Learning Objectives

You’ll be able to:

Explore NPDES permitting and development of limits based on technology and Water quality.

Review the chemistry of wastewater treatment and how it applies to biological wastewater treatment.

Understand biological nutrient removal, including nitrification/denitrification and phosphorus removal.

Learn about different modeling software that can be used in wastewater treatment such as the activated sludge model and diffused and surface aeration models.
Paul Marotta, Ph.D.  AquaTer, Inc., Brentwood

Dr. Marotta is in charge of technical aspects of wastewater and air quality projects for AquaTer. He provides a broad range of expertise in industrial and environmental engineering. His environmental experience includes facility and corporate-level environmental compliance responsibilities. Dr. Marotta currently directs design and mathematical modeling for air, water, wastewater, soils, and groundwater treatment projects. His nuclear experience includes thermal design and performance analyses for the nuclear reactors (RSPA), design and installation of emergency lift systems, reactor vessel brittle fracture prevention analyses and new reactor prototype concept development. These areas required extensive computer modeling using complex dynamic simulations and three-dimensional finite element analysis. Dr. Marotta has successfully facilitated high performance teams within an established unionized manufacturing environment. His industrial experience includes several positions within pulp and paper manufacturing, with management expertise ranging from large capital projects, to plant management, to technical consultant. Dr. Marotta is an adjunct professor and teaches graduate level Heat Transfer and Thermodynamics at the University of Tennessee Space Institute.

Dr. Imre Takács  Dynamitex, France

Dr. Takács, born Hungarian, naturalized Canadian, living in France, has done a similar circle in wastewater process modeling. As principal developer of GPS-X, BioWin and in the past eight years his own new Sumo process simulator, he has close trial and experience in process modeling. Dr. Takács' interests are widespread from nutrient removal and recovery to phase separation, main and substream treatment and energy efficient technologies. He will lead the group through the development of a virtual wastewater treatment plant from BOD removal to nutrient recovery using the Sumo process simulator.

Additional Learning

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