

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) |
| Upland Hilltop or Plain <input type="checkbox"/> Sloping Hillside <input type="checkbox"/> Depression and/or drainage way <input type="checkbox"/> Stream Bottom Or Bench Nearly level <input type="checkbox"/> Sloping <input type="checkbox"/> Depressional <input type="checkbox"/> | Nearly Level <input type="checkbox"/> 0 – 2 % Gently Sloping <input type="checkbox"/> 2 – 6 % Moderately Sloping <input type="checkbox"/> 6 – 12 % Strongly Sloping <input type="checkbox"/> 12 – 20 % Steep <input type="checkbox"/> 20 – 30 % Very Steep <input type="checkbox"/> 30% or greater | None to Slight Water <input type="checkbox"/> Over 75% of the Wind <input type="checkbox"/> original surface soil remains Moderate Water <input type="checkbox"/> 25 to 75% of the Wind <input type="checkbox"/> surface soil remains (some mixing of subsoil with surface layer) Severe Water <input type="checkbox"/> Less than 25% of Wind <input type="checkbox"/> surface soil remains (Plow layer mostly subsoil material) Deposition <input type="checkbox"/> By wind or water | | Coarse <input type="checkbox"/> Sands and Loamy sands Moderately Coarse <input type="checkbox"/> Sandy Loam Medium <input type="checkbox"/> Loam, Silt, Silt loam Moderately Fine <input type="checkbox"/> Clay loam, Sandy clay loam, Silty clay loam Fine <input type="checkbox"/> Sandy clay, Silty clay, Clay Organic <input type="checkbox"/> Peat and Muck | Loose <input type="checkbox"/> Single grained Granular <input type="checkbox"/> Fragments small, Mostly rounded Blocky <input type="checkbox"/> Fragments irregular, Some sharp corners Platy <input type="checkbox"/> Fragments flat and thin Cloddy <input type="checkbox"/> Fragments large and irregular |
| SUBSOIL (thickest or most prominent layer below surface soil) – <i>Answer regardless of soil depth</i> | | SOIL PROFILE | | | SOIL TEST REPORT |
| Texture (5 points) | Structure (5 points) | Natural Drainage (5 points) | Depth of soil Favorable for Roots (5 points) | Soil Fertility and Nutrient Management (5 points) | |
| Coarse <input type="checkbox"/> Sands and Loamy sands Moderately Coarse <input type="checkbox"/> Sandy Loam Medium <input type="checkbox"/> Loam, Silt, Silt loam Moderately Fine <input type="checkbox"/> Clay loam, Sandy clay loam, Silty clay loam Fine <input type="checkbox"/> Sandy clay, Silty clay, Clay Organic <input type="checkbox"/> Peat and Muck | Loose <input type="checkbox"/> Single grained Granular <input type="checkbox"/> Fragments small, Mostly rounded Blocky <input type="checkbox"/> Fragments irregular, Some sharp corners Platy <input type="checkbox"/> Fragments flat and thin Prismatic, Columnar or Massive <input type="checkbox"/> Large fragments | Very Poorly <input type="checkbox"/> Organic Poorly <input type="checkbox"/> Mottling above 12” Somewhat Poorly <input type="checkbox"/> Mottles between 12” and 36” Moderately Well or Well <input type="checkbox"/> No mottles above 36” | Over 40 inches <input type="checkbox"/> 20 to 40 inches <input type="checkbox"/> 12 to 20 inches <input type="checkbox"/> Less than 12 inches <input type="checkbox"/> <hr/> Root growth of crops <u>MAY</u> be limited by: Sand gravel layers Bedrock Soil pans Marl | pH adjustment <input type="checkbox"/> Nitrogen <input type="checkbox"/> Phosphorus <input type="checkbox"/> Potassium <input type="checkbox"/> No fertilizer/soil amendments needed <input type="checkbox"/> <hr/> NOTE: CHECK ALL NEEDED AMENDMENTS (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 |
| TOTAL - 100 | _____ of 100 |

Team Name _____

Team No. _____

Contestant Name _____

Contestant No. _____

Pit No. _____

Div: Sr/Jr/4H