A PUMPED SEPTIC TANK IS A HAPPY SEPTIC TANK!!

Homeowners of Septic Systems

Chatham County Environmental Health
Pittsboro, North Carolina

October 22 & 23, 2018

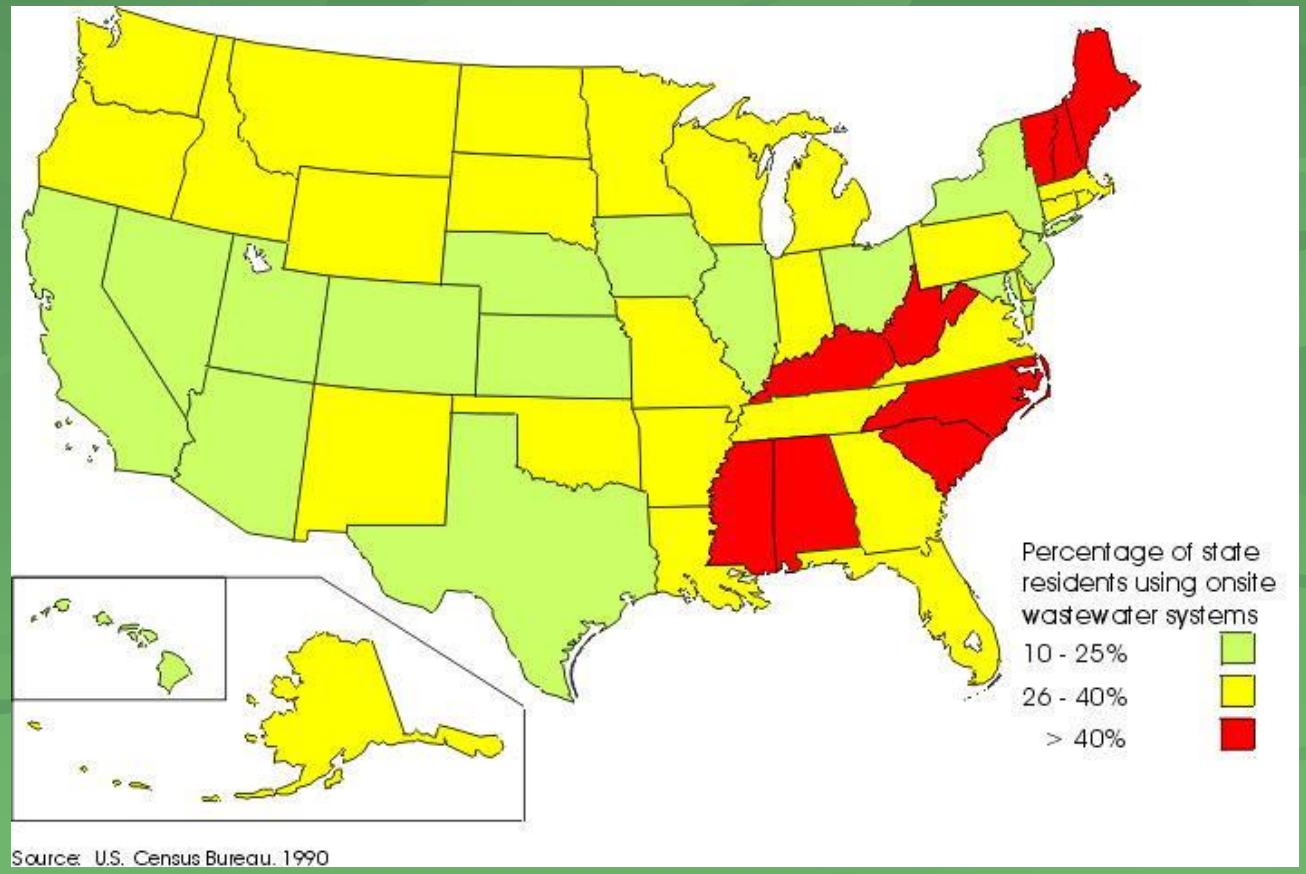
Topics to be reviewed

- Why do we use septic systems?
- What are the components of a septic system?
- What types of septic systems are installed in Chatham County?
- Why do septic systems fail?
  - And how can failures be prevented?

Why do we use septic systems?

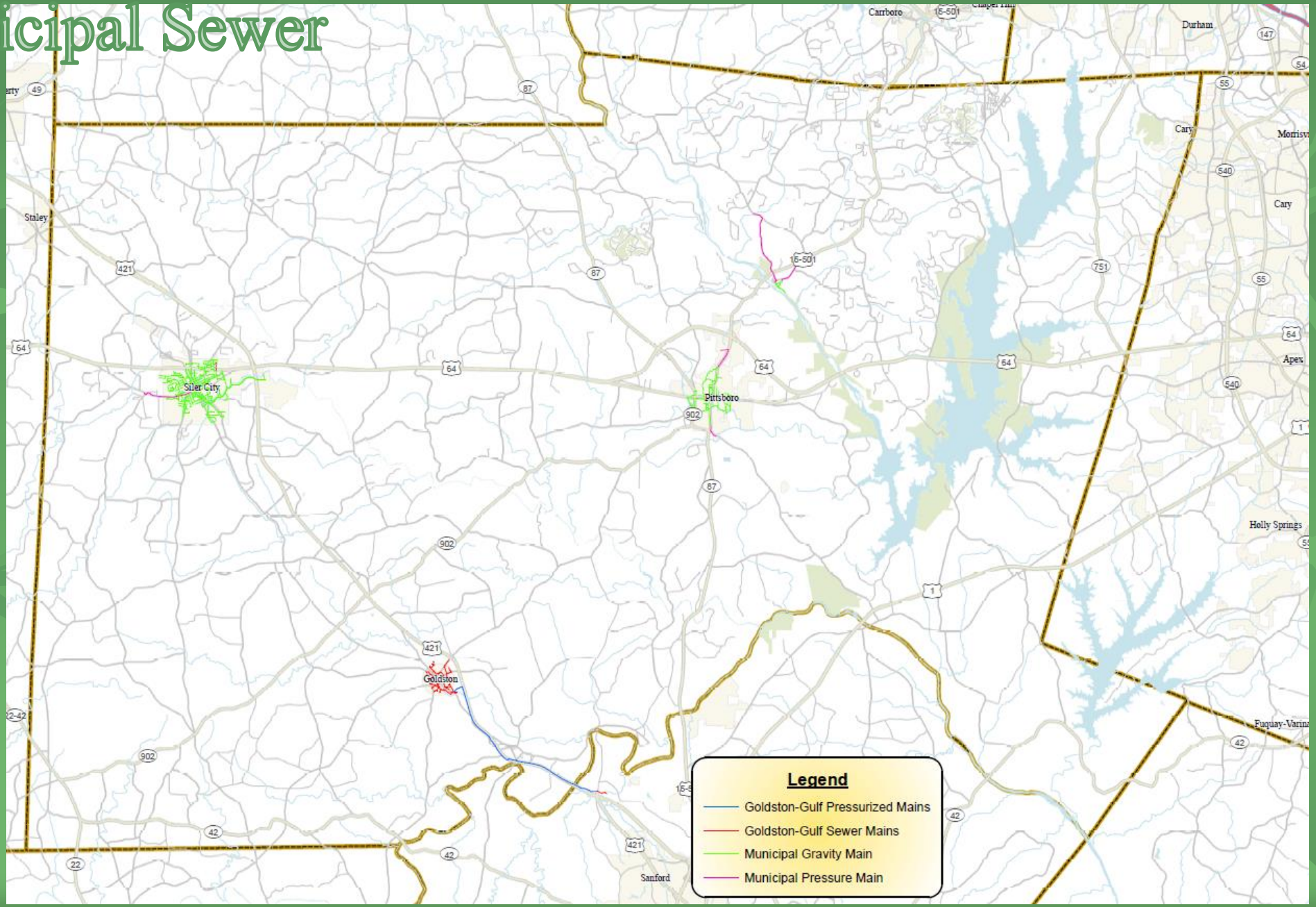
- Safely TREAT and dispose of sewage
- Protect your family's health
- Protect public health in the community
- Protect ground and surface water
- Help keep housing affordable (city sewer is very expensive to install and maintain)

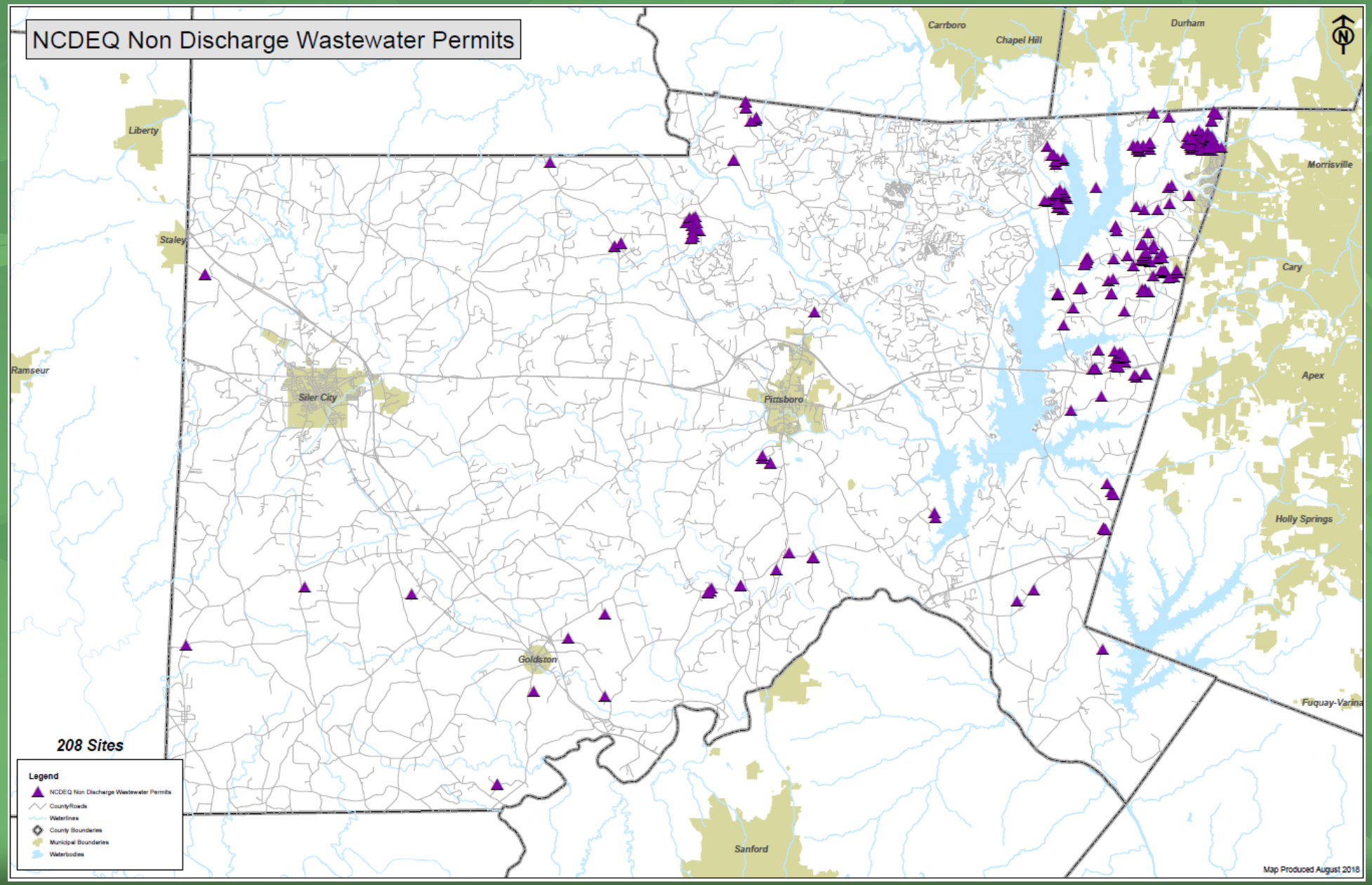
Who uses septic systems



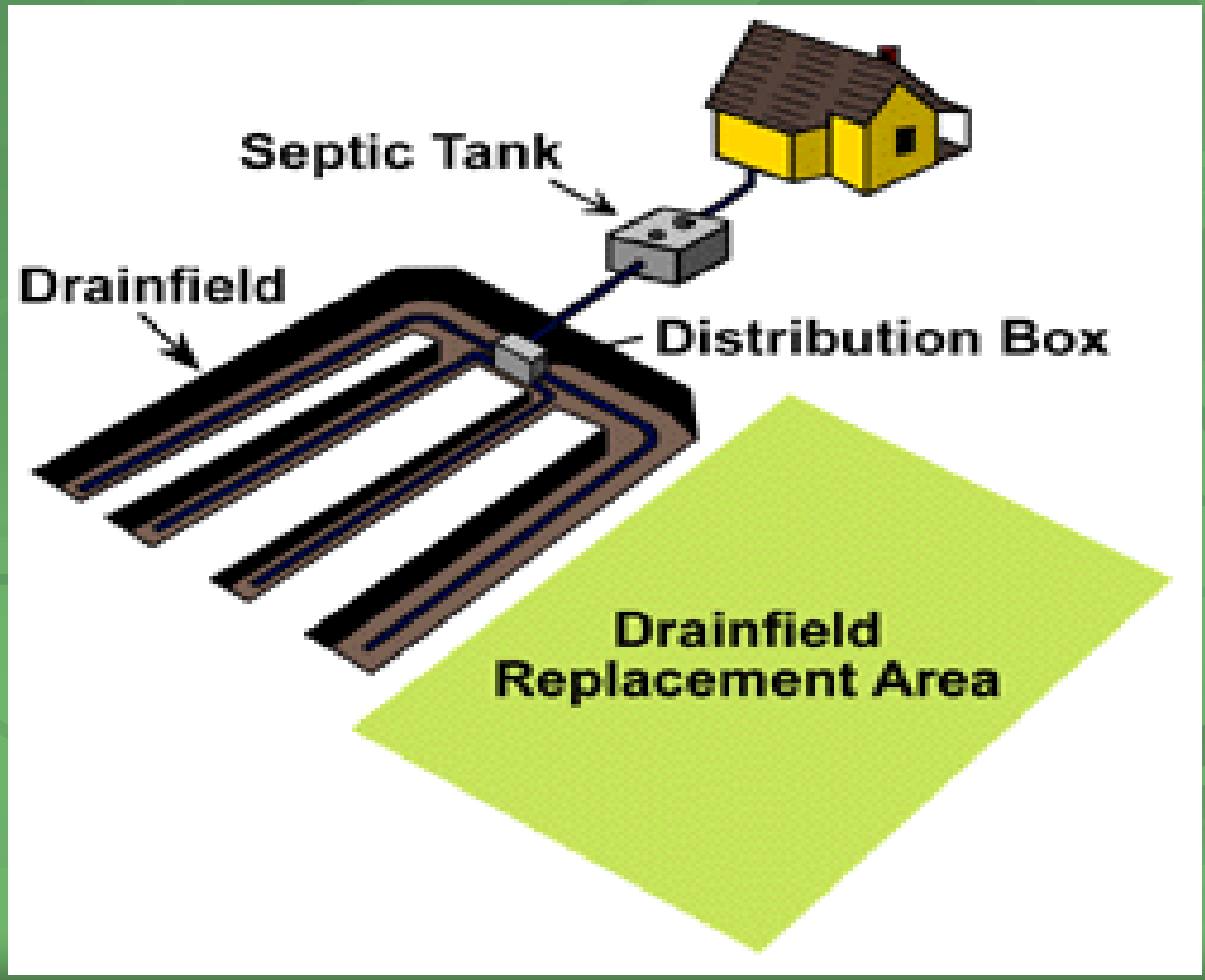
- 20-25% of the US population
- 48% of North Carolinians

Municipal Sewer

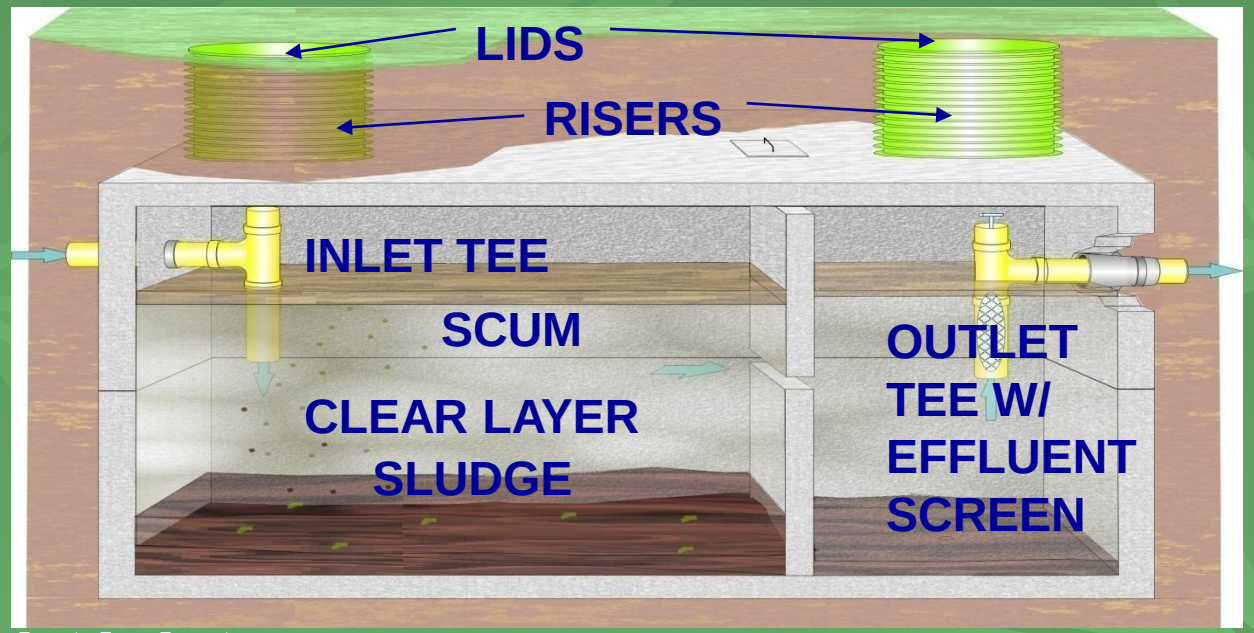



NCDEQ Non Discharge Wastewater Permits
Carrboro
Chapel Hill
Durham
Liberty
Staley
Morrisville
Cary
Ramseur
Siler City
Pittsboro
Apex
Holly Springs
Goldston
Fuquay-Varina
Sanford
208 Sites
Legend
NCDEQ Non Discharge Wastewater Permits
CountyRoads
Waterlines
County Boundaries
Municipal Boundaries
Waterbodies
Map Produced August 2018

- What is a septic system?



Typical Septic Tank



Solids Separate
- Heavy solids sink (sludge)
- Lighter solids float (scum layer-grease & oil)

Some pollutant reduction

Weak point of system, cracks in seam or manhole covers may allow water to infiltrate into system

Septic tanks need to be pumped to prevent solids from getting to the drainfield!!!

Septic Tank and Effluent Filter Maintenance

Table 1. Estimated Septic Tank Inspection and Pumping Frequency (in Years)					
Tank Size (gallons)	Number of People Using the System				
	1	2	4	6	8
900	11	5	2	1	<1
1,000	12	6	3	2	1
1,250	16	8	3	2	1
1,500	19	9	4	3	2

Effluent Filters

- Effluent filters
  - Clean with septic tank pumping
  - If drains in house are slow check filter first for clogging
  - Do not throw away the filter

this is another way
solids are stopped from
entering the drainfield and
help prevent premature failure

Cleaning Effluent Filter

Before

After

Drainfield

Type of drainfield depends upon:

- Soil depth
- Landscape position

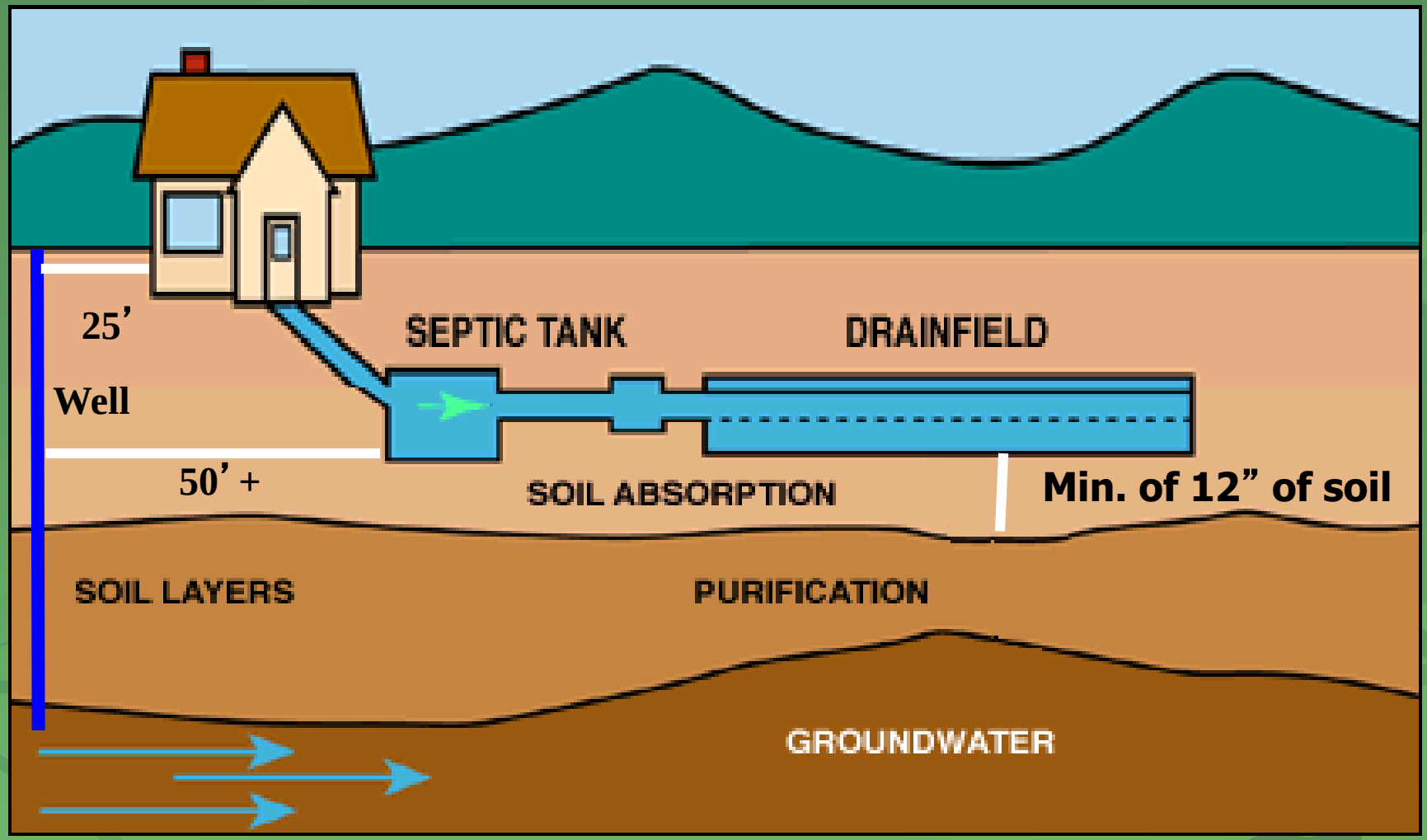
Size of drainfield depends upon:

- # of bedrooms
- Type of Soil

Why soil depth is important

- 12” of suitable or provisionally suitable soil required below the trench bottom to effectively filter the wastewater to reduce the amount of pathogenic bacteria and nitrogen before water reaches the water table

- The depth of suitable soil in combination with setbacks help protect surface water and groundwater (drinking water wells)


25’
Well
50’ +
SEPTIC TANK
DRAINFIELD
SOIL ABSORPTION
Min. of 12” of soil
SOIL LAYERS
PURIFICATION
GROUNDWATER

Types of Systems: Gravel System

25% reduction accepted systems

Polystyrene

Chamber

Low Pressure Pipe

PPBPS (panel block)

Fill System

Drip System

Pretreatment Options

Gravel Bed

Peat Filter

Fabric Filter

Sandfilter

Reasons for Pumps

- Location of field uphill from house plumbing
- As part of design to disperse the wastewater over the entire drainfield
  - Pressure Manifold
  - Low Pressure Pipe
  - Pretreatment/Drip

Questions??