

Department of Civil Engineering
2014 Autumn Semester
Yoshimura Chihiro

Water Quality Dynamics

Outline #11: Equilibrium Model

1. Exercise
 - Ex-25
 2. Streeter-Phelps Equation
 - Mass balance of BOD and DO in plug-flow system
 - First-order reaction
 - Deoxygenation rate constant
 - Reaeration rate constant
 - Effect of temperature on rate constants
 3. Equilibrium Model
 - Activity corrections
 - Equilibrium constant and temperature
 - Packages of equilibrium model
 4. Exercise
 - Ex-24 and 26
-