



**cooperative
governance**

Department:
Cooperative Governance
REPUBLIC OF SOUTH AFRICA

**MUNICIPAL INFRASTRUCTURE
SUPPORT AGENT (MISA)**



CPD (ECSA)

Getting Acquainted with Wastewater Treatment Plants – Operations and Maintenance

The Municipal Infrastructure Support Agent (MISA) in partnership with SAICE Professional Development & Projects (SAICE-PDP) invites you to attend this 2-day course which aims to equip attendees with the necessary skills to operate and maintain a Wastewater Treatment Plant.



Attend this course and:

- Learn about the methods of wastewater treatment and how to select the most appropriate method for your municipality
- Understand properties of wastewater and their potential harm if not treated
- Get a practical perspective on effective operation and maintenance of wastewater treatment plants
- Get an overview of the green drop compliance process
- Understand the wastewater risk abatement planning

Benefits include:

- Practical activities to solve wastewater management problems
- Comprehensive training manual that will serve as reference material
- Networking with your peers
- CPD Credits (ECSA)

Presenters:

Sibusiso Mnguni Pr Eng
Siphathisiwe Masimirembwa Pr Tech Eng

<p>COURSE SCHEDULE</p> <p>Venue:</p> <p>Dates:</p> <p>Time:</p> <p>REGISTRATION</p> <p>To register, visit www.saicepdp.org</p> <p>For more details contact Nompumelelo Nyaba:</p> <p>Email nompumelelo@saicepdp.org /</p> <p>Tel: 011 476 4100</p>	<p>WHO SHOULD ATTEND</p> <p>The course helps municipal attendees to apply their theoretical training in practice. It is therefore recommended for:</p> <ul style="list-style-type: none"> ▪ Staff employed in local government and involved in wastewater treatment plants, or about to become involved in the field ▪ Municipal Engineers, Technologists and Technicians ▪ Water Service Managers and Supervisors looking for a refresher in the operation and maintenance of wastewater treatment plants
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COURSE OUTLINE

DAY 1

HOLISTIC OVERVIEW OF WASTEWATER TREATMENT PLANTS

- Introduction to wastewater treatment
- Objectives of wastewater treatment
- Environmental effects of spillage of untreated wastewater
- Wastewater governance and regulatory environment
- Introduction to characteristics of wastewater
- Wastewater Systems
 - Overview of the status of wastewater treatment plants in South Africa
 - Overview of methods of wastewater treatment including selection of suitable methods
 - Elements of a conventional wastewater treatment plant
 - Improvements / latest technologies in wastewater treatment

DAY 2

OPERATIONS AND MAINTENANCE

- PRACTICAL PERSPECTIVE

- Recap of Day 1
- Effective operation and maintenance of plants and safety aspects
 - Shortcomings in maintenance and management in most municipalities
 - Wastewater plant failures and response
 - Components of a strong management team
 - Plant optimisation and trouble shooting
 - Environmental, health and safety
 - Check list / maintenance schedules
- Green drop compliance approach - hints and tips
- Overview of Wastewater Risk Abatement Plan



WHAT TO BRING TO THE COURSE

- Scientific calculator, scale ruler, pencil and eraser
- For **online** courses, it is recommended to have the following installed on your computer:
- MS Excel and the Zoom app

ABOUT YOUR FACILITATORS

Sibusiso Mnguni holds a National Diploma and BSc in Civil Engineering, as well as an M.Com degree in Project Leadership and Management. He has specialist experience in water and wastewater infrastructure with over 30 years' experience in the civil engineering sector, spanning construction supervision, consulting engineering, municipal services, and state-owned entity environments. His experience includes the development of pump stations, pipelines, and associated infrastructure.

For ten years, he coordinated Strategic Integrated Project (SIP) No. 19, a national water and sanitation programme established under the Infrastructure Development Act, 2014. This role involved technical oversight to major municipalities, including engagement with wastewater treatment plant operations and maintenance. His interest is in strengthening municipal technical capacity and improving wastewater treatment plant operations and maintenance in line with regulatory requirements and good engineering practice.

Sibusiso is an active corporate member of SAICE.

Siphathisiwe Masimirembwa has a BEng Hons in Civil and Water Engineering and an MBA. She started her career in Zimbabwe where she worked for consulting engineers and a water authority before moving to South Africa, where she has gained experience in both consulting and the public sector. Her range of experience has equipped her with knowledge in planning, design and construction of roads and water services as well as private housing developments. Phathi's passion for uplifting candidates has led her to mentoring engineering candidates in municipalities, developing and delivering courses which contributes to capacity building. Phathi is an active member of SAICE.



SAICE-PDP's Municipal Academy was established to support practitioners employed in local government with applying theoretical knowledge and relevant legislation in practice.

municipal academy
the road to service delivery



MISA's mandate is to provide technical support and advice to municipalities, whilst strengthening their capacity, for effective infrastructure planning, delivery, operations and maintenance.