

City of Meridian
Public Works Department

Protection of the City's Public Water
Supply and the Aquifer Resource



Meridian Public Works

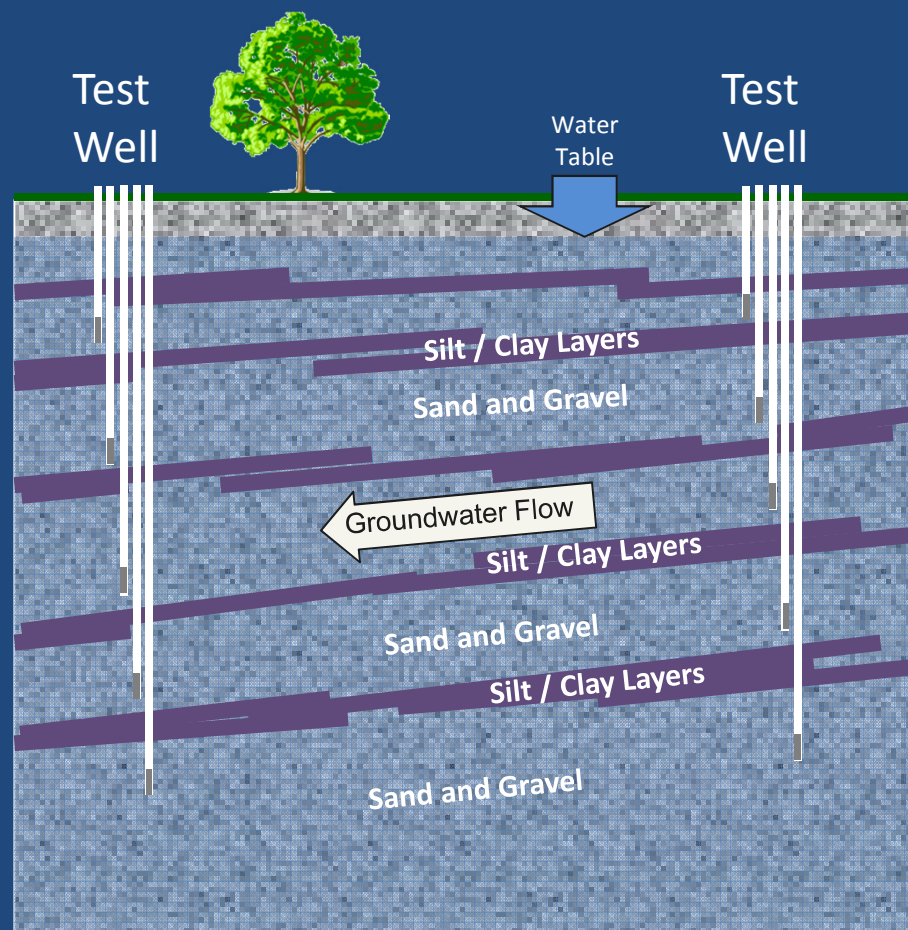
- Primary Responsibilities
 - Water Supply and Wastewater Treatment
 - The mission of Public Works is to anticipate, plan and provide exemplary public services and facilities that support the needs of our growing community in an efficient, customer-focused and financially responsible manner.
- Water Supply
 - Ensure an adequate supply of clean, safe, drinking water is available for all current and future residents.

Water Supply

- City Water Supply
 - Over 90,000 residents and growing fast
 - Groundwater diverted from 23 wells
 - 3.5 billion gallons pumped in 2015
 - Future demand may approach 15 billion gallons per year
 - Is the resource sustainable?
 - Quantity
 - Quality

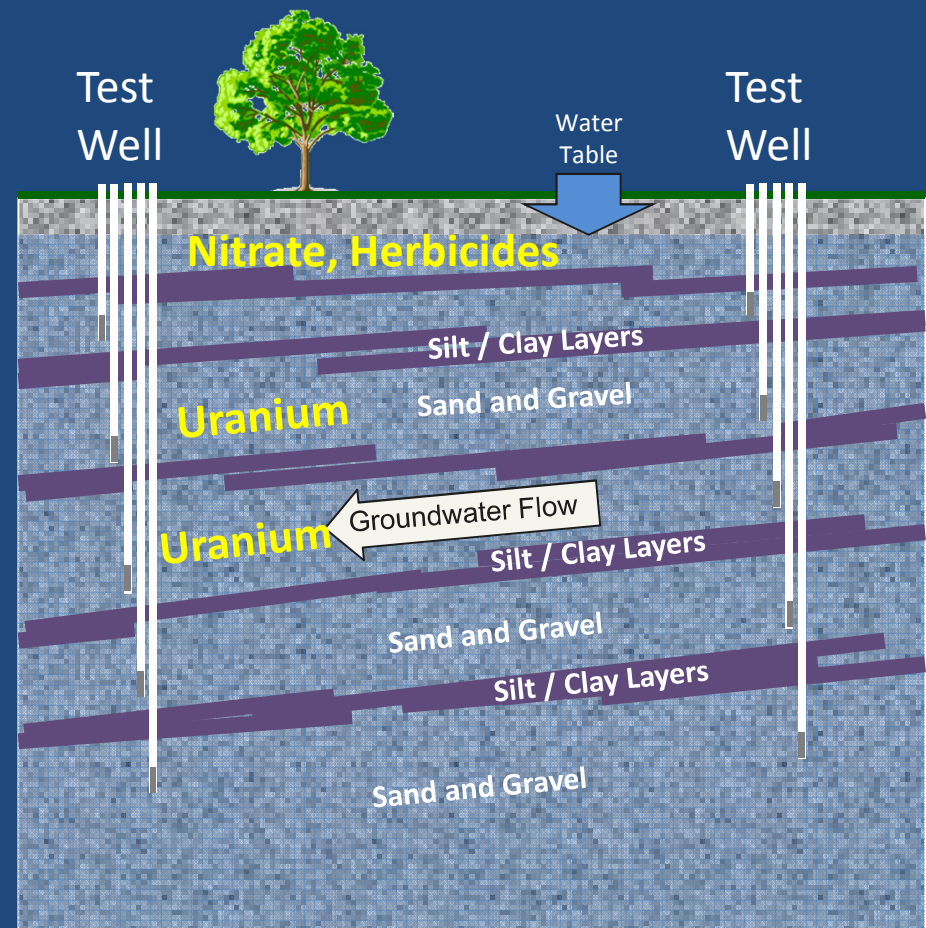
Water Quantity

- Where do we get data?
 - Test wells
 - Up to 20 years of ground water level monitoring
- What does the data show?
 - Aquifer system includes many different layers
 - Aquifer system is full and robustly recharged
 - Water supply is sustainable
- City actions
 - Continue to monitor water levels



Water Quality

- Regulated by Safe Drinking Water Act
- Where do we get data?
 - Knowledge of land use and history
 - Water quality sampling from supply wells and monitoring wells from multiple depths
- What does the data show?
 - Human-introduced contaminants exist in some layers
 - Natural contaminants exist in some layers
 - Water chemistry and temperature varies with depth



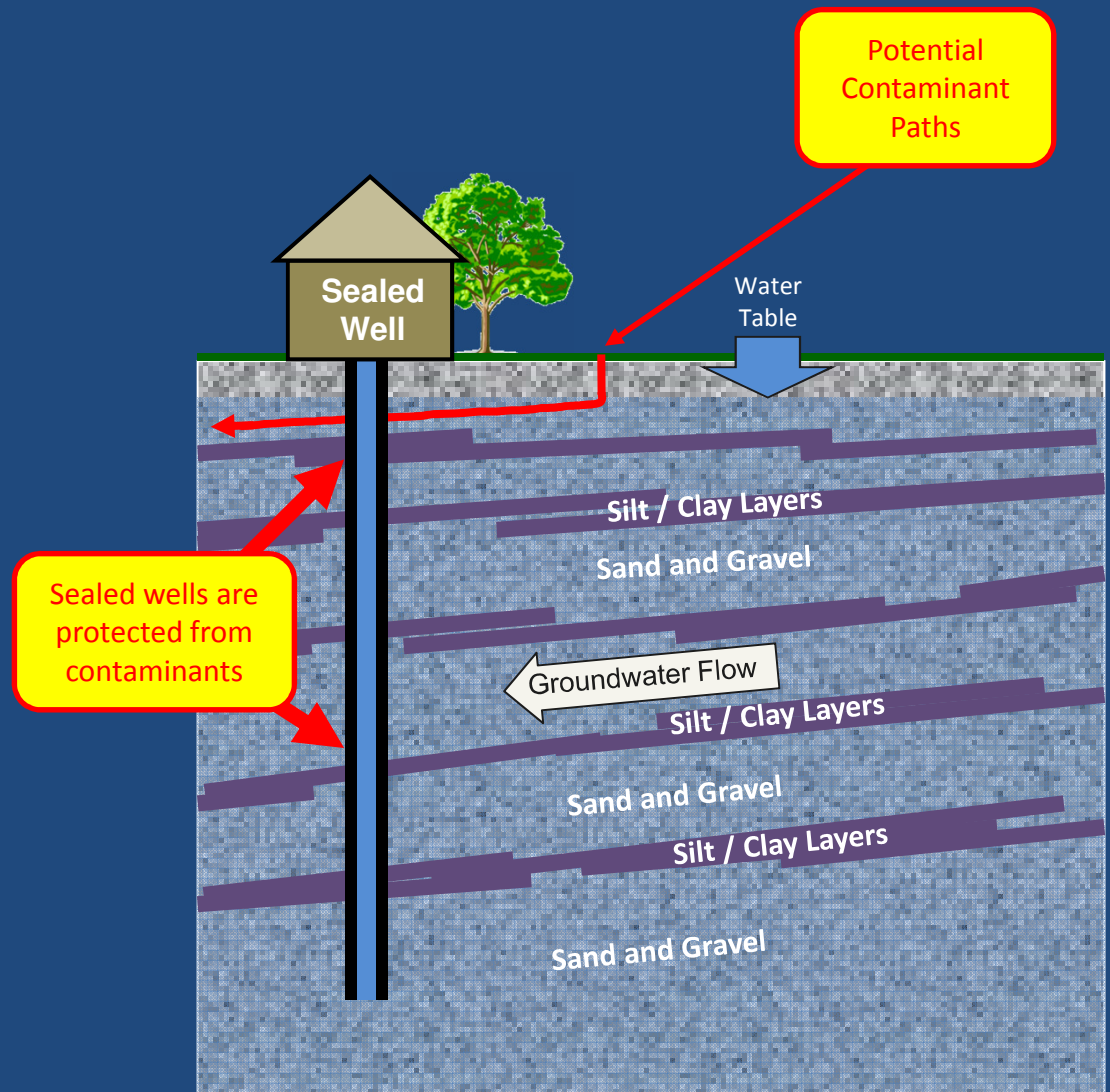
Water Quality Concerns and Strategies

1. Existing contaminants

- Build test wells
- Seal wells
- Pumping rates
- Water Treatment

2. Introduction of future contaminants

- Ordinances
- Monitoring

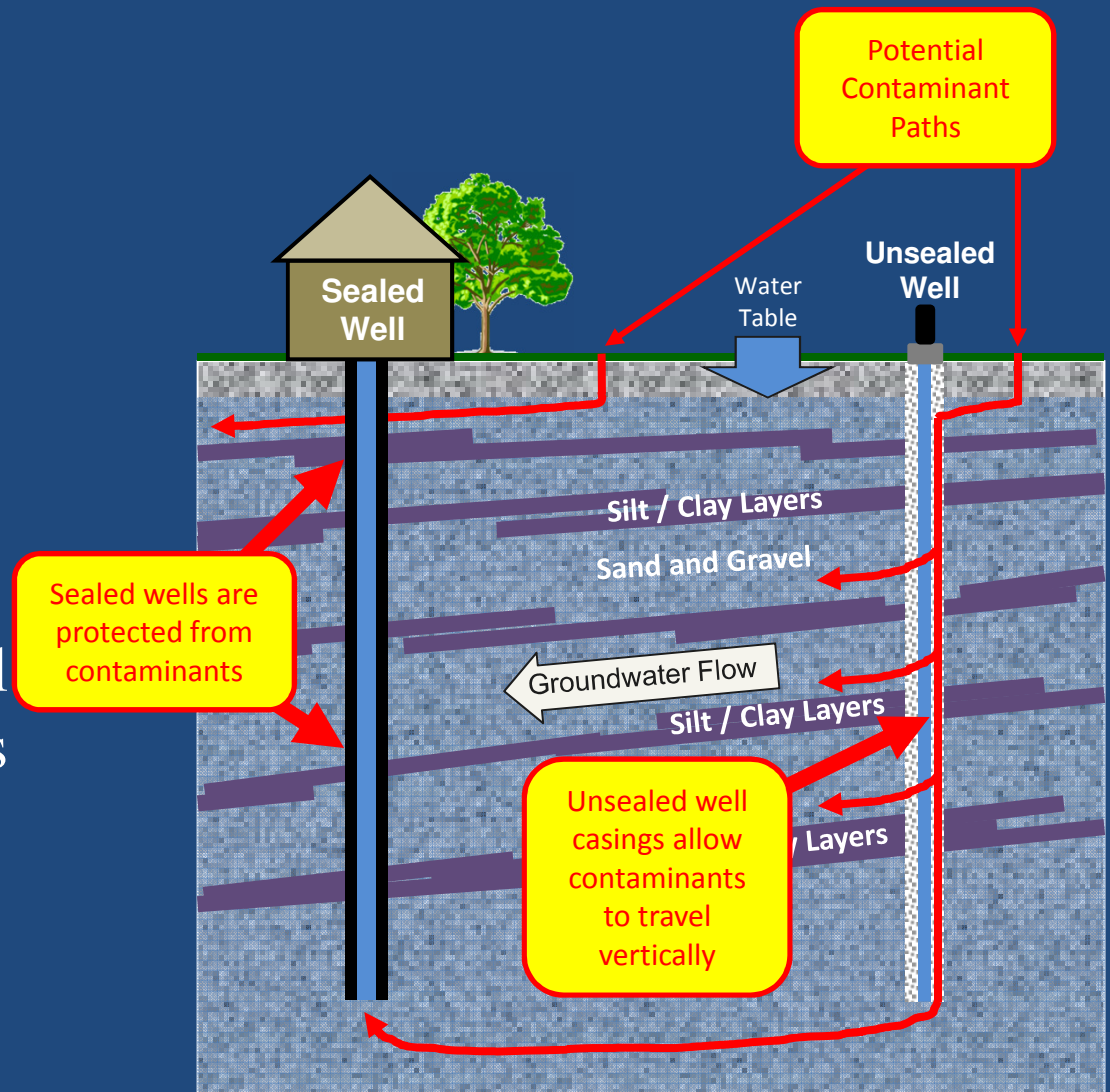


Water Quality Concerns and Strategies

3. Disruption of natural barriers to contaminant movement

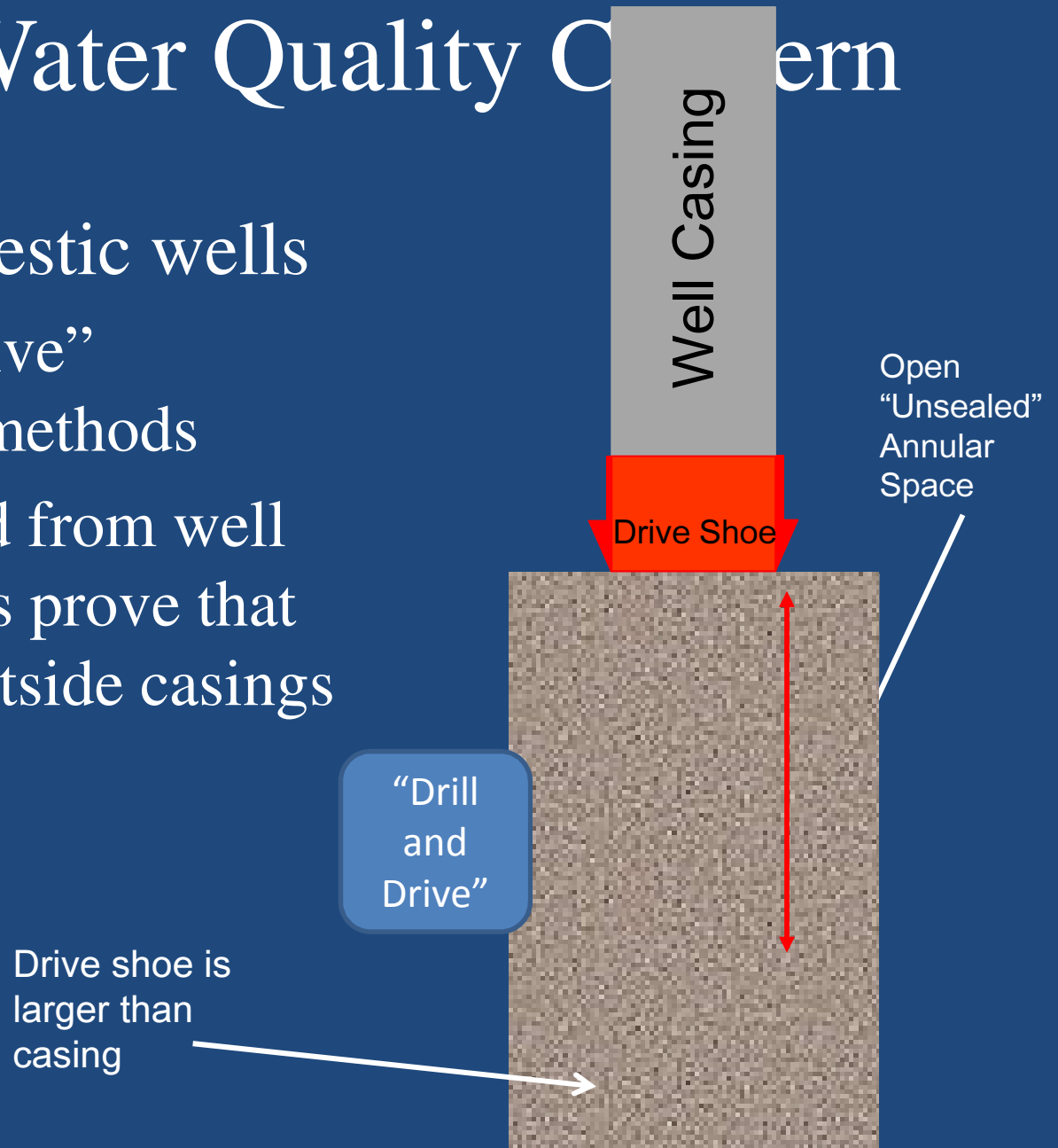
– Actions:

- Maintain natural protective layers when building new wells



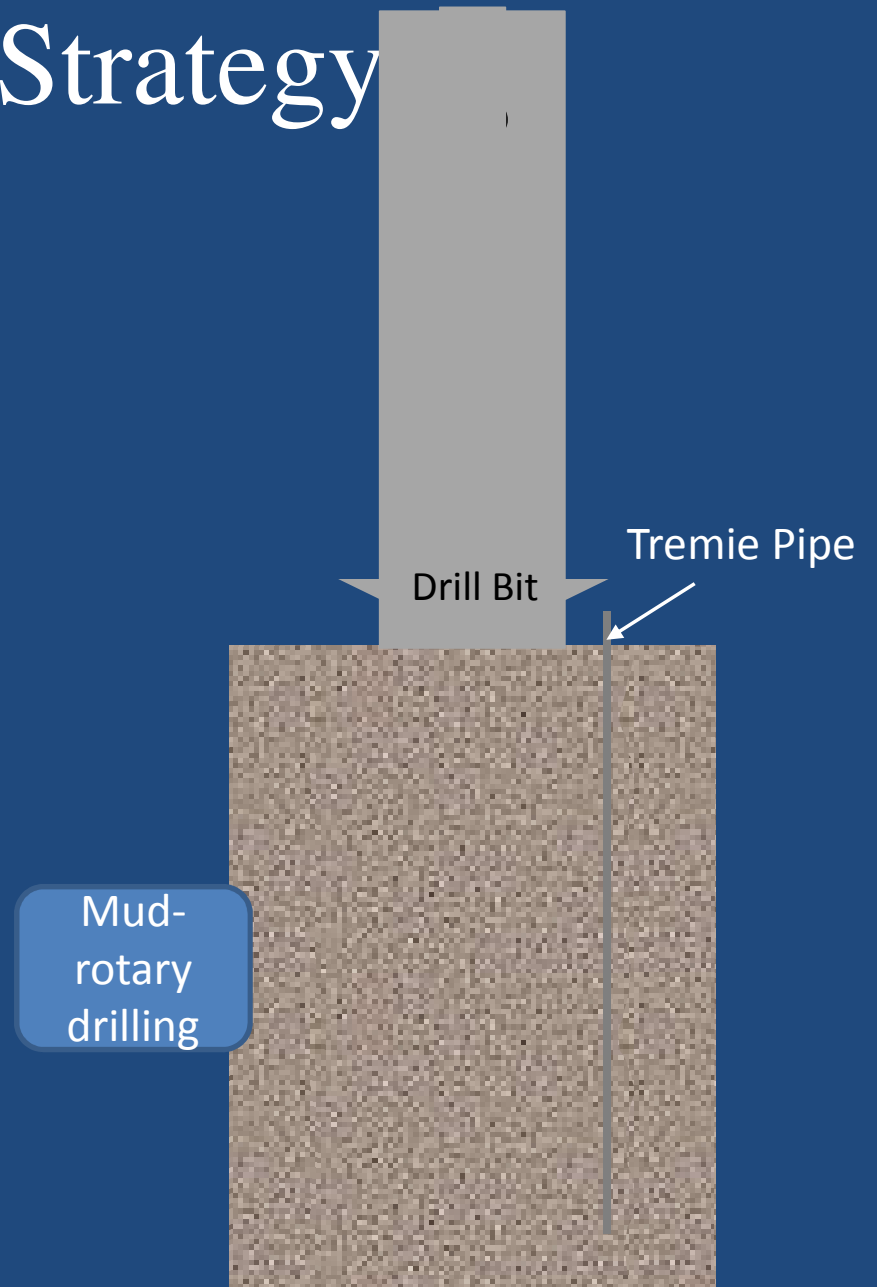
Primary Water Quality Concern

- Unsealed domestic wells
 - “Drill and Drive” construction methods
 - Data collected from well abandonments prove that voids exist outside casings



Protection Strategy

- Alternate drilling method
 - Mud-rotary drilling
 - Full-depth casing seals



Request for Area of Drilling Concern

- Submitted to IDWR
- Documents:
 - Aquifer characteristics
 - Presence of contaminants of concern
 - Unsealed nature of “drill and drive” wells
- Proposes and suggest rules to:
 - Protect the groundwater resource from contamination and waste
 - Protect public health

Conclusion

- The water resource belongs to everyone and everyone is responsible for protecting it