A trickling filter has the following:

* Average Wastewater Flow: 500 gpm
* Recirculation Ratio: 0.4
* Influent into the Primary Clarifier: 500 mg/l
* The primary clarifier BOD removal efficiency: 80%
* Filter Diameter: 54 feet
* Depth of media: 6 feet

**Question #1:**  Calculate the BOD loading

**Question #2:**  Hydraulic loading,