

Distribution mounds

- True Wisconsin mounds combine treatment and land application on the same footprint
- Some mounds do not seek to provide treatment (or maybe just a small amount of polishing) but are primarily for land application (disposal)
- These mounds will typically provide land application for secondary treated effluent e.g. from an AWTS

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Distribution mounds

- Often such mounds do not incorporate important design features of true mounds
- May not use spec sand
- This may be of poor quality, poor grain size distribution, contain a high % of fines which wash down through the sand filter and contribute to clogging / reduced hydraulic conductivity. This may contribute to seepage out of the mound
- Sand may not hold up much water for evapotranspiration and may overload soil

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Distribution mounds

- Mound height may be limited which reduces treatment capacity and also significantly reduces water storage capacity, so again limits evapotranspiration – reduces exposure to wind
- If mounds are lower in height they tend to have shallower slopes which reduces runoff of incident rainfall and increases the amount of water reaching the soil – may cause toe seepage

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Distribution mounds

- Commonly use irrigation lines spread over mound surface
- To achieve the required flow need large number of generally closely spaced lines
- If lines are closely spaced on lower part of mound flanks, may contribute to saturation and toe seepage
- Large flows required of low flow rate drippers may require quite a powerful pump

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Distribution mounds

- Mound basal DLRs 5mm/day for medium heavy clays to 32mm/day for sands and a lot higher than corresponding DIRs for same range of soils 2mm/day for medium – heavy clays to 5mm/day for sands, so may significantly overload soils (by between 2.5 times to ~6.5 times their capacity.
- Is the disposal mound just irrigation by stealth because available space is limited?

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Distribution mounds

- Typical 3 bedroom / 5 person house on town water producing 750L/day
- Mound basal area for strongly structured light clay at 8mm/day is ~95m²
- Irrigation area for strongly structured light clay at 8mm/day is ~250m²
- The mound relies on a significant amount of evapotranspiration, so needs to be of suitable height and have the capacity to hold the moisture in the mound to be available for evapotranspiration

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