

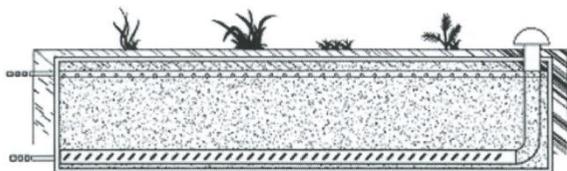


Centre for Environmental Training

Sand Filters, Media Filters and Mound Systems for On-site Wastewater Treatment

5-6 July, 2021

Coffs Harbour, NSW



A short course for Wastewater Professionals seeking alternative cost effective solutions to wastewater problems in sensitive locations



This two-day course covers the selection, design, sizing, construction and performance of a wide range of sand filters, media filters and mound systems for on-site wastewater and greywater management.

Sand filters, media filters, mound systems and amended soil systems are of growing popularity and in many cases offer attractive passive and low cost options for the treatment of wastewater in both domestic and commercial situations.

This course covers the basic principles of design of sand filters, media filters and mound systems and a range of other filtration and nutrient removal options. The selection, availability and performance of media for sand filter and mound construction is investigated in detail. A range of process and media based nutrient removal options will be discussed. The sizing of filter and mound systems will be reviewed and the requirements of the various legislative guidelines including those of the State Government, the Standard AS/NZS 1547:2012 *On-site Domestic Wastewater Management* and various overseas agencies will be compared. The course will cover the design and construction of sand filters and mounds with examples suited to sensitive and challenging sites.

Pressure dosed and low pressure distribution systems including siphons and Flouts, and land application systems will be discussed. A number of case studies will be used to illustrate various aspects of sand filter and mound system construction and maintenance. Monitoring and performance data for various systems will be presented.

In addition, examples of a range of sand filters, media filters and mound systems at both domestic and commercial scales will be discussed.

The course comprises illustrated lectures, practical demonstrations, worked exercises, reviews of design options and case studies of sand filters, media filters and mounds both in Australia and overseas.

Technical sessions include:

- Wastewater treatment using sand filters
- Sand filter design principles
- Single pass intermittent sand filters
- Recirculating sand filters
- Media filters
- Fabric filters
- Mound systems
- Wisconsin mounds
- Amended soil systems
- Selection of media for sand filter construction
- Sourcing of media
- Nutrient removal processes
- Sizing of sand filters and mounds
- Design guidelines and standards
- Sand filters for greywater treatment
- Construction of sand filters
- Dosing systems; pumps, siphons and Flouts
- Land application of effluent
- Construction of mound systems
- Maintenance of sand filters and mounds
- Case studies of sand filters and mound systems
- Monitoring and performance data

The course is designed for those involved in all aspects of on-site wastewater systems and in particular for those seeking small footprint systems with a high quality final effluent. The course is suitable for designers seeking cost effective wastewater management solutions for rural residential, leisure, recreational and community facilities and for regulators seeking to better understand the performance of these systems and suitable regulatory controls. Sand filters and media filters are well suited to a variety of small commercial applications where the treated effluent can be beneficially used for agricultural, horticultural or landscaping purposes.

The course is taught by leading Australian on-site wastewater practitioners experienced in the design, construction, evaluation and monitoring of a range of alternative wastewater systems including sand filters, media filters and mounds at both domestic and commercial scales.

Sand Filters, Media Filters and Mound Systems

Course Presenters

Mark Saunders, BEnvSc (Hons I).

Mark is a consultant at Whitehead & Associates Environmental Consultants Pty Ltd and a course presenter for the Centre for Environmental Training. Mark has wide-ranging experience in on-site wastewater management, including site assessment, system selection and design, project management, risk analysis and auditing. Mark has worked extensively in the public and private sector in both Australia and the USA. Mark has extensive experience in wastewater treatment processes, the design, operational performance, monitoring and troubleshooting of a wide range of domestic and commercial on-site wastewater management systems including sand filters, media filters and mounds.

Joe Whitehead, BSc, MAppSc, FGS.

Joe is the Director of the Centre for Environmental Training and Principal of Whitehead & Associates Environmental Consultants Pty Ltd, a leading consultancy specialising in on-site and decentralised wastewater management throughout Australia, New Zealand and the Pacific Islands. Joe is an experienced designer of alternative on-site wastewater management and reuse solutions on all scales from single domestic premises to community facilities and villages. He has researched the availability and performance of both natural and man-made filter materials for wastewater treatment systems and nutrient removal. Joe has experience in the design, installation, operation and management of a range of treatment and reuse systems and in the specification and selection of media for sand filter and mound systems. Joe has been involved in the preparation and review of a number of technical guidelines for on-site and decentralised wastewater management for various regulatory agencies throughout Australia. Joe has prepared and delivered in excess of 150 professional short courses in on-site and decentralised wastewater topics at venues throughout Australia and New Zealand.

Course Enrolment Form (2925)

Name	
Organisation	
Address	
Postcode	
Tel	
Fax	
e-mail	

PLEASE REGISTER ME FOR:

Sand Filters, Media Filters and Mound Systems for On-site Wastewater Management Treatment 5-6 July 2021

The course will be held from 8.30am to 4.30pm in Coffs Harbour, NSW: Venue tba.

Course fee: \$1,800.00 + \$180.00 GST = Total \$1,980.00

10% discount for two or more registrations from the same organisation.

Course fee includes comprehensive course notes, lunches and morning and afternoon teas. Each participant will receive a certificate outlining the detailed content and duration of the course.

Payment Terms and Conditions: Payment can be made by EFT or credit card (a 2.6% surcharge applies). Places will be confirmed upon receipt of payment into our account. If you are unable to attend a course, you will need to advise us of cancellation at least 14 days prior to the course otherwise no refund will be provided. A full refund will be given where notice of cancellation is given more than 14 days before the course. 10% administration charge is applicable to all course transfers due to illness/non-attendance.

**The Centre for Environmental Training
197 Main Road
CARDIFF NSW 2285
Telephone: 02 4954 4997**

**e-mail: mail@environmentaltraining.com.au
Web: www.environmentaltraining.com.au**

This two-day course covers the selection, design, media selection, sizing, construction, maintenance and performance of a wide range of sand filters, media filters, mounds and amended soil systems for on-site wastewater treatment in both domestic and commercial settings.

These systems offer alternative passive and low energy solutions where high levels of treatment or nutrient removal are required.

The course covers sand filter designs suitable for greywater treatment, an increasingly sought after option, particularly in urban areas.

The course offers an opportunity for those involved in planning, design, installation, maintenance and regulatory control of on-site wastewater management systems to acquire a wealth of knowledge on important emerging technologies which are of growing popularity in Australia.

Written and presented by the team responsible for the leading professional short course for on-site wastewater practitioners in Australasia, the *On-site Wastewater Management Training Course*.

Who should attend?

**On-site Wastewater Consultants
Environmental/Engineering Consultants
Wastewater System Designers
Wastewater System Installers
Plumbers and Drainlayers
Environmental Health Officers
Health and Building Surveyors**



Onsite i Site

All course participants receive a complimentary one-year subscription to our on-site wastewater information portal.

www.onsiteisite.com