

## Engineering Interpretations

### **Water Management**

Interpretations of soils for water management are given as limitations for pond reservoir areas; embankments, dikes, and levees; excavated pond (aquifer-fed); and as restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

**POND RESERVOIR AREA** is the area that holds water behind a dam or embankment. Soils best suited to this use have a low seepage potential, which is determined by the permeability and depth to fractured or permeable bedrock, or other permeable material.

**EMBANKMENTS, DIKES, AND LEVEES** are raised structures of soil material constructed to impound water or protect land against overflow. They generally are less than 20 feet high and are constructed of "homogeneous" soil material (without a core zone) and compacted to medium density.

**EXCAVATED PONDS (AQUIFER-FED)** are bodies of water created by excavating a pit or dugout into a ground-water aquifer. Excluded are ponds which are fed by surface runoff or that have embankments that impound water 3 feet or more above the original surface.

**DRAINAGE** is the process of removing excess surface and subsurface water from agricultural land. Soil features are listed that affect grading, excavation, and stability of trench sides or ditch banks. Features are also listed which might affect productivity after drainage is installed. The availability of drainage outlets must also be considered.

**IRRIGATION** is the controlled application of water to supplement rainfall for supporting plant growth. Soil features are listed that affect design, layout, construction, management, or performance of an irrigation system.

**TERRACES AND DIVERSIONS** are embankments or a combination of an embankment and a channel constructed across a slope to control erosion by diverting or storing surface runoff instead of permitting it to flow uninterrupted down the slope. Soil features are listed that affect the construction of terraces and diversions and that may cause problems after construction.

**GRASSED WATERWAYS** are natural or constructed channels that generally are broad and shallow and are covered with erosion-resistant grasses. They are used to conduct surface water to outlets at a nonerosive velocity. Soil features are listed that affect the construction and maintenance of the waterway, and also that affect the growth of grass after construction.

*This subsection includes:*

- **(a) Water Management**

Water Management

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
15000: BASEHOR-----	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope soil blowing depth to rock	Limitation: slope soil blowing depth to rock	Limitation: slope depth to rock
15001: BASEHOR-----	Severe: slope depth to rock	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: large stones slope depth to rock	Limitation: large stones slope depth to rock
15002: MCGIRK-----	Slight	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
40000: BARDEN-----	Slight	Moderate: hard to pack wetness	Severe: no water	Limitation: percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
40001: BOLIVAR-----	Moderate: seepage slope depth to rock	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: slope depth to rock	Limitation: depth to rock	Limitation: depth to rock
40002: LIBERAL-----	Moderate: slope depth to rock	Moderate: hard to pack thin layer wetness	Severe: no water	Limitation: percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
46000: HUMANSVILLE----	Slight	Severe: hard to pack	Severe: no water	Limitation: flooding percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
66000: MONITEAU-----	Slight	Severe: wetness	Severe: slow refill	Limitation: flooding frost action	Limitation: erodes easily flooding wetness	Limitation: erodes easily wetness	Limitation: erodes easily wetness
66001: DAMERON-----	Moderate: seepage	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
70000: BONA-----	Moderate: seepage slope	Severe: hard to pack	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: large stones	Limitation: large stones droughty

Water Management--Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
70001: BONA-----	Severe: slope	Severe: hard to pack	Severe: no water	Limitation: deep to water	Limitation: slope droughty	Limitation: slope large stones	Limitation: slope large stones droughty
70002: ALSUP-----	Moderate: slope depth to rock	Moderate: hard to pack thin layer wetness	Severe: no water	Limitation: slope	Limitation: slope wetness	Limitation: erodes easily wetness	Limitation: erodes easily
70003, 70004: ALSUP-----	Severe: slope	Moderate: hard to pack thin layer wetness	Severe: no water	Limitation: slope	Limitation: slope wetness	Limitation: erodes easily slope wetness	Limitation: erodes easily slope
70005: BLUEYE-----	Severe: slope	Severe: hard to pack	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: erodes easily slope depth to rock	Limitation: erodes easily slope droughty
MOKO-----	Severe: slope depth to rock	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
70006: CRELDON-----	Moderate: seepage	Moderate: thin layer wetness	Severe: no water	Limitation: percs slowly	Limitation: percs slowly rooting depth wetness	Limitation: erodes easily rooting depth wetness	Limitation: erodes easily percs slowly rooting depth
70007: CLIQUOT-----	Severe: slope	Moderate: hard to pack large stones thin layer	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: large stones percs slowly slope	Limitation: large stones slope droughty
70008: GOSS-----	Moderate: slope seepage	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: slope large stones droughty	Limitation: large stones	Limitation: large stones droughty
70009, 70010: GOSS-----	Severe: slope	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty
70011: GOSS-----	Severe: slope	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope	Limitation: large stones slope droughty

Water Management--Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
70011: MOKO-----	Severe: slope depth to rock	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
70012: HOBERG-----	Moderate: seepage slope	Severe: hard to pack	Severe: no water	Limitation: large stones percs slowly slope	Limitation: slope wetness droughty	Limitation: erodes easily large stones wetness	Limitation: erodes easily large stones droughty
70013: MOKO-----	Severe: slope depth to rock	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
70014: MOKO-----	Severe: slope depth to rock	Severe: large stones	Severe: no water	Limitation: deep to water	Limitation: large stones slope droughty	Limitation: large stones slope depth to rock	Limitation: large stones slope droughty
ROCK OUTCROP.							
70015: PEMBROKE-----	Moderate: seepage slope	Moderate: piping	Severe: no water	Limitation: deep to water	Limitation: slope	Favorable	Favorable
70016: GOODSON-----	Moderate: depth to rock	Moderate: hard to pack large stones thin layer	Severe: no water	Favorable	Limitation: wetness	Limitation: wetness	Favorable
70017: GOODSON-----	Moderate: slope depth to rock	Moderate: hard to pack large stones thin layer	Severe: no water	Limitation: slope	Limitation: slope wetness	Limitation: wetness	Favorable
70018: GOODSON-----	Severe: slope	Moderate: hard to pack large stones thin layer	Severe: no water	Limitation: slope	Limitation: slope wetness	Limitation: slope wetness	Limitation: slope
70039: SACVILLE-----	Slight	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly wetness
73000: POMME-----	Moderate: seepage slope	Moderate: large stones thin layer	Severe: no water	Limitation: deep to water	Limitation: slope	Limitation: large stones	Limitation: large stones

Water Management--Continued

Map symbol and soil name	Limitations for--			Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
73001: GLENSTED-----	Slight	Severe: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly	Limitation: percs slowly wetness	Limitation: percs slowly wetness	Limitation: percs slowly wetness
73002, 73003: OCIE-----	Severe: slope	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: large stones percs slowly slope	Limitation: large stones slope droughty
GATEWOOD-----	Severe: slope	Severe: hard to pack	Severe: no water	Limitation: percs slowly slope depth to rock	Limitation: percs slowly slope wetness	Limitation: slope wetness depth to rock	Limitation: percs slowly slope depth to rock
73004, 73005: OCIE-----	Severe: slope	Severe: thin layer	Severe: no water	Limitation: deep to water	Limitation: percs slowly slope droughty	Limitation: large stones percs slowly slope	Limitation: large stones slope droughty
73006: PERIDGE-----	Moderate: seepage slope	Moderate: hard to pack piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily slope	Limitation: erodes easily	Limitation: erodes easily
73007: PLATO-----	Moderate: seepage	Moderate: hard to pack thin layer wetness	Severe: no water	Limitation: percs slowly too acid	Limitation: wetness droughty	Limitation: erodes easily wetness	Limitation: erodes easily wetness
73008, 73009: VIRATON-----	Moderate: seepage slope	Moderate: wetness	Severe: no water	Limitation: large stones percs slowly slope	Limitation: slope wetness droughty	Limitation: erodes easily rooting depth wetness	Limitation: erodes easily rooting depth droughty
73010: WILDERNESS-----	Moderate: seepage slope	Moderate: large stones wetness	Severe: no water	Limitation: percs slowly slope too acid	Limitation: slope wetness droughty	Limitation: large stones rooting depth wetness	Limitation: large stones rooting depth droughty
74625: HARTVILLE-----	Moderate: slope	Moderate: hard to pack wetness	Severe: no water	Limitation: frost action percs slowly slope	Limitation: percs slowly slope wetness	Limitation: erodes easily percs slowly wetness	Limitation: erodes easily percs slowly
75375: HORSECREEK-----	Moderate: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: flooding	Limitation: erodes easily	Limitation: erodes easily
75376: CEDARGAP-----	Moderate: seepage	Moderate: large stones	Severe: no water	Limitation: deep to water	Limitation: flooding droughty	Limitation: large stones	Limitation: large stones droughty

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	Pond reservoir areas	Embankments, dikes, and levees	Aquifer-fed excavated ponds	Drainage	Irrigation	Terraces and diversions	Grassed waterways
75377: RACKET-----	Severe: seepage	Severe: piping	Severe: cutbanks cave	Limitation: deep to water	Limitation: flooding	Favorable	Favorable
75378: STURKIE-----	Moderate: seepage	Severe: piping	Severe: no water	Limitation: deep to water	Limitation: erodes easily flooding	Limitation: erodes easily	Limitation: erodes easily
99000. PITS, QUARRIES							
99001. WATER							
99003. MISCELLANEOUS WATER							