

Emerging Pollutants

Emerging pollutants is an in depth look into the raft of new and unknown pollutants that are entering our waterways. The course will explore pollution pathways, impact of the pollutants and potential preventative measures to minimise and prevent further deterioration.

As both custodians and commercial users of the waterway, those working within the water community are likely to come across these pollutants regularly and are more likely to be responsible for their removal, irrespective of whether or not they were responsible for polluting the environment.

We as the water industry are also large consumers of chemicals for treatment, electricity for operations and civil materials for construction. We abstract water from rivers for consumption and also discharge wastewater back into waterways, often not too far away in some cases from the abstraction point. It is important for us to keep our raw product (waterways, rivers, reservoirs, lakes and groundwater sources) free of pollution, in order to reduce the need for significant treatment, and providing the best water quality to the public. Furthermore, as providers of water services to the public, water companies are held accountable for public health. Therefore, health risks and associated impact need to be understood and is the responsibility of the water community.

Course Outcomes

- Ability to identify and understand aspects and activities of human interactions resulting in pollution
- Ability to identify pollution pathways
- A greater understanding of the various pollutants
- Understand the direct and indirect impact on health and water environment as a result of pollution
- Impact of activities on receiving water courses, the soil and the atmosphere
- An understanding of the monitoring and measuring methods that is required to collate, analyse and evaluate the impacts
- Critically evaluate merits of different pollution management strategies

The Bigger Picture

Understand how the water sector can **proactively** respond in order to prevent further pollution, both in terms of personal behaviours and industry attitudes.

Course Outline

This course will run from 8:45 a.m. to 4:00 p.m., including three breaks through the day and an assessment at the end of the course. A detailed programme will be provided to delegates who register along with some pre-reading, before the course.

The course covers the following topics:

- In depth exploration of pollution pathways
- New emerging pollutants: plastics, pesticides, endocrines, and other chemicals
- The impact of emerging pollutants, known, unknown and perceived

- Plastics: The social and environmental cost
- Emerging pollutants and introduction to catchment management
- Pollution monitoring and measuring
- Procurement and consumer power vs pollution prevention
- Case studies: DDT and plastic

Interactivity! Quizzes, scenarios and discussions

- Its fin€!
- Captain Planet!
- Quick quiz: Life is Plastic! It's Fantastic!
- What's up Doc?
- End of the World
- How to save the World

The course will conclude with an overview of the day's activities, completion of a short feedback survey and a timed assessment in order to assess delegates' learning.

To encourage further learning delegates will be provided a list of useful resources and other relevant courses such as Catchment management and Sustainability for beginners.

General Information

Delegate Course Requirements and Expectations

Knowledge Testing: All courses will conclude with a short live assessment which will be undertaken immediately at the end of each course.

Delegate Interactivity: All delegates will be required and positively encouraged to actively participate. The courses will include at least two group interactivities, along with quizzes, discussions, calculations and games as appropriate.

Assumed knowledge: A basic understanding of the water sector is assumed, and satisfactory equivalent of English and Maths capability is required to proceed.

Equipment: Laptop and a smart phone with Wi-Fi connection, audio and visual capability (webcam enabled). Note that **both** a laptop **and** a smart phone will be required in most cases. The laptop will be utilized as the main learning tool, whilst smart phone activities will be integrated to enhance learning. The technology/apps that will be utilized will be required to be downloaded prior to commencement of the course. These will be provided ahead of course commencement. Pen and paper are also advisable.

Differently abled learners: At present we are sadly unable to offer courses that are suited for those who are vision impaired or suffer from hearing loss. We are working towards improving our service.

Course fees and registration

R3500 (ex. VAT) for WISA members and R4000 (ex. VAT) for Non-members.

To register or for more information please contact Anita Pillay at training@wisa.org.za

Continuing Professional Development

The course will conclude with an online live test, and a Certificate of Attendance which can be used to claim ONE (1) CPD-points from WISA, SACNASP and ECSA will be awarded to successful learners.