**Significant Sand and Gravel Aquifers**

**WHAT IS AQUIFER?**

Aquifer is a permeable soil layer that contains water. It is a natural underground reservoir that can be recharged by rainfall or ground water. An aquifer can be charged by surface water, such as streams and lakes, or by groundwater. Groundwater moves slowly through the soil and rock layers and is replenished over time. Aquifers are crucial for providing fresh water for human and animal consumption, agriculture, and industrial use.

**HOW ARE AQUIFERS MAPPED?**

Aquifers are mapped using geological, hydrological, and geophysical methods. Geologists use drilling and sampling to determine the type and thickness of the aquifer, while hydrologists measure the flow rate and recharge rate of the aquifer. Geophysical methods, such as seismic surveys, are used to determine the thickness and permeability of the aquifer. These methods help to identify the location, size, and depth of the aquifer, which is crucial for managing water resources.

**GROUND WATER FLOW AND CONTAMINATION**

Groundwater flows from higher to lower elevation and is replenished by recharge areas such as springs, seeps, and streams. Groundwater contamination can occur from human activities, such as industrial practices, agriculture, and urbanization. Contamination can also occur from natural sources, such as geologic formations and natural processes. Preventive measures, such as proper waste disposal and land use planning, can help to reduce the risk of groundwater contamination.

**SOURCES OF INFORMATION**


**OTHER SOURCES OF INFORMATION**

- Maine Geological Survey, Open File Reports
- United States Geological Survey, Water Resources Investigations Reports
- State of Maine, Department of Environmental Protection, Water Resources Reports
- Federal Emergency Management Agency, Floodplain Management Information System
- United States Department of Agriculture, Natural Resources Conservation Service, Soil Survey
- United States Environmental Protection Agency, Ground Water Protection Program

**Geological and Well Information**

- **Depth to bedrock:** A measure of the depth below the surface to the bedrock layer.
- **Depth to water:** A measure of the depth below the surface to the water table.
- **Dewatering:** A process of removing water from a well or borehole to allow for the extraction of a sediment or water.
- **Drainage:** A process of removing water from a well or borehole to allow for the extraction of a sediment or water.
- **Drilling:** A process of removing water from a well or borehole to allow for the extraction of a sediment or water.
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