



Source Identification Results



Non-Point Source Pollution

- **Non-point source pollution (NPS) does not have a single, easily identifiable source**
- **NPS pollutants are commonly occurring and can come from multiple sources**
- **Most common NPS pollutant**
 - Bacteria
 - Nitrogen compounds
 - Phosphorus compounds
 - Sediment



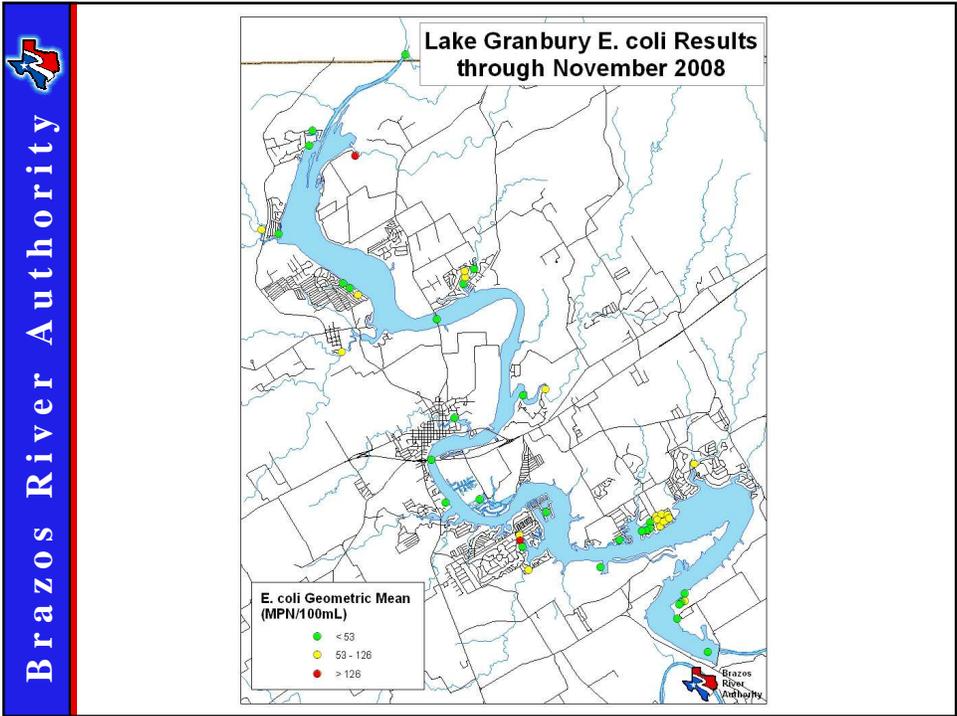
Bacteria

- **Most difficult NPS pollutant to trace source**
- **Living organism with an environmental life-cycle that is not well understood**
 - Decay rates
 - Re-growth
 - Role of sediment
- **Differing concentrations of bacteria in animals fecal matter**



Lake Granbury WPP Bacteria Source Identification

- **Multiple assessment strategies used**
 - Water Quality Monitoring
 - Land Use Analysis
 - Watershed Bacteria Model
 - Representative Cove Bacteria Model
 - Waterfowl Count
 - Bacteria Source Tracking
- **No single strategy gives a definitive answer with 100% confidence**
- **When dealing with bacteria it is not uncommon for different assessment strategies to have different results**



Source Identification Results to Date

Land Use	0-1 Mile	1-2 Mile	Total
Multi-Family Residential	<1%	<1%	<1%
Single-Family Residential	42%	22%	33%
Commercial/Services	4%	2%	3%
Industrial	<1%	<1%	<1%
Utilities/Transportation	2%	2%	2%
Recreational	3%	<1%	2%
Cropland/Pasture	22%	25%	23%
Orchards	<1%	2%	<1%
Other Agriculture	<1%	<1%	<1%
Rangeland	24%	44%	33%
Quarries	<1%	<1%	<1%
Water	1%	<1%	1%



Summary of Waterfowl Count Project

- Average Ratio = 0.64 waterfowl/lake surface acre
- TPWD Concern Ratio = 100 waterfowl/lake surface acre
- Highest waterfowl populations occur in fall and winter



Stakeholder's

- Listen to all the results
- ASK QUESTIONS
- Think and consider sources
- Meet in early January to prioritize focus areas for BMP research/identification
 - Urban
 - Livestock
 - Wildlife