

INFILTRATION TESTING REQUIREMENTS

SOIL SURVEY CONSIDERATIONS for ENVIRONMENTAL SITE DESIGN

by

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4/21/2010

TABLE D.1.1 INFILTRATION TESTING SUMMARY TABLE

| Type of Facility | Initial Feasibility Testing | Concept Design Testing (initial testing yields a rate greater than 0.52"/hr) | Concept Design Testing (initial testing yields a rate lower than 0.52"/hr) |
|---------------------------|---|--|--|
| I-1 (trench) | 1 field perc. test, test pit not required | 1 infiltration test and 1 test pit per 50' of trench | Not acceptable practice |
| I-2 (basin) | 1 field perc. test, test pit not required | 1 infiltration test and 1 test pit per 200 sq. ft. of basin area | Not acceptable practice |
| F-1 (surface sand filter) | 1 field perc. test, test pit not required | 1 infiltration test and 1 test pit per 200 sq. ft. of filter area (no underdrains required)* | Underdrains required |
| F-6 (bioretention) | 1 field perc. test, test pit not required | 1 infiltration test and 1 test pit per 200 sq. ft. of filter area (no underdrains required)* | Underdrains required |
| Micro-scale practices | Web Soil Survey, HSG determination | 1 test pit/soil, on HSG=A or B use mean Ksat, on HSG=C run 1 perc. test/soil | |

*underdrain installation is still strongly recommended

WEB SOIL SURVEY EVALUATION CHECKLIST

SOURCE

- **Map Unit Symbol:** - Most Reports
- **Map Unit Name:** - Water Features
- **Hydrologic Soil Group:** - Water Features
- **Depth to Seasonal High Water Table:** (upper limit range, month) - Water Features
- **Depth to Restrictive Layer, Kind:** - Soil Features
- **Horizons and Depths:** - Physical Soil Properties (Particle size & co. frag.)
- **Permeability (Ksat)**
(in/hr = um/sec. x 0.1417) - Physical Soil Properties

Potential “inclusion soils”

- check stream and/or drainageway overlay
- check 2' contour maps for concave/convex, irregularities

Soil Features

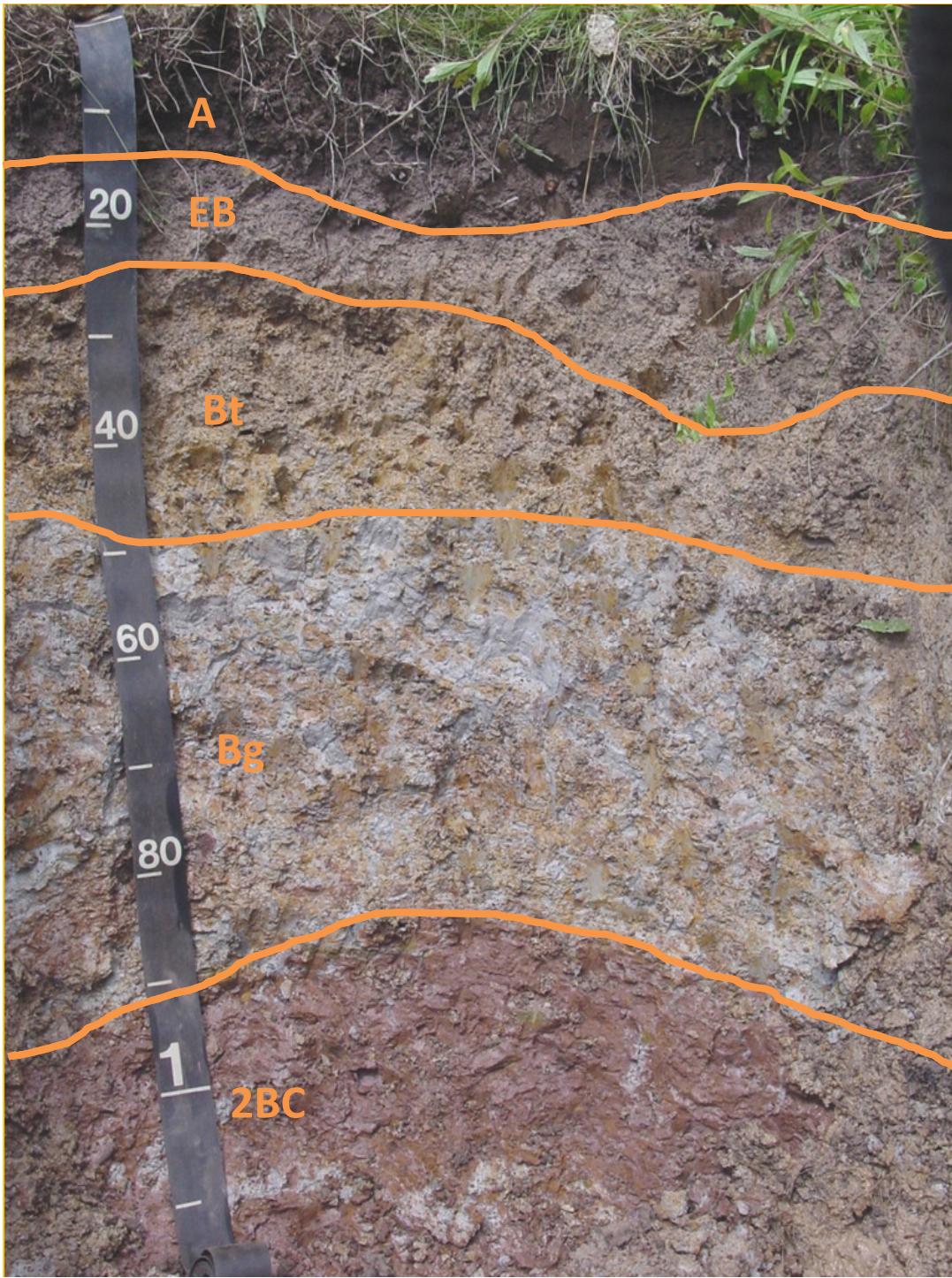
Allegany County, Maryland

| Map symbol and soil name | Restrictive layer | | | | Subsidence | | Potential for frost action | Risk of corrosion | |
|--------------------------|-------------------|--------------|-----------|-------------------|------------|-----------|----------------------------|-------------------|----------|
| | Kind | Depth to top | Thickness | Hardness | Initial | Total | | Uncoated steel | Concrete |
| CcB: | | | <i>in</i> | <i>in</i> | | <i>in</i> | <i>in</i> | | |
| Caneyville | Lithic bedrock | 20-40 | — | Indurated | 0 | 0 | Moderate | Moderate | Low |
| CfB: | | | | | | | | | |
| Cavode | Lithic bedrock | 53-61 | — | Strongly cemented | 0 | 0 | High | High | Moderate |
| CmA: | | | | | | | | | |
| Clymer | Lithic bedrock | 35-59 | — | Indurated | — | — | Moderate | Low | High |
| HuB: | | | | | | | | | |
| Hustontown | Fragipan | 18-32 | — | Noncemented | 0 | 0 | Moderate | Moderate | Moderate |
| KeC: | | | | | | | | | |
| Kilnsville | Lithic bedrock | 10-20 | — | Strongly cemented | 0 | 0 | Moderate | Low | Moderate |
| MnB: | | | | | | | | | |
| Monongahela | Fragipan | 18-30 | 8-27 | Noncemented | 0 | 0 | Moderate | Moderate | Moderate |

Water Features

Allegany County, Maryland

| Map symbol and soil name | Hydrologic group | Surface runoff | Month | Water table | | Ponding | | | Flooding | |
|--------------------------|------------------|----------------|----------|-------------|-------------|---------------|----------|-----------|----------|-----------|
| | | | | Upper limit | Lower limit | Surface depth | Duration | Frequency | Duration | Frequency |
| | | | | Ft | Ft | Ft | | | | |
| CcB: | | | | | | | | | | |
| Caneyville | C | High | Jan-Dec | | | — | — | None | — | None |
| CfB: | | | | | | | | | | |
| Cavode | C | Very high | January | 0.8-1.6 | >6.0 | — | — | None | — | None |
| | | | February | 0.8-1.6 | >6.0 | — | — | None | — | None |
| | | | March | 0.8-1.6 | >6.0 | — | — | None | — | None |
| | | | April | 0.8-1.6 | >6.0 | — | — | None | — | None |
| | | | May | 1.6-2.0 | >6.0 | — | — | None | — | None |
| | | | June | 3.0-4.0 | >6.0 | — | — | None | — | None |
| | | | October | 2.5-4.0 | >6.0 | — | — | None | — | None |
| | | | November | 2.5-4.0 | >6.0 | — | — | None | — | None |
| | | | December | 0.8-1.6 | >6.0 | — | — | None | — | None |
| CmA: | | | | | | | | | | |
| Clymer | B | Medium | Jan-Dec | | | — | — | None | — | None |
| HuB: | | | | | | | | | | |
| Hustontown | C | Medium | January | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | February | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | March | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | April | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | May | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | June | 2.3-4.0 | >6.0 | — | — | None | — | None |
| | | | October | 2.3-4.0 | >6.0 | — | — | None | — | None |
| | | | November | 1.9-2.5 | >6.0 | — | — | None | — | None |
| | | | December | 1.9-2.5 | >6.0 | — | — | None | — | None |
| KeC: | | | | | | | | | | |
| Klinesville | C | Low | Jan-Dec | | | — | — | None | — | None |







“Helping People Understand Soils”

Web Soil Survey (WSS)

<http://websoilsurvey.nrcs.usda.gov>

Soil Data Mart (SSDM)

<http://soildatamart.nrcs.usda.gov>

Official Soil Series Descriptions (OSD's)

<http://soils.usda.gov/technical/classification/osd/index.html>

Mid-Atlantic Association of Professional Soil Scientists (MAPSS)

<http://www.sawgal.umd.edu/mapss/>

American Registry of Certified Professional in Agronomy in Crops and Soil (ARCPACS)

<http://soilsassociation.org/index.htm>

United States Department of Agriculture

