# Private Sewage Disposal Permit Application

Regional Municipality of Wood Buffalo

## SOIL PROFILE REPORTING

The characteristics of each soil profile investigated shall be described using the Canadian System of Soil Classification nomenclature and include the following in the soil profile description:

- ❑ **Soil Horizons** – the distance from the ground surface to the top and bottom of each soil horizon observed shall be measured and distinctness and topography of the horizon boundaries described.
- ❑ **Soil Color** for each soil lies and identified, the matrix color and quantity, size, contrast, and color of any redoximorphic features present shall be described.
- ❑ **Texture** for each horizon identified, the soil texture classification including any appropriate texture modifier shall be reflected in this evaluation report and a soil sample of the most restricting layer affecting the design shall be collected and analyzed at a laboratory using a recognized grain or particle size analysis method to determine the texture of the same. **NOTE: Other than Sandy Clay any texture that uses the word SAND in its description must include sand particle size.**
- ❑ **Soil Structure** and grade of structure identified for each horizon.
- ❑ A statement regarding the treatment capability and dispersal capacity of the available site(s).
- ❑ Where the soil profile includes features that will require the lateral movement of water through the soil away from the dispersal system, identified constraints on the system design and allowable effluent hydraulic loading rates, as it relates to linear loading rates.
- ❑ A summary of the significant limiting conditions of soil profile and site.
- ❑ A justification of the locations and number of the soil profiles investigated.
- ❑ A description of the development being served including:
    - ❑ Characteristics affecting the determination of peak and average wastewater flows to be used in the design,
    - ❑ The peak daily wastewater flow volume to be used for the system design, and
    - ❑ Anticipated effluent wastewater strength.
- ❑ Copies of laboratory soils analysis reports have been attached.
- ❑ Number of soil profiles investigated; a minimum of two (2) test pit excavations shall be investigated at the proposed location for the soil-based treatment component to classify and assess the treatment capacity of the soil.
- ❑ Minimum depth of soil investigation (choose appropriate depth as per YOUR design).The soil profiles shall be investigated to a minimum depth below ground surface of:
    - ❑ 4 feet for Treatment Mounds.
    - ❑ 9 feet for Treatment Fields receiving primary treated effluent (septic tank effluent).
    - ❑ 6.5 feet for Treatment Fields receiving secondary treated effluent (treatment plant, sand filter effluent).
    - ❑ 6 feet for Open Discharge systems.

NOTE: When the site evaluation report is complete the information from the report is to be used to produce your System Design Report. This includes any features that would require peak flow to be increased.

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## Alberta Private Sewage Treatment System Soil Profile Log Form

Regional Municipality of Wood Buffalo

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Owner Name or Job ID | | | | | | | | | | | |
| Legal Land Location | | | | | | Test Pit GPS Coordinates: | | | | | |
| LSD – ¼ | Sec | Twp | Rg. | Mer. | Lot | Block | Plan | Easting | | Northing | |
| | | | | | | | | | | | |
| Vegetation Notes: | | | | | | Overall Site Slope % | | | | | |
| | | | | | | Slope position of test pit | | | | | |
| Test Hole No. | | Soil Subgroup | | Parent Material | | Drainage | | Depth of Lab (sample #1) | | Depth of Lab (sample #2) | |
| | | | | | | | | | | | |
| Horizon | Depth (cm) (in) | Texture | Lab or HT | Color | Gleying | Mottling | Structure | Grade | Consistence | Moisture | %Coarse Fragment |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Depth to Groundwater: | | | | | | Restricting Soil Layer Characteristic, describe: | | | | | |
| Depth to Seasonally Saturated Soil: | | | | | | Depth to restrictive Soil Layer: | | | | | |
| Site Topography: | | | | | | Depth to Highly Permeable Layer Limiting Design: | | | | | |
| Key Soil Characteristics applied to system design effluent loading: | | | | | | | | | | | |
| Weather Condition Notes: | | | | | | | | | | | |
| Comments (such as root depth and abundance or other pertinent observations): | | | | | | | | | | | |