

Hepatitis A and Water Borne Disease in Precinct 2, Fort Bend County

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Public Health

Program Planning, Implementation and Evaluation

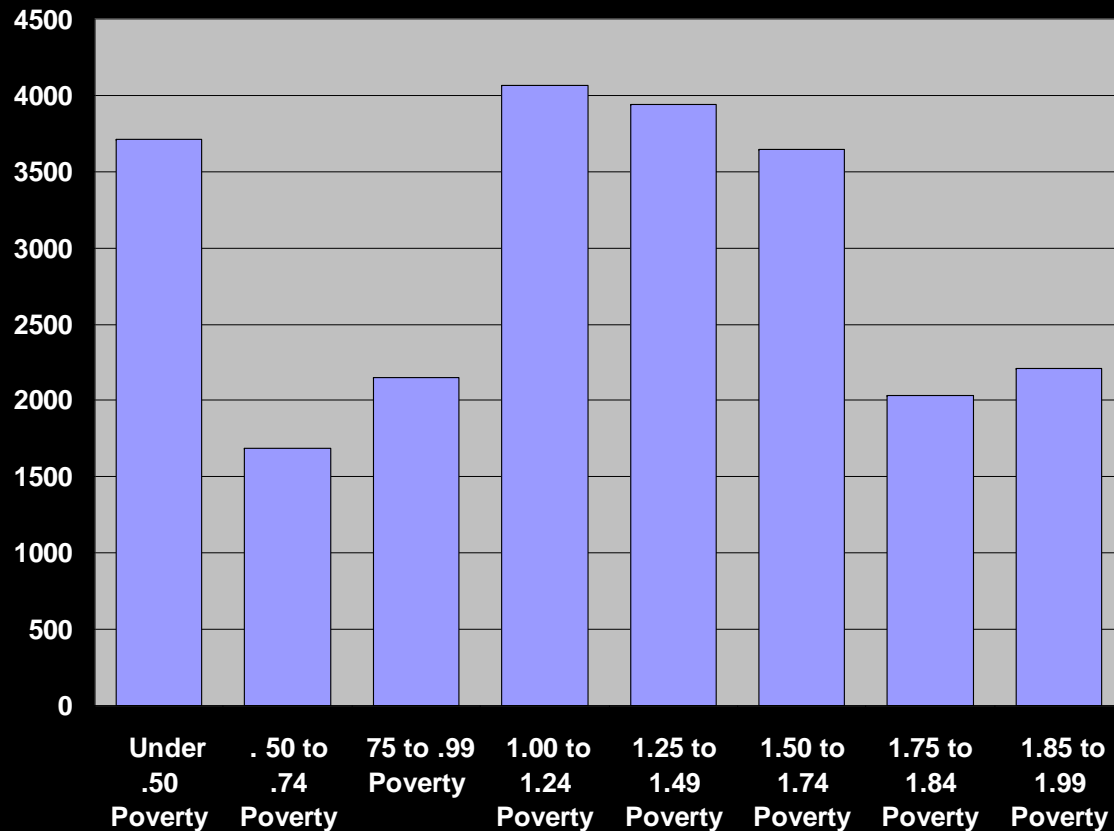


"This is Not an Approved Disposal System"

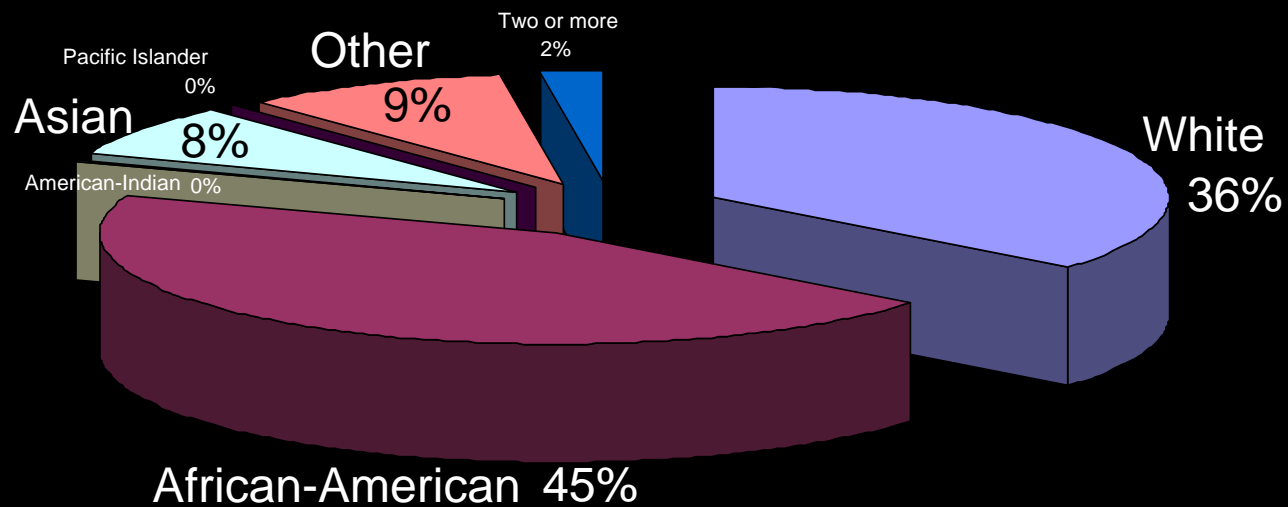
Citizens without Adequate Sanitary Service

- Twice as many in urban as rural areas
- Over a third served by on-site sewage facilities (OSSF) have an income below the Federal Poverty Level

In 2000, 23,436 Precinct 2 residents (nearly 25%) made less than two times the Federal poverty level

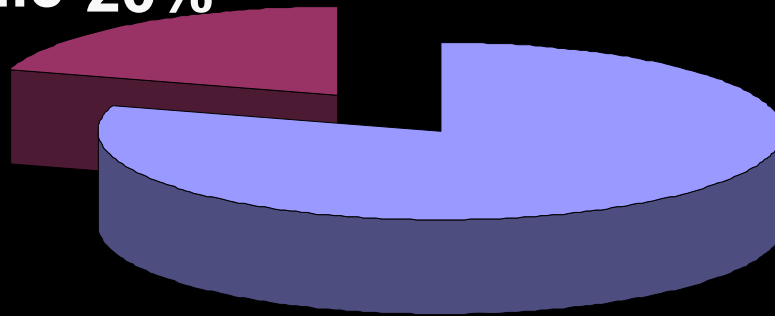


2000 Ethnic Distribution



Hispanic or Latino

Hispanic 20%



Non-Hispanic 80%

High Incidence Hepatitis A in Precinct 2

- Precinct 2 level data unavailable.
- 1992-1999, an average of 34.7 cases per year in Fort Bend County (2000 pop. 354,452).
- 45% under 14 years. Of these 74% Hispanic.

Hepatitis A

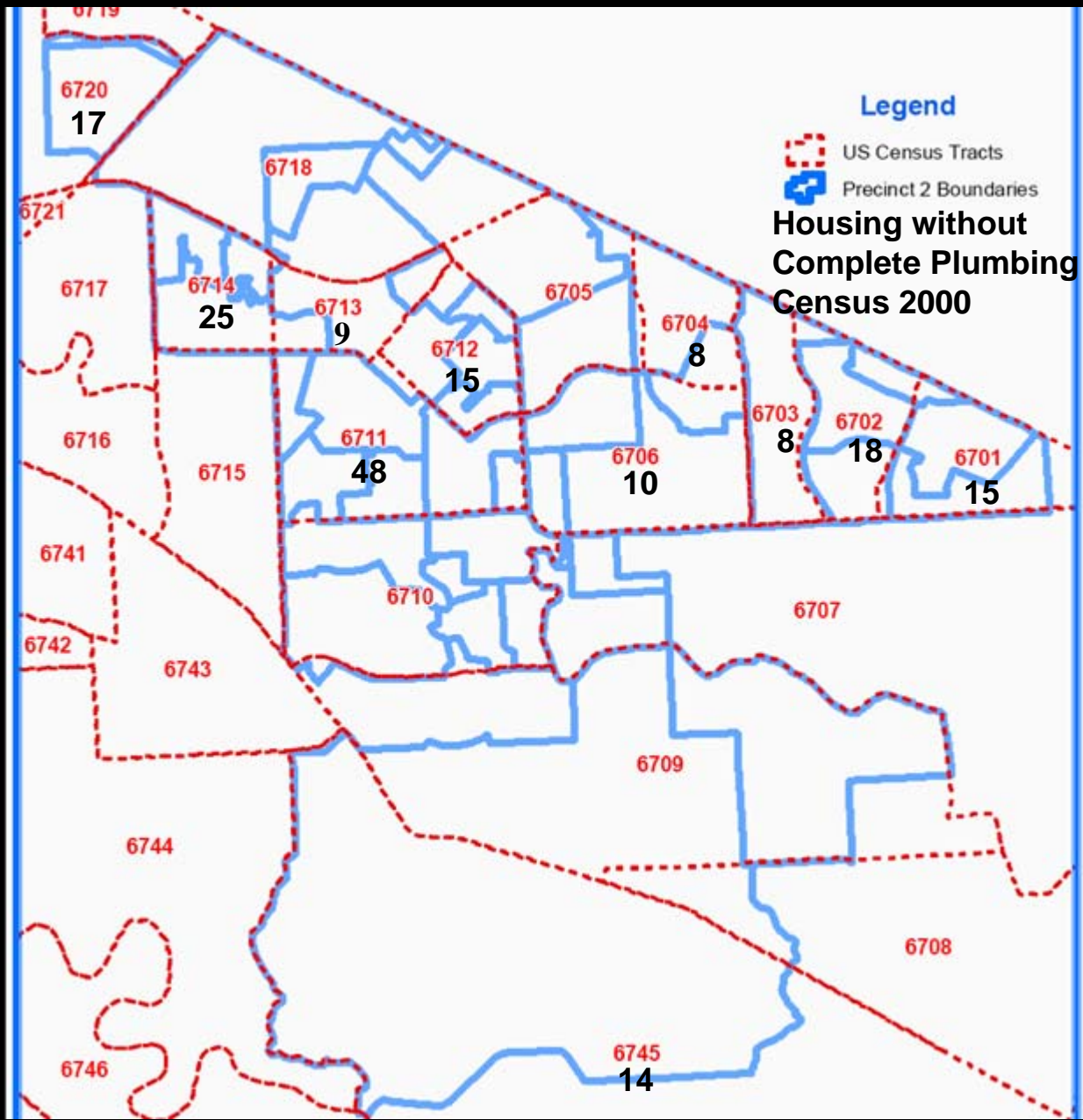
- An acute liver disease caused by Hepatitis A virus .
- Contagious before symptoms appear.
- Fatal for 1-3/1,000. May cause encephalopathy.

Illnesses from Exposure to Untreated Sewage

Infectious Agents Potentially Present in Untreated Domestic Wastewater

Organism	Disease Caused
Bacteria	
<i>Escherichia coli</i>	Gastroenteritis
<i>Leptospira</i>	Leptospirosis
<i>Salmonella typhi</i>	Typhoid Fever
<i>Salmonella</i> (= 2,100 serotypes)	Bacillary dysentery
<i>Vibrio cholerae</i>	Cholera
Protozoa	
<i>Cryptosporidium parvum</i>	Cryptosporidiosis
<i>Entamoeba histolytica</i>	Amoebic dysentery
<i>Giardia lamblia</i>	Giardiasis
Viruses	
<i>Various Enteroviruses</i>	Gastroenteritis, Meningitis
<i>Hepatitis A virus</i>	Infectious hepatitis

Source: EPA Wastewater Technology Fact Sheet: Ultraviolet Disinfection⁶



In Fort Bend County

- 14,629 OSSF
- Between 10 and 20% inadequate
- More than half 30 years old
- As many as 40% are failing

Official Response

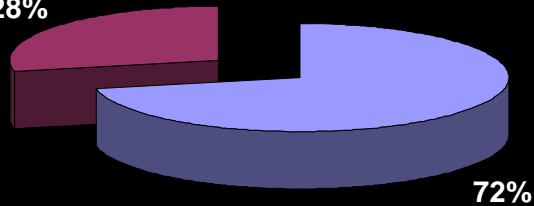
- Water Supply District No. 1
- Grant and Bond Funding
- Extension of Stafford lines to Fifth Street
- Use of Environmental Fines for OSSF

Insurance Status 2003-2005 Estimate*

All Residents

Uninsured

28%



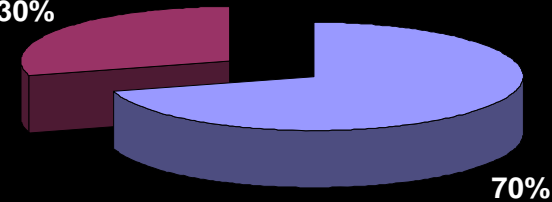
Insured

72%

Residents Under 65

Uninsured

30%



Insured

70%

*March Current Population Survey (CPS).

Cost to Remedy

- \$7,000-\$8,000 per OSSF
- Municipal plant \$42,000,000
- Prefab plant \$500,000

Health Hazards of Urbanization

- Increased Population Density.
- Poor Sewage Disposal.
- Shallow Water Wells.

Limitations

- Precinct 2 boundaries
- Incomplete reporting
- Discrepancies between Counts
- No Census specific health data