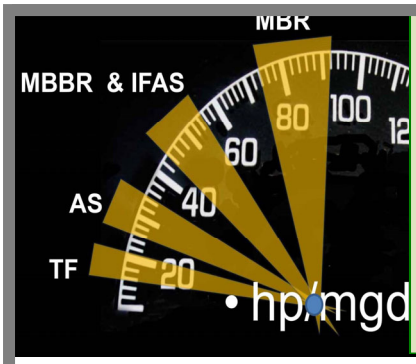


Aeration & Power Consumption

Session 8

FREE Zoom—Training Session

Describes aeration equipment & explains oxygen transfer. Compares power consumption by treatment process.

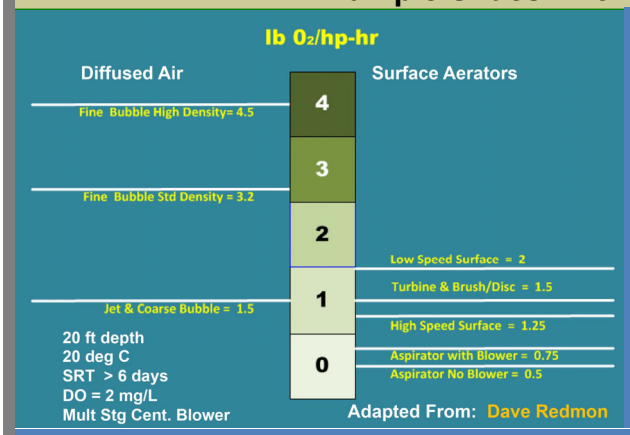
Includes: Introduction to various aeration diffusers and air blowers. Covers standard versus field transfer including calculations for O2 transfer.

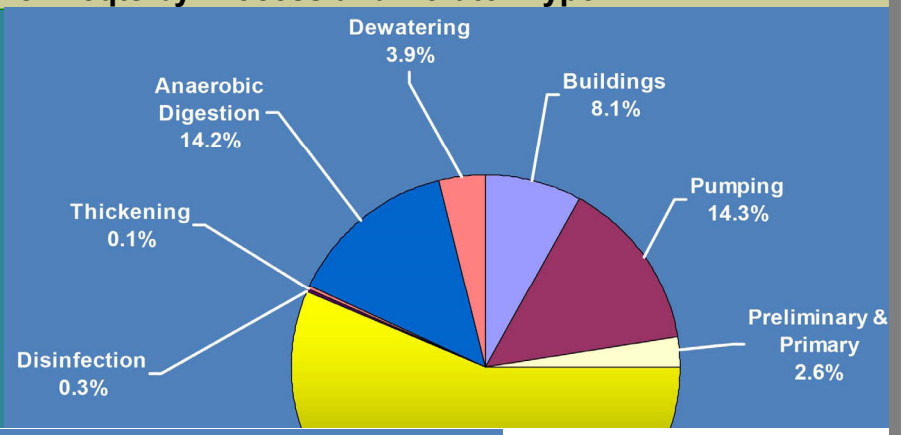
Next to effluent quality, energy conservation and wise selection of aeration equipment are often of major concern at the wastewater treatment plant. Participants will learn in what parts of the plant energy use is the highest and where the greatest gains can be made to reduce power cost. You will be able to calculate energy requirements based on BOD and nutrient loads. Attendees will learn how to estimate air and power requirements for various types of aeration equipment. The differences between field and standard oxygen demand will be explained. Participants will be better prepared to purchase aeration equipment.

Answer these Example Questions:

1. What is the difference between coarse bubble and fine bubble aeration?
2. For a 1.5 mgd flow with BOD of 150 mg/L and ammonia N of 30 mg/L ; what is the oxygen demand and associated air requirements for a fine bubble aeration system with water depth of 15 feet?
3. For high-speed surface aerators what is the efficiency and how much hp would be required to satisfy the oxygen demand in Q 2 above?
4. What are the essential equations for calculating power consumption?
5. How do treatment processes compare in energy consumption and what can be done to reduce power?

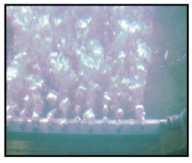
Example Slides: Power Reqts by Process and Aerator Type



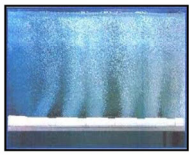


High Speed Turbo Blower

hp = (0.005) (psig) (scfm)



Coarse



Fine

More information Contact: wwixjohn@gmail.com

Questions: Phone/Text 971-562-7471