

Mapped vs Measured Infiltration Rates

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NRCS Soil Survey - 1971

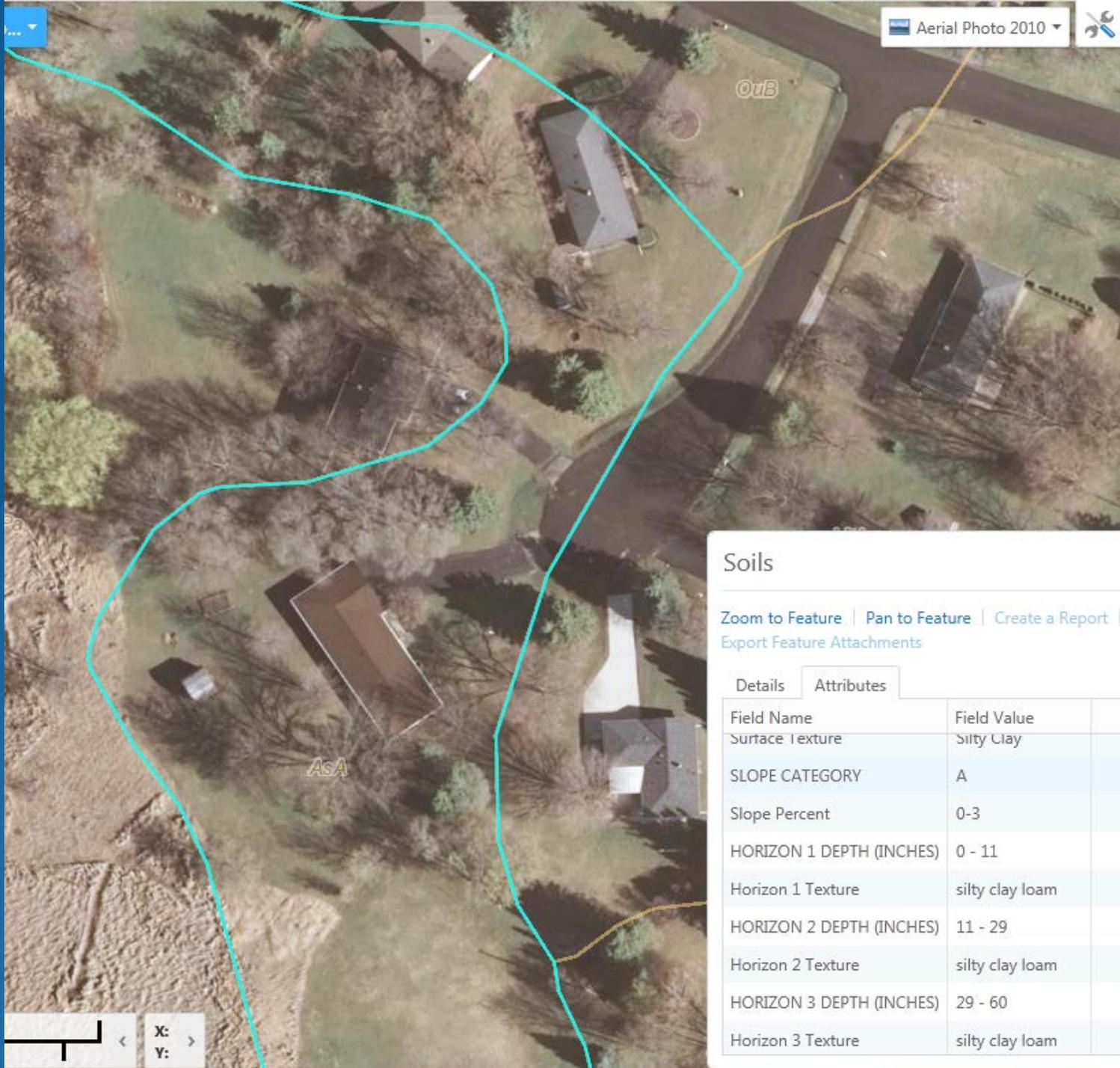
- Use for evaluating infiltration potential of site
- County ordinance states “may be exempted if ... less than 0.6 in/hr...”
- Per list, includes sedimentary peat, silty clay, clay
- County may still require infiltrometer testing to support request

Soil Infiltration Rates

NRCS Soil Survey of Milwaukee and Waukesha Counties, Wisconsin, July 1971

| Soil Type | Rate (in/hr) | Infiltration Potential |
|--------------------|--------------|------------------------|
| Sand and gravel | >20.0 | Excessively High |
| Sand | >20.0 | Excessively High |
| Fine sand | >20.0 | Excessively High |
| Gravelly loam | 6.3-20.0 | Very High |
| Loamy sand | 6.3-20.0 | Very High |
| Muck | 2.0-6.3 | High |
| Muck and peat | 2.0-6.3 | High |
| Sandy loam | 2.0-6.3 | High |
| Silt and fine sand | 0.63-2.0 | Moderate |
| Silt loam | 0.63-2.0 | Moderate |
| Silty clay loam | 0.63-2.0 | Moderate |
| Loam | 0.63-2.0 | Moderate |
| Clay loam | 0.63-2.0 | Moderate |
| Sandy clay loam | 0.63-2.0 | Moderate |
| Marl | 0.63-2.0 | Moderate |
| Sedimentary peat | 0.20-0.63 | Low |
| Silty clay | 0.06-0.20 | Low |
| Clay | 0.06-0.20 | Low |
| Dolomite | NA | Low |

- Ashkum silt clay
- Silt clay loam below surface texture
- Infiltration rate 0.63-2.0 in/hr
- Not exempt



Default Design Infiltration Rates: 1002 Std.

Use for BMP design where there are no measured rates.

Table 2: Design Infiltration Rates for Soil Textures Receiving Stormwater

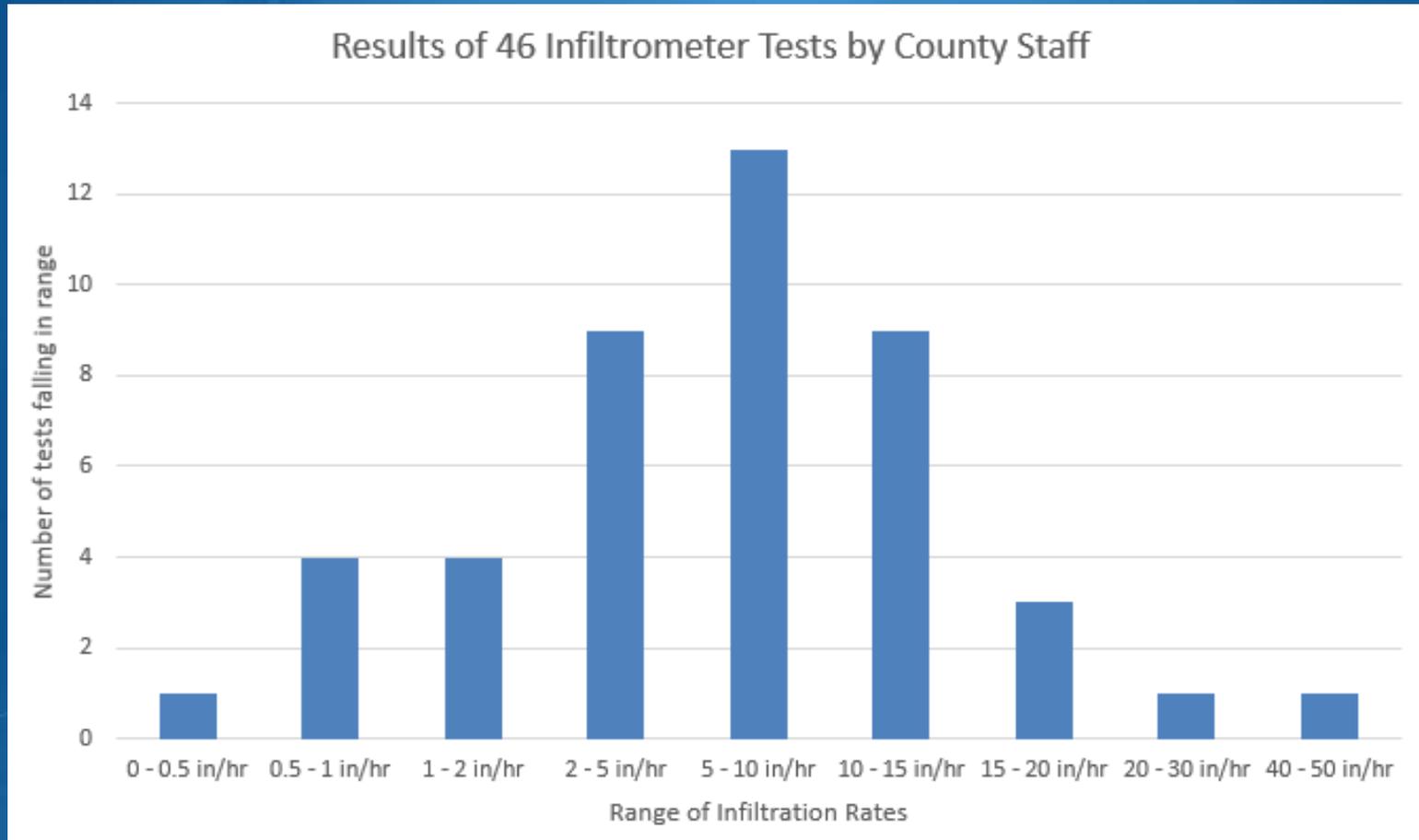
| Soil Texture ¹ | Design Infiltration Rate Without Measurement inches/hour ² |
|---------------------------|--|
| Coarse sand or coarser | 3.60 |
| Loamy coarse sand | 3.60 |
| Sand | 3.60 |
| Loamy sand | 1.63 |
| Sandy loam | 0.50 |
| Loam | 0.24 |
| Silt loam | 0.13 |
| Sandy clay loam | 0.11 |
| Clay loam | 0.03 |
| Silty Clay loam | 0.04 ³ |
| Sandy clay | 0.04 |
| Silty clay | 0.07 |
| Clay | 0.07 |

¹Use sandy loam design infiltration rates for fine sand, loamy fine sand, very fine sand, and loamy fine sand soil textures.

² Infiltration rates represent the lowest value for each textural class presented in Table 2 of Rawls, 1998.

³ Infiltration rate is an average based on Rawls, 1982 and Clapp & Hornberger, 1978.

Measured vs Table Values



- Most common topsoil in county – loam / silt loam
- DNR default rate 0.13 in/hr
- NRCS survey rate 0.63 – 2 in/hr
- County tests: Average = 9 in/hr, Geometric mean = 5 in/hr, Median 7 in/hr

Questions?