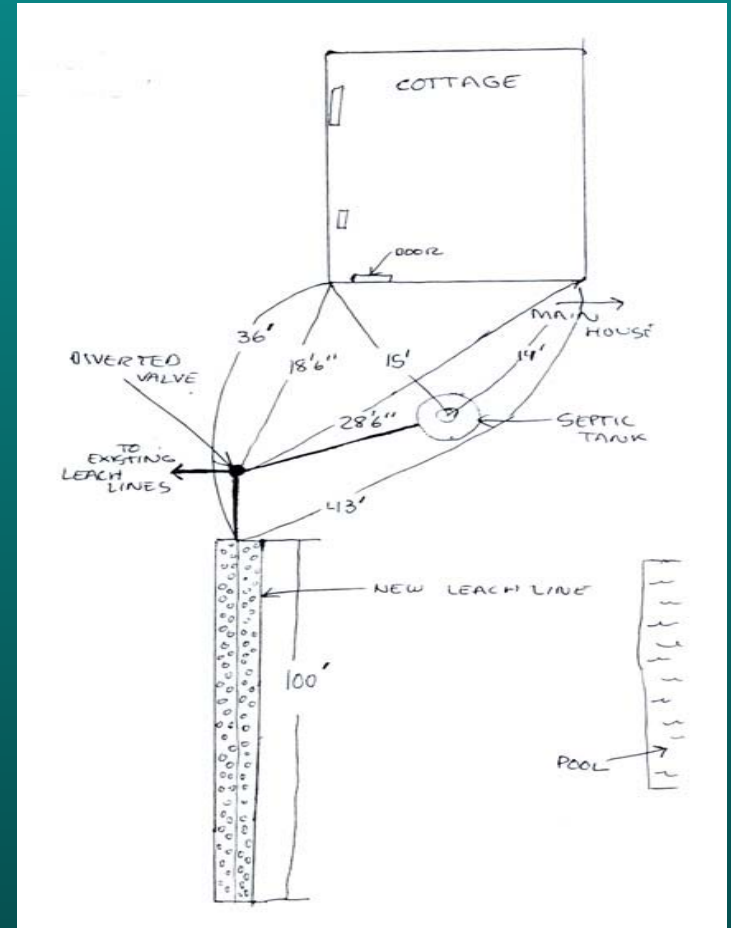
- Management of the system is the key
- Have the tank inspected and pumped every 3 to 5 years





# Keep Records

- **System locations on your property**
  - Map or drawings triangulate off house feature
- **History of servicing and inspection**
  - Inspection reports
  - Permits for system repair or expansion



# Check for Signs

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Be alert to signs of a failing system

- Sewage surfacing over the drain field
- Soggy, very green areas
- Sewage back-ups in the house
- Slow draining toilets or drains
- Sewage odors



# WARNING



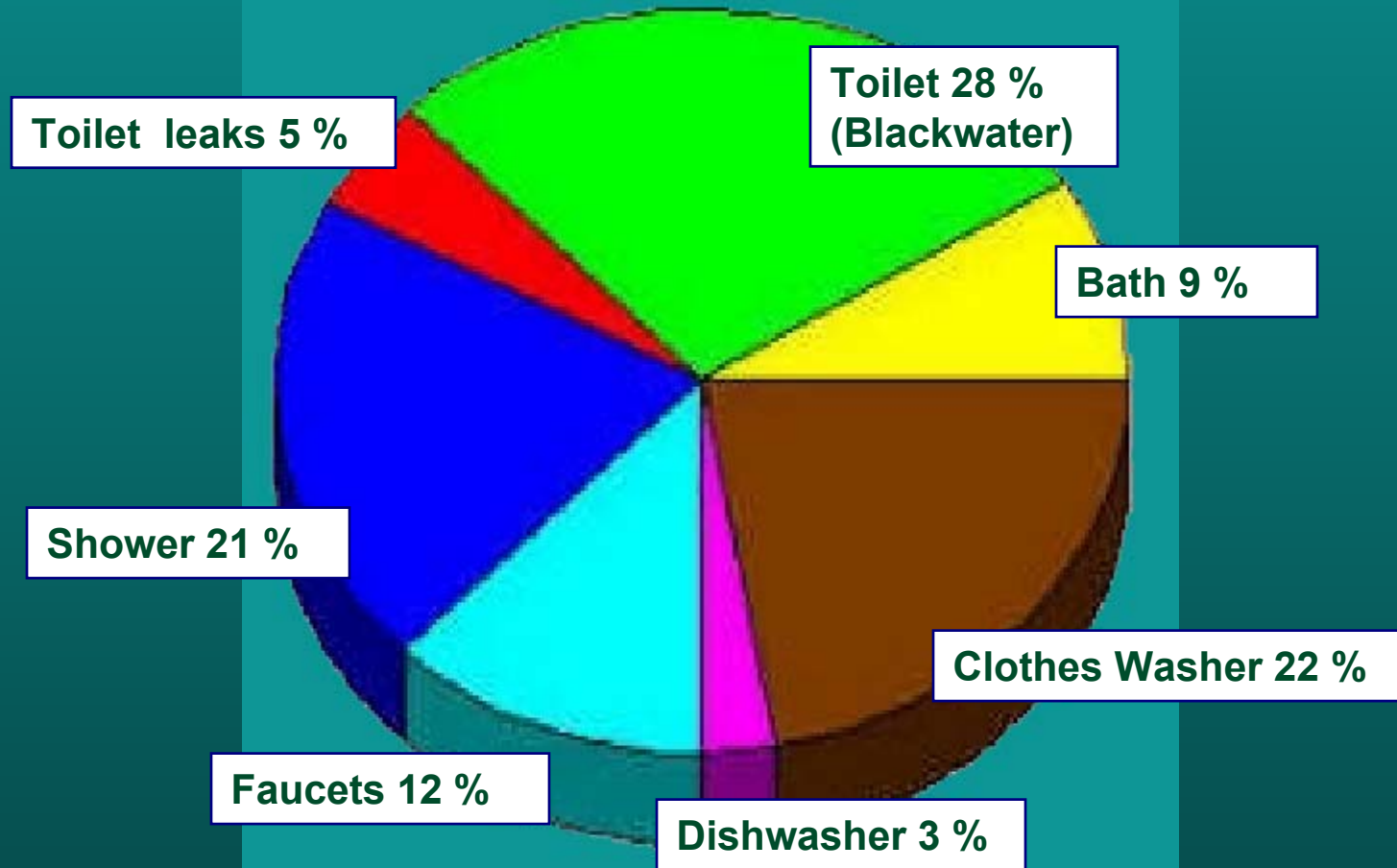
Never inspect a septic tank alone!

Never enter a septic tank, **NEVER!**

**Toxic, DEADLY** gases can  
be present in septic tanks!

# What goes into a septic tank?

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# Do Not Flush

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- **Materials difficult to break down**

- cigarette butts
- paper towels
- disposable diapers
- feminine products

- **Hazardous materials**

- pesticides
- paints
- waste oil

Septic system  
additives are not  
recommended

# Graywater Systems

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- **Graywater is considered waste water.**
- **It consists of:**
  - ONLY water from bathtubs, showers, bathroom sinks, clothes washing machines, and laundry tubs
  - NO toilet water, kitchen sink or dishwasher water
- **Graywater systems must be permitted**



# Future Changes and Benefits

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- **Assembly Bill 885 (enacted 9/27/00)**
  - Additional regulations
- **Phase III septic system ordinance review**
  - Potential local code changes
- **Special state funding**
  - Septic System Sanitary Survey Project
  - Septic to sewer conversion loan program

# More Future Changes and Benefits

- **Loan program elements**

Funding for:

- **Proper abandonment of septic system**
- **Installation of sewer lateral**
- **Connection to sanitary district sewer mains**



# Even More Future Changes and Benefits

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- **Additional incentives**
  - Reduced or eliminated permit costs and connection fees (not for all districts)
  - Low interest rate (2-3%)
  - Discounts from septic system contractors
  - Most or all costs may be tax deductible

# Environmental Health Services

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Ask for your District Specialist

(805) 681-4900 South County

(805) 346-8460 North County

Website: [www.countyofsb.org/phd/ehs](http://www.countyofsb.org/phd/ehs)