

**REGISTRATION FORM**  
(register with full payments by 22 Jan 2018)

To:  
The Malaysian Water Association  
No. 24 Second Floor, Jalan Sri Hartamas 8  
Taman Sri Hartamas, 50480 Kuala Lumpur

**Participants' Details**

Participant 1  
Name : \_\_\_\_\_  
Designation: \_\_\_\_\_  
E-mail: \_\_\_\_\_

Participant 2  
Name : \_\_\_\_\_  
Designation: \_\_\_\_\_  
E-mail: \_\_\_\_\_

Participant 3  
Name : \_\_\_\_\_  
Designation: \_\_\_\_\_  
E-mail: \_\_\_\_\_

Organisation & Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Tel / Fax: \_\_\_\_\_

**Payment Details**

Enclose herewith my / our full payment of  
RM \_\_\_\_\_ to  
**THE MALAYSIAN WATER ASSOCIATION.**  
Account No: 277 0001 3651 (Hong Leong Bank Berhad)

-----  
Authorised signature

Date & org. stamp

**TENTATIVE PROGRAMME**

- 8:00 am **Registration and welcome reception**  
8:45 am Welcome Remarks by President of MWA  
**Session One**  
9:00 am Introduction to bank filtration techniques  
9:30 am Planning and selection of a RBF site  
Q & A and Discussion  
10:30 am **Tea break**  
**Session Two**  
11:00 am Bank filtration well design, construction and  
operation  
11:40 am Hydraulics of RBF  
Q & A and Discussion  
12:45 pm **Lunch break**  
**Session Three**  
1:45 pm Water quality aspects of RBF  
2:15 pm Removal efficiency of RBF (pathogens, DOC,  
turbidity, algae, trace compounds, etc.)  
2:35 pm Post-treatment of bank filtrate  
(e.g. iron removal, activated carbon, disinfection)  
Q & A and Discussion  
3:15 pm **Tea break**  
**Session Four**  
3:30 pm Worldwide RBF case studies – success and  
failure  
4:00 pm Looking Ahead – Recommendations and  
Final Wrap up  
4:30 pm **End**

**To register / For Enquiry:**

Johari / Emi:  
Tel: 03 6201 2250/9521 Fax: 03 6201 5801  
E-mail: [johari@mwa.org.my](mailto:johari@mwa.org.my)



Organised by  
**THE MALAYSIAN WATER  
ASSOCIATION**



Pengurusan Aset Air  
in collaboration with  
Pengurusan Aset Air Berhad

**Register Now!**  
(places are  
limited)

**ONE DAY WORKSHOP**  
**Design, Construction and Operation**  
**of RBF Schemes**

**25 January 2018 (Thursday)**

**BEM CPD Hours  
Applied**

**8:00 am – 4:30 pm**

**Universiti Teknologi Malaysia (UTM), Kuala Lumpur**  
**(Dewan Seminar, Anjung Menara Razak)**

**WHO SHOULD ATTEND**

Policy makers and planners, engineering consultants,  
water resource professionals, water and wastewater  
managers and operators, regulators, fund managers,  
contractors, equipment suppliers, academician and  
graduate students.

**REGISTRATION FEES**

- MWA Member & Universities: **RM370/head**
- MWA Student Member: **RM300/head**
- Non-member: **RM410/head**  
*All fees inclusive of GST.*

## INTRODUCTION

### Riverbank Filtration Technology

Riverbank filtration (RBF) is a cost-effective, natural pretreatment technology that uses Mother Nature's geology — Instead of chemicals — to pretreat surface water and groundwater supplies.

As energy costs for conventional treatment technologies escalate and translate into increases in user rates, alternative pretreatment technologies are being used more widely. RBF technology is at the forefront as a method for not only pretreating existing raw surface water supplies but also for developing new and sustainable water supplies.

RBF uses the bed of a reservoir, lake or river and an adjacent sand and gravel aquifer as a natural filter. The technology can be applied directly to existing surface water reservoirs, streams, lakes and rivers, and now it is often a guiding factor in the hydrogeologic investigation of new source supplies.

### Technology Benefits

Advantages of RBF include natural pretreatment through bank filtration, reduced chemical usage for pretreatment and resistance to contaminant threats. It has minimal color, odor, turbidity and algae, features a low profile and is aesthetically pleasing. The technology decreases construction and operation costs, offering the lowest costs among supply options, and it provides maintenance cost savings (e.g., no leaf debris, which is common to surface water intakes).

### About the Presenter

**Prof. Grischek, Thomas**



Use of RBF results in a reduced need for disinfection, less sludge generation, achievement of treatment removal credits used to meet the Long-Term Enhanced Surface Water Treatment Rule, easy maintenance and consistent water quality and temperatures. It also is not susceptible to invasive plant infestation and has no impact on fisheries.

### Applications

Using alternative well technology (e.g., horizontal or angle wells) opens up numerous RBF applications depending on the site characteristics and soil conditions. These include:

- Freshwater intakes beneath river and lake beds;
- Saltwater intakes beneath an ocean floor;
- Offsetting well head from wetlands, buildings and floodplains;
- High-capacity single- well pumping;
- Utilizing aquifers beneath rivers and lakes to provide prefiltration and enhance raw water quality; and
- Tapping aquifers from a distance where land constraints prevent drill rig access.

### Present Position within the Organisation

- Professor for Water Sciences at the University of Applied Sciences Dresden, Faculty of Civil Engineering & Architecture, Programme officer for the course “Environmental Engineering”
- Guest lecturer for Water Engineering at the University of Applied Sciences Zittau

### Key Qualifications

- 25 years experience in applied research in the field of riverbank filtration
- scientific background in hydrogeology, water engineering, hydrochemistry and microbiology
- coordination and management of several national and international collaborative projects

### Projects as Consultant

Since 1997 – Riverbank filtration in India, Russia, Egypt, Thailand, Brazil,

several groundwater flow and transport modelling studies for nature reserves, construction sites and well-head protection zones,

design and optimization of groundwater monitoring programmes, data interpretation and evaluation, pumping test analysis,

lab experiments to determine hydraulic parameters, infiltration rates and behaviour of pollutants in aquifers,

design of water treatment facilities for groundwater, especially focussed on calcite, iron, manganese, sulfate.