



PRIMARY CLARIFIER DESIGN DATA CHECKLIST

To prevent the formation of hydrogen sulfide (H₂S) in a primary clarifier, a positive dissolved oxygen (D.O.) level must be maintained and carried through the primary clarifier. The amount of oxygen needed is determined by multiplying the hydraulic retention time (HRT) of the primary clarifier by a theoretical ~10 mg/L/hr oxygen uptake rate. This amount of oxygen is then used to design the ECO2 SuperOxygenation System.

Anticipated Project Implementation Date		
Requested Response Date		Example
Owner Information		<i>Fishers WWTP</i>
Elevation Above Sea Level (ft)		<i>750 ft</i>
Location of Primary Clarifier (Above / Below Grade)		<i>Below</i>
Shape of Primary Clarifier		<i>Round</i>
Depth of Primary Clarifier (ft)		<i>10 ft</i>
Length and Height / Diameter of Primary Clarifier (ft)		<i>120 ft</i>
Hydraulic Retention Time (HRT) of Primary Clarifier		<i>2.5 hrs</i>
Average Flow (MGD)		<i>8 MGD</i>
Influent Water Pumped or Gravity Feed into Primary Clarifier		<i>Pumped</i>
If Pumped at what pressure head (ft)		<i>30 ft</i>
Oxygen Uptake Rate (mg / L / hr)		<i>10 mg/L/hr</i>
BOD Loading (mg/L)		<i>300 mg/L</i>
Temperature of the Wastewater (°C)		<i>27° c</i>