

Unit 4.3 Drying beds

1. INTRODUCTION

This Unit combines the information of Chapter 7 and 8 of the FSM book. Chapter 7 deals with sludge drying in unplanted beds – large filters built up from sand and gravel over a drainage system. It provides an understanding of the appropriate level of operations, maintenance and monitoring for their performance. Chapter 8 covers planted sludge drying beds, where enhanced drying is established by evapotranspiration through plants. Information is provided on applicable vegetation, the appropriate level of operations, maintenance and monitoring for their performance, and on the design. The Chapters were prepared by Pierre-Henri Dodane, Mariska Ronteltap, Yves Magloire Kengne (Université de Yaoundé I) and Elizabeth Tilley (EAWAG).

The key note is created by Mbaye Mbégueré (ONAS, Office National de l'Assainissement de Senegal), a true expert in the field of FSM, from Senegal. It combines the knowledge of Chapter 6, 7 and 8 on settling-thickening and drying beds, but in the form of an overview.

2. LEARNING OBJECTIVES

The learning objectives for Unit 4.3 Drying beds are to:

- Have an understanding of an unplanted drying bed for sludge dewatering.
- Have an overview of the main components of unplanted drying beds, their characteristics and their effect on the performance of the beds.
- Be able to design an unplanted drying bed to achieve the desired treatment objectives.
- Know what a planted drying bed for sludge dewatering is.
- Have an overview of the vegetation types that may be used, the role they play in sludge dewatering and criteria for their selection.
- Know the appropriate level of operational and maintenance monitoring necessary for the operation of planted drying beds.
- Be able to design (un)planted drying bed to achieve the desired treatment objectives.

3. THINGS TO DO; PLACES TO GO

In order to complete this Unit successfully, please do the following:

- Watch the key note speech of Unit 4.3
- Go through the PowerPoint presentation of Unit 4.3
- Read Chapter 7 and 8 of the FSM book
- Check the Course page for any recommended reading materials or web pages
- Check the assignment list