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Nota di contenuto	Title Page; Copyright Page; Contents; Preface; Acknowledgments; Part I Overview; Chapter 1 Introduction; Aerobic Lagoon; Anaerobic Lagoon; Facultative Lagoon; Chapter 2 Carbon and Energy Substrates; Group 1; Group 2; Group 3; Group 4; Group 1-Niches or Roles Performed; Group 2-Niches or Roles Performed; Group 3-Niches or Roles Performed; Group 4-Niches or Roles Performed; Chapter 3 Microbial Interactions; Photosynthesis and Cellular Respiration; Availability of Electron Carrier Molecules; Chapter 4 The Facultative Lagoon; Daily Diurnal Changes Due to Abiotic Factors Daily Diurnal Changes Due to Biotic Factors Lagoon Systems; Types of Discharge; Part II Lower Life Forms; Chapter 5 Bacteria; Response to Free Molecular Oxygen; Hydrolytic Bacteria; Lipids, Proteins, and Starches; Chapter 6 Archaea; Chapter 7 Fungi; Chapter 8 Bioaugmentation; Control of Odor; Reduce Sludge; Improve Treatment Efficiency during Cold Temperatures; Chapter 9 Purple and Green Sulfur Bacteria; Chapter 10 Pathogens and Disinfection; Indicator Organisms; Coliform Bacteria; Disinfection; Chlorination; UV Radiation; Ozone; Part III Algae; Chapter 11 Green Algae and Diatoms; Algae

Chapter 12 Blue-Green Algae (Cyanobacteria)Tetrads; Toxin-Producing Cyanobacteria; Cylindro; Chapter 13 Algae, Alkalinity, and pH; Phosphorus and pH; Nitrogen and pH; Sulfur and pH; Metal Removal and pH; Chapter 14 Control Measures for Undesired Algal Growth; Physical Measures; Chemical Measures; Biological Measures; Phosphorus Removal; Part IV Higher Life Forms; Chapter 15 Protozoa; Amoebae (Sarcodina); Flagellates (Mastigophora); Free-Swimming Ciliates (Holotrichia); Crawling (Creeping) Ciliates (Spirotrichia); Stalk Ciliates (Peritrichia); Protozoan Succession and Regression Chapter 16 Metazoa Bristleworms; Gastrotrichs; Crustaceans (Copepods, Cyclops, Ostracoda, and Daphnia); Nematodes; Rotifers; Sludge Worms; Part V Plants; Chapter 17 Cattails and Bulrushes; Cattails; Bulrushes; Control of Cattails and Bulrushes; Chapter 18 Duckweed and Watermeal; Chapter 19 Weed Problems; Part VI Large Aquatic and Terrestrial Animals; Chapter 20 Insects; Life Cycle of an Insect; Chapter 21 Fish; Ameiurus; Carassius; Ctenopharyngodon; Gambusia; Salvelinus; Chapter 22 Animal Control; Burrowing Animals; Waterfowl; Part VII Sludge and Odors Chapter 23 Sludge Accumulation and Disposal Chapter 24 Reed Beds; Chapter 25 Odors; Hydrogen Sulfide and Ammonia; Part VIII Monitoring; Chapter 26 Nitrification; Cold Weather Nitrification; Nitrite; Chapter 27 BOD and TSS; Chapter 28 Monitoring Parameters; Microscopic Examination; Chapter 29 Troubleshooting Notes; Introduction; Poor Nitrification; Ammonia; Hydrogen Sulfide Toxicity; Bibliography; List of Abbreviations; Glossary; Subject Index; Genera and Species Index; EULA

Sommario/riassunto

Provides personnel a new understanding of how lagoon and fixed film sewage treatment systems work. Tested in short-course situations by the author over the last 20 years. Directs the material in a practical manner at operators who are responsible for process control and troubleshooting. Reduces the jargon, chemical equations, and kinetics that overwhelm most operators and laboratory technicians. Provides necessary information for understanding biological and chemical conditions at the treatment process.
