Particle Size and Density: – Larger and denser particles settle faster than smaller or lighter particles. Biological Activity: – Organisms such as algae and bacteria can affect sedimentation through processes like biofilm formation, which can enhance particle aggregation. Chemical Composition: – The presence of certain chemicals or pollutants can alter the properties of sediment particles, affecting their behavior in suspension and settling. Concentration of Suspended Solids: – Higher concentrations can lead to flocculation, where particles clump together, increasing their settling rate. Fluid Velocity: – Higher flow velocities can keep particles in suspension, while slower velocities allow them to settle. Water Temperature: – Temperature affects water density and viscosity, which can influence the settling rates of particles.