Best Practices In Sewage and Effluent Treatment Technologies Processes, Theory, Maintenance,Operation and Troubleshooting Training

Description

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Course Description

The quality of groundwater used cannot be compromised any longer and the servicing requirements of on-site sewerage disposal Systems cannot be ignored. With limited funds available to you the private owner or regulatory agency that have responsibility for inspection, the task of on-site sewerage treatment and disposal is becoming very difficult. With limited funds available to the owners we Believe this workshop will help you to install an effective system. You will learn numerous tips and tricks throughout the workshop to make it very practical and relevant to your applications.

Course Objective

Maintain and troubleshoot waste water treatment systems

- Understand the different waste water treatment systems available
- Understand National and local legislatation
- Apply knowledge of the latest technologies and best practice

Who Should attend?

- Municipal Planners
- Sewerage Operators
- Municipal Engineers
- Consulting Engineers
- Anyone responsible for managing and operating sewerage treatment facilities
- Maintenance Engineers, Technicians and Staff
- Plant Engineers
- Operation, Maintenance, Inspection and Repair Managers,Supervisors and Engineers
- Mechanical Engineers and Technicians
- Design Engineers

Course Outline

Introduction

Planning considerations -provincial and national government

- Economic, social and environmental goals of planning
- Environmental assessment
- Need for health and safety
- Factors in preparing municipal plans
- Protection for stepped up demand

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Waste water fundamentals

- Basic terminology
- Contaminant considerations
- Biological, phosphorous, ammonia
- Pathogens
- Effluent objectives
- Alternate discharge options
- Receiving water capacity-provincial water quality objectives
- Surface discharge
- Subsurface discharge

Design considerations

- Collection of sewerage
- Aerobic and anaerobic treatments
- Critical design parameters for communal sewerage treatment systems

Treatment technologies

- Suspended solids removal
- BOD removal
- Nitrification and denitrification
- Phosphorous reduction

Treatment systems

Conventional Septic Tank

- As the treatment system
- Enhanced septic tanks
- As a primary for other bioreactors

Bioreactors

- Fixed film
- Rotating
- Suspended
- Batch
- Filters-sand, peat, stone, synthetics
- New technologies targeting specific contaminants

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Recirculating sand filters year round treatment

- History experimental design
- Construction
- Operation

Subsurface discharge

- Filter bed
- Shallow trench
- Leaching bed
- “Constructed wetland”
- Recycle, reuse

Direct discharge

- Stream assimilative capacity
- Mixing zone
- Disinfection

Biosolids disposal

- Hauled waste
- Compost
- Lime stabilization

Management of communal waste water systems

- Regular monitoring
- Long term satisfactory performance

Financial and legal issues

- Funding sources
- Approval process
- Regulatory compliance
- Municipal and owner liability

Design and installation of your own system

- Simple design rules
- Implementation of your system
- Tips and tricks
- The Thirteen Golden Rules of working with Waste Water systems

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