

GROUNDWATER SAMPLING

Capabilities

- Physical sampling of groundwater for possible contaminants.
- Measures groundwater elevation and flow direction in combination with other analyses to find possible sources of contamination.
- Water is extracted from a well into certified sampling jar.
- Sample is transported to certified laboratory for analysis.
- Lab will provide chemical contamination levels for location of sample was taken.
- Quality assurance and quality control is conducted to ensure the validity of groundwater sampling results.

Applications

- Groundwater sampling is used to determine presence or absence of particular contaminants.
- Determines if water is safe to drink.

Limitations

- Water Sampling is only one of multiple tools in locating sources of contamination.

Types of Wells

- Monitoring Well
 - Small diameter wells used to monitor groundwater conditions.
 - Used to sample groundwater for chemical properties.
 - Depth varies according to monitoring needs (typically < 20 meters).
 - Monitoring wells can be completed at multiple levels, allowing discrete samples or measurements to be made at different depths.
- Supply Wells
 - Known as “production” or “pumping” wells.
 - Larger in diameter (> 15 cm in diameter) than monitoring wells.
 - Typically deeper than monitoring wells (~100 to 300 meters).
 - Cased (metal, plastic, or concrete) wells may extend into bedrock.
 - Constructed for pumping water out of the aquifer.
 - Rigorous testing conducted to ensure water is safe to drink.