

# Soil Study and Land Evaluation Scorecard Part I

SITE			SURFACE SOIL	
Position in Landscape (5 points)	Slope (5 points)	Type and Degree of Erosion or Deposition (5 points)	Texture (5 points)	Structure (5 points)
<b>Upland</b> Hilltop or Plain <input type="checkbox"/>  Sloping Hillside <input type="checkbox"/>  Depression and/or drainage way <input type="checkbox"/>  <b>Stream Bottom Or Bench</b> Nearly level <input type="checkbox"/>  Sloping <input type="checkbox"/>  Depressional <input type="checkbox"/>	<b>Nearly Level</b> <input type="checkbox"/> 0 – 2 %  <b>Gently Sloping</b> <input type="checkbox"/> 2 – 6 %  <b>Moderately Sloping</b> <input type="checkbox"/> 6 – 12 %  <b>Strongly Sloping</b> <input type="checkbox"/> 12 – 20 %  <b>Steep</b> <input type="checkbox"/> 20 – 30 %  <b>Very Steep</b> <input type="checkbox"/> 30% or greater	<b>None to Slight</b> Water <input type="checkbox"/> Over 75% of the    Wind <input type="checkbox"/> original surface soil remains  <b>Moderate</b> Water <input type="checkbox"/> 25 to 75% of the    Wind <input type="checkbox"/> surface soil remains (some mixing of subsoil with surface layer)  <b>Severe</b> Water <input type="checkbox"/> Less than 25% of    Wind <input type="checkbox"/> surface soil remains (Plow layer mostly subsoil material)  <b>Deposition</b> <input type="checkbox"/> By wind or water	<b>Coarse</b> <input type="checkbox"/> Sands and Loamy sands  <b>Moderately Coarse</b> <input type="checkbox"/> Sandy Loam  <b>Medium</b> <input type="checkbox"/> Loam, Silt, Silt loam  <b>Moderately Fine</b> <input type="checkbox"/> Clay loam, Sandy clay loam, Silty clay loam  <b>Fine</b> <input type="checkbox"/> Sandy clay, Silty clay, Clay  <b>Organic</b> <input type="checkbox"/> Peat and Muck	<b>Loose</b> <input type="checkbox"/> Single grained  <b>Granular</b> <input type="checkbox"/> Fragments small, Mostly rounded  <b>Blocky</b> <input type="checkbox"/> Fragments irregular, Some sharp corners  <b>Platy</b> <input type="checkbox"/> Fragments flat and thin  <b>Cloddy</b> <input type="checkbox"/> Fragments large and irregular
<b>SUBSOIL (thickest or most prominent layer below surface soil) –</b> <i>Answer regardless of soil depth</i>		<b>SOIL PROFILE</b>		<b>SOIL TEST REPORT</b>
<b>Texture (5 points)</b>	<b>Structure (5 points)</b>	<b>Natural Drainage (5 points)</b>	<b>Depth of soil Favorable for Roots (5 points)</b>	<b>Soil Fertility and Nutrient Management (5 points)</b>
<b>Coarse</b> <input type="checkbox"/> Sands and Loamy sands  <b>Moderately Coarse</b> <input type="checkbox"/> Sandy Loam  <b>Medium</b> <input type="checkbox"/> Loam, Silt, Silt loam  <b>Moderately Fine</b> <input type="checkbox"/> Clay loam, Sandy clay loam, Silty clay loam  <b>Fine</b> <input type="checkbox"/> Sandy clay, Silty clay, Clay  <b>Organic</b> <input type="checkbox"/> Peat and Muck	<b>Loose</b> <input type="checkbox"/> Single grained  <b>Granular</b> <input type="checkbox"/> Fragments small, Mostly rounded  <b>Blocky</b> <input type="checkbox"/> Fragments irregular, Some sharp corners  <b>Platy</b> <input type="checkbox"/> Fragments flat and thin  <b>Prismatic, Columnar or Massive</b> <input type="checkbox"/> Large fragments	<b>Very Poorly</b> <input type="checkbox"/> Organic  <b>Poorly</b> <input type="checkbox"/> Mottling above 12”  <b>Somewhat Poorly</b> <input type="checkbox"/> Mottles between 12” and 36”  <b>Moderately Well or Well</b> <input type="checkbox"/> No mottles above 36”	<b>Over 40 inches</b> <input type="checkbox"/>  <b>20 to 40 inches</b> <input type="checkbox"/>  <b>12 to 20 inches</b> <input type="checkbox"/>  <b>Less than 12 inches</b> <input type="checkbox"/>  Root growth of crops <u>MAY</u> be limited by: Sand gravel layers Bedrock Soil pans Marl	<b>pH adjustment</b> <input type="checkbox"/>  <b>Nitrogen</b> <input type="checkbox"/>  <b>Phosphorus</b> <input type="checkbox"/>  <b>Potassium</b> <input type="checkbox"/>  <b>No fertilizer/soil amendments needed</b> <input type="checkbox"/> <b>NOTE: CHECK ALL NEEDED AMENDMENTS</b> (may be more than one box checked)

# Soil Study and Land Evaluation Scorecard Part II-V

## PART II. Soil Limitations

**Potential Score 14 Pts (2 Pts per Correct Answer)**

Mark **all** characteristics. **Yes** if limiting, **No** if not limiting.

**Yes No**

- 1. Soil subject to sheet, rill, or wind erosion
- 2. Subject to occasional overflow or flooding
- 3. Surface drainage restricted
- 4. Subsoil drainage restricted from high water table
- 5. Low available water capacity
- 6. Stoniness
- 7. No major limitations

## PART III. Land Capability Classes

**Potential Score 7 Pts. 3 Pts if Answer 1 Class Off**

Mark **one** Land Capability Class that is most appropriate.

\_\_\_\_\_ **CLASS I:** May be safely used for intensive production, such as continuous row crops, pasture, woodland, and wildlife habitat.

\_\_\_\_\_ **CLASS II:** Requires general conservation systems and can be used for crop production, pasture, woodland, and wildlife habitat.

\_\_\_\_\_ **CLASS III** Requires specific practices and conservation systems and can be used for crop production, pasture, woodland, and wildlife habitat.

\_\_\_\_\_ **CLASS IV** Requires intensive conservation systems and practices and can be used for crop production, pasture, woodland, and wildlife habitat.

**CLASS V** *NOT APPLICABLE IN WISCONSIN*

\_\_\_\_\_ **CLASS VI** Generally ill-suited for cropland. Recommend permanent pasture, woodland or wildlife habitat. Use conservation practices for all land uses.

\_\_\_\_\_ **CLASS VII** Use very carefully for pasture. Improve for woodland or wildlife. Needs careful conservation.

\_\_\_\_\_ **CLASS VIII** Reserve for wildlife habitat. Not suitable for agricultural or commercial plant production.

## PART IV. Conservation Practices for Long Term Land Use

**Potential Score 26 Pts (2 Pts Per Correct Answer)**

Mark **all** practices, **Yes** if it is needed, **No** if not needed, for most-intensive land use, unless otherwise indicated on Pit Information Card.

**Yes No**

- 1. Develop and implement a nutrient management plan
- 2. Use residue management and/or plant cover crop
- 3. Contour farming, contour buffer strips, contour strip cropping, or terraces
- 4. Maintain existing terraces
- 5. Construct or maintain grassed waterways, diversions, or erosion control structures
- 6. Renovate or otherwise improve pasture
- 7. Eliminate or manage grazing
- 8. Improve timber stand or plant adapted trees in woodland
- 9. Establish or maintain windbreaks
- 10. Protect stream banks or lakeshore
- 11. Improve fish and wildlife habitat
- 12. Establish/maintain riparian forest buffer or grass filter strip
- 13. Control invasive species that are present

## PART V. Non-Ag Land Use Limitations

**Potential Score 3 Pts (1 Pt per Correct Answer)**

Mark **Yes** if limitations are present for the following, **No** if not.

**Yes No**

- 1. Houses with Basements
- 2. Septic Tank Absorption Fields
- 3. Local Roads, Streets and Driveways

Possible Points	Official Score
Part I - 50	_____ of 50
Part II - 14	_____ of 14
Part III - 7	_____ of 7
Part IV - 26	_____ of 26
Part V - 3	_____ of 3
<b>TOTAL - 100</b>	_____ of 100

<b>Team Name</b> _____	<b>Contestant Name</b> _____	<b>Pit No.</b> _____
<b>Team No.</b> _____	<b>Contestant No.</b> _____	<b>Div: Sr/Jr/4H</b>