

## WATER FEATURES

### GENERAL

Estimates of several important water features are provided which are used in land use planning that involves engineering considerations. Water features which are covered include: hydrologic groups, month, water table (upper and lower limit), ponding (duration and frequency) and flooding (duration and frequency). See National Soil Handbook Part 618 for criteria used in rating specific uses.

### PROPERTIES

**Hydraulic groups** - are groups of soils with the same runoff potential. These groups are used to estimate runoff from precipitation. There are four hydrologic groups (A, B, C, and D) and three dual groups (A/D, B/D, and C/D). For more information, see hydrologic soil groups under the cropland interpretations section of this guide.

**Month** - probable dates of occurrence that floods are most likely to occur are expressed in months. About two-thirds to three-fourths of all flooding occur during the stated period.

**Water table** (upper and lower limit)- the zone of saturation during the wettest season. The depth to a seasonal high water table applies to undrained soils. Soils that have a seasonal high water table are classified according to depth to the water table, kind of water table, and the time of year when the water table is highest. Three kinds of seasonal high water table are

recognized with the soil: apparent, perched, and artesian.

**Ponding** - standing water in a closed depression. The water is removed only by deep percolation, transpiration, or evaporation or by a combination of these processes.

Ponding of soils is classified according to depth, frequency, duration, and the beginning and ending months in which standing water is observed. Ponding frequency classes are:

- *None* - no reasonable possibility of ponding;
- *Rare* - ponding unlikely but possible under unusual weather conditions;
- *Occasional* - ponding is expected infrequently under usual weather conditions;
- *Frequent* - ponding is likely to occur under usual weather conditions. Ponding duration classes are:
  - *Very Brief* - less than 2 days;
  - *Brief* - 2 to 7 days;
  - *Long* - 7 to 30 days;
  - *Very Long* - more than 30 days.

**Flooding** - the temporary covering of the soil surface by flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, or any combination of sources.

Flooding of soils is classified according to frequency, duration, and time of year the flooding occurs. Flooding frequency classes are:

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- *None* – no reasonable possibility of flooding;
- *Very Rare* – flooding is very unlikely but possible under extremely unusual weather conditions;
- *Rare* – flooding unlikely but possible under unusual weather conditions;
- *Occasional* – flooding is expected infrequently under usual weather conditions;
- *Frequent* – flooding is likely to occur often under usual weather conditions;
- *Very Frequent* – flooding is likely to occur very often under usual weather conditions. Flooding duration classes are:
  - *Extremely brief* – 0.1 to 4.0 hours;
  - *Very brief* – 4 to 48 hours;
  - *Brief* – 2 to 7 days;
  - *Long* – 7 to 30 days;
  - *Very long* – more than 30 days.

## REFERENCES

- (1) National Soil Survey Handbook, Part 618.  
<http://soils.usda.gov/technical/handbook/detailedtoc.html>
- (2) Soil Survey Manual - USDA Handbook No. 18, Oct. 1993.  
<http://soils.usda.gov/technical/manual/>
- (3) Soil Data Mart  
<http://soildatamart.nrcs.usda.gov/Survey.aspx?State=WV>
- (4) Web Soil Survey  
<http://websoilsurvey.nrcs.usda.gov/app/>