Biosolids 101

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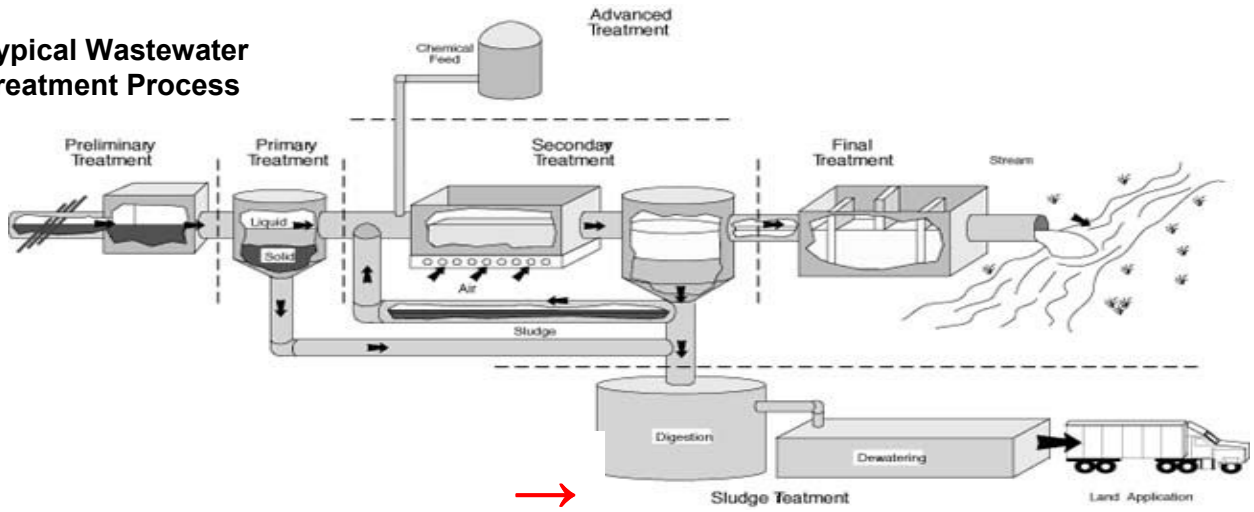
Urban Wastewater Systems *(continued)*

Sludge Treatment Processes:

Typical Wastewater Treatment Process



Sludges generated through the sewage treatment process must go through **sludge treatment** to stabilize the sludge and reduce odors, remove some of the water and reduce volume, decompose some of the organic matter and reduce volume, kill disease causing organisms, and disinfect the sludge prior to **land application**.

The third of the three main types of sludge treatment in Michigan is **Alkaline Stabilization.**

Alkaline Stabilization is the process of adding enough lime to raw sludge to raise the pH of the sludge to a minimum of 12 for 2 hours and 11.5 for an additional 22 hours. Most of the lime stabilizing mixes are liquid in Michigan, where the raw sludge to biosolids process remains liquid.

The advantages of Alkaline Stabilization are the ease to which a facility can convert to this process from any other means of stabilization or disposal, the lime added to the material is a benefit to agriculture, and with Michigan Biosolids being liquid, the mixing of lime with sludge is an easier process.

The disadvantages to Alkaline Stabilization are the handling of more material after the process, the settling out of lime during storage making removal of the material more difficult, and the release of ammonia and other gases during the stabilization process which could spur odor complaints.

Next week: Start of the series on Land Appliciation

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