

TUESDAY, MARCH 6, 2007

3:45 pm ~ 4:30 pm
BRAZOS ROOM (Left)



John Blount

Reducing OSSF System Failures

John R. Blount is a 1984 graduate of the University of Houston. He has worked in the Civil Engineering Field for twenty-one years and is a Registered Professional Engineer (WI) (TX). He has worked at the Harris County Engineer's Office for the last twenty years holding positions as an Inspector, Planchecker, Compliance Manager, Deputy Manager and Manager of Permits. He currently holds a position as Deputy Director, Planning & Operation of the Harris County Public Infrastructure Department. He serves on the National Sanitation Foundations' (NSF) Joint Wastewater Committee and was previously chairman of the Texas Onsite Wastewater Research Council.

**Reducing Onsite Sewage Facility
Failures using a Three Pronged
Approach**

John R. Blount, P.E.
Deputy Director,
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Harris County Public Infrastructure

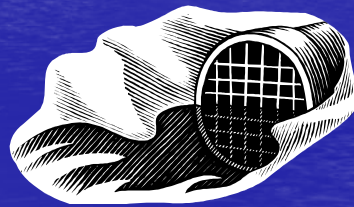


Why?

- Public Health



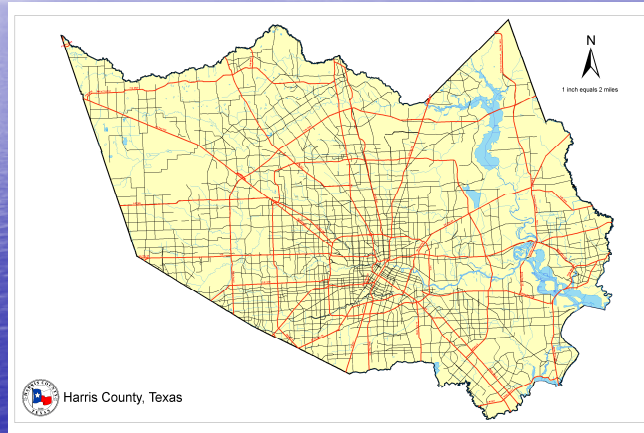
- Watershed Protection



Harris County Facts

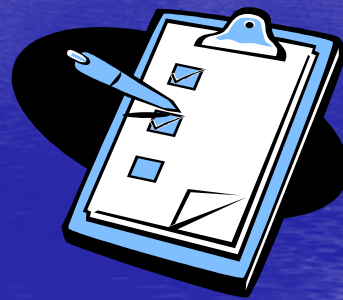
- Thirty-four incorporated cities inside the County such as Houston and Baytown
- A population of 3.7 million
- Third largest County in the Country
- Approximately 61,060 onsite sewage facilities operating in the unincorporated areas of the County
- Harris County is three times larger than Rhode Island based on population

County Map



The three elements of a successful program

1. Proper Design
2. Proper Installation
3. Proper Maintenance



Design

Treatment

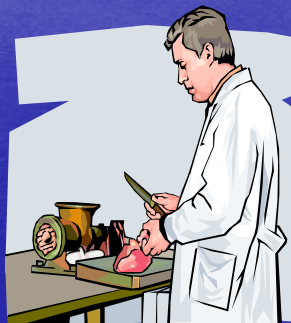
- Organic Loading
- Hydraulic Loading
- Peak Loading

Disposal

- Surface or Substance
- Soil Type
- Soil Drainage
- Soil Topography
- Location of Easements (wells etc.)
- Proper Disinfection

Organic Loading High Organic Load Sources

- Food preparation and dishwashing
- Slaughter houses/meat packing
- Use of ultra-low water conserving fixture
- Certain processes such as canning operations



Hydraulic Loading

- Determine water use from State tables and real data
- Understand State's data is "average" water use
- For residential aerobic systems suggest a 150 gallon per bedroom sizing criteria

Peek Loading

- Understand if peek loads occur
- Classic peek flow example is a church
- Insure treatment process accounts for peak loads in both septic and aerobic treatment

Surface or Subsurface Disposal

Surface Disposal

- Higher Public Health risk
- Lower loading rates means greater disposal area required
- Requires year around vegetation
- Requires Positive Surface Drainage

Surface or Subsurface Disposal (cont)

Subsurface Disposal

- Requires suitable soil layer
- Requires suitable subsurface drainage
- Requires positive surface drainage

Soil – Soil – Soil



- Soil make-up and profile
- Soil drainage
- Soil topography

Location of Easements and Setbacks

- Recent boundary and topographic survey
- On commercial projects, insure all the plan sets match



Disinfection

- Use NSF/ANSI Standard 46 listed disinfection devices



Maintenance

- Protects Pubic Health and Watershed
- Ensures longevity of equipment and drain field
- Effective monitoring program extremely important

