

NASIS
SOIL SURVEY
INTERPRETATIONS

Documentation

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Requirements for Interpretations Documentation

To describe the interpretive model and the basis for underlying criteria.

To communicate the interpretive concept.

To track edits and change to the interpretive model.

As a reference for local and region interpretations.

Format for Interpretations Documentation

NASIS rule, evaluation and property descriptions and report capabilities. 50%

Legacy NSH format. 50%

Tabular

Tabular and narrative with graphic

Other format options are web based with graphics and narrative.

NASIS Report Format.

Rule: ENG - Daily Cover for Landfill

Description: Soils are either partial or complete members of the set of soils that are limited for use as "Daily Cover for Landfill" if one or more soil properties within 150 cm (60 inches) of the soil surface are limiting.

NASIS Report Format -- Scope.

Scope: This interpretation is a tool for guiding the user in site selection for the safe disposal of solid waste. The ratings are for soils in their present condition and do not consider present land use or mechanical alterations. Improper site selection, design, or installation may cause contamination of ground water and surface waters and may create health and environmental hazards. Potential hazards and limitations may be reduced or eliminated by installing systems designed to overcome or reduce the effects

NASIS Report Format -- Property.

Property Used: SOIL REACTION 1-1 WATER
THICKEST LAYER IN DEPTH 25-150cm

Data used: ph1to1h2o, hzdept, and hzdepb from
component horizon table.

Considerations:

1. Calculated horizon thickness;
2. Horizon depth;
3. 1 to 1 water pH.

Logic: Finds the value of soil reaction (pH) for the
thickest horizon in the depth range 10" to 72" (25-180cm).

NASIS Report Format -- Evaluation

Evaluation Used:

Soil reaction 25-150cm thickest layer.

This evaluation checks the pH of the thickest layer between 25 and 150 cm (10 to 60 inches).

The soil is a member of the set of soils that are too acid if the pH of the thickest layer between 25 and 150 cm is less than or equal to 3.5. The soil is not a partial member of the set of soils that are too acid if the thickest layer pH is greater than 3.5 and less than 5.5.

NASIS Report Format -- Child Rule

Impact of Child Rule:

Acid < 3.5 Thickest Layer 10 to 60 inches

Soil with high acidity in the thickest layer have an acidity limitation. When this layer is used as daily cover for landfill re-vegetation and vegetative growth are inhibited. Measures that reduce acidity will be required to achieve optimum growth.

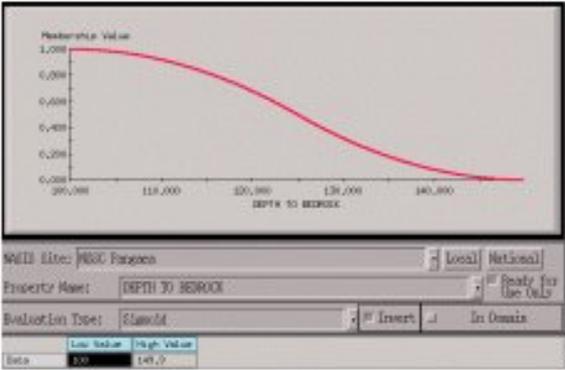
National Soil Survey Handbook no Graphic

If all conditions are non-limiting then the rating is unlimited. ¶

Condition Specifications			
Restrictive Condition	General	Specific	
		Limiting	Non-Limiting
permafrost	permanently frozen	texture in lieu of is \leq pfb or texture modifier is pfb	all other
poor filter	rapid saturated hydraulic conductivity (0 to 150 cm)	$K_{sat} > .42 \text{ ptm} \cdot \text{sec}^{-1}$	$K_{sat} < .14 \text{ tm} \cdot \text{sec}^{-1}$
slow percolation	slow saturated hydraulic conductivity (0 to 150 cm)	$K_{sat} < .1 \text{ Lm} \cdot \text{sec}^{-1}$	$K_{sat} > .4 \text{ m} \cdot \text{sec}^{-1}$
wetness	shallow high water table	$< .60 \text{ cm}$	$> .120 \text{ cm}$
ponding	ponding in any month	$> .4 \text{ hours}$	$< .4 \text{ hours}$
slope	steep slopes	$> .15\%$	$< 8\%$

National Soil Survey Handbook w/Graphic

Interpretive Child Rules: Depth to Bedrock

Description	Property Summary	Evaluation	Restrictive Feature
<p>Depth to bedrock restricts the construction, installation, and functioning of the installed application.</p>	<p>Evaluation uses: Depth to bedrock</p> <ol style="list-style-type: none"> Depth to the top of the first restrictive layer and; Restrictive feature type is "bedrock(lithic)" or "bedrock(paralithic)" <p>Logic: Finds the top depth of the first restrictive layer where restrictive type is "bedrock(lithic)" or "bedrock(paralithic)". Depth to restrictive feature must be synchronized with the depth to the restrictive feature horizon shown in the horizon table.</p> <p>Returns values for low, high, and ry each has a single value.</p>	 <p>This evaluation checks for the presence of bedrock and if present evaluates bedrock depth.</p> <p>A soil can be a complete or partial member of the set of soils that are limited by the depth to bedrock and DEPTH TO BEDROCK is the set's restrictive feature. If the depth to bedrock is less than 100cm (40 inches), then the soil is a complete member of the set. If the depth to bedrock is greater than 100cm (40 inches) and less than 150cm (60 inches) then the soil is a partial member of the set. A soil that has bedrock at a depth of more than 150cm (60 inches) is not a member of the set.</p>	<p>Depth to bedrock</p>

WEB/HTML Based



Interpretation Documentation Decision

- 1 NASIS narrative report
- 2 NSSH style tabular report
- 3 NSSH style tabular report with narrative and graphics
- 4 Web/HTML style report.