

ALS 3133 Test 2 Study Guide

This is a just a guide. Material on the test is not limited to the following information.

Terms/Acronyms to know

Zoonoses	Class A biosolids
Aflatoxins	Class B biosolids
eutrophication	NPDES
Mineralization	EQ
denitrification	CO2 Fertilization effect
nitrification	BioDenipho
volatilization	artificial N fixation
symbiotic N fixation	immobilization
Deep well injection	emerging contaminants of concern

Organic Wastes

Types of problems with organic wastes – examples

Why problems are growing

Potential problems/benefits of increasing concentrations of organic wastes

Balanced approach to solving problems considering the 3 E's

C, N, P Cycles

Inputs/Gains of nitrogen in the N cycle

Outputs/losses of nitrogen from the N cycle

Transformations of N in the cycle

Inputs/Gains of phosphorus in the P cycle

Outputs/losses of phosphorus in the P cycle

Transformations of P in the cycle

Inputs/Gains of carbon in the C cycle

Outputs/losses of carbon in the C cycle

What is the Haber-Bosch process?

Most common form of nitrogen plants take up

Where do we get phosphate?

Municipal Biosolids

Biosolids life cycle

Guaranteed analysis and use of biosolids in fertilizer

NPDES

Purpose of each stage of wastewater treatment process (primary, secondary, tertiary, ..)

UF Water reclamation facility process

Three Criteria for land disposal per the 503 rule

Benefits of land application

503 rule

Fate of Pathogens in soil/toxic metals in the soil

National Academy of Science conclusions

Potential problems with misuse of biosolids

Uses for Reclaimed Water

Leaders in reclaimed water use