

mp649

Marlon's Individual Contribution Page

Spring 2013 Contributions

During this semester I worked on the Sedimentation Tank Hydraulics team to improve the overall performance of the floc blanket. To understand the relationships between the geometry of the tank, the energy dissipation, upflow velocity and the overall quality of the water is an essential knowledge for the AguaClara plants. We verified the effect of three different coagulant doses on the effluent turbidity. Also, we noticed how important energy dissipation rates are to provide momentum necessary to keep a steady floc blanket and to optimize particles interactions directly related to effluent water purity. To identify flow paths we performed dye tests that proved distinct behaviors depending on how diluted is the floc blanket. 18 videos were produced and several insights were developed during the research, especially the influence of height of floc blanket along time on effluent turbidity and geometric patterns that describe jet and debris flow interaction.