



Blue Drop Green Drop No Drop Water Management Systems

20-23 February 2024
Online Workshop

Overview

The issue of water quality and availability has become a matter of paramount concern in South Africa. This escalating concern reflects the urgent need for comprehensive and strategic interventions to address the challenges posed by both the quality and quantity of water resources in the region. This has the potential to trigger water stresses, adversely impacting economic development, environmental sustainability, and human health.

To avert this impending crisis, South Africa faces the daunting task of investing in water infrastructure. While quantity is a key factor, the authorities recognize that ensuring water quality is equally crucial in preventing a full-blown crisis.

The 'Blue Drop' certification programme is an incentive-based regulatory approach which was designed to enhance the quality and delivery of water services. The program defines clear requirements and obligations for Water Services Institutions, safeguarding consumers from potentially unsustainable and unsafe services. In parallel, the 'Green Drop' certification programme operates in a manner similar to Blue Drop. It assesses and compares the performance of Water Service Authorities and their Providers, subsequently rewarding or penalizing providers based on evidence of their excellence or failure to meet defined minimum standards or requirements. Water Service Authorities and Providers grapple with numerous challenges in delivering effective water services to consumers, particularly concerning the management of wastewater treatment plants.

The "No Drop" certification programme emulates the Blue Drop and Green Drop models.

The No Drop Program encompasses a set of criteria utilized to evaluate, confirm, and authenticate the water use efficiency of municipalities, which encourages and rewards water conservation and leak management.

Acknowledging the multifaceted challenges faced by stakeholders in the water service sector, concerted efforts and collaborative learning platforms, such as this workshop, is deemed essential. This platform plays a crucial role in empowering stakeholders to overcome challenges, offering opportunities to learn best practices, exchange ideas, and derive practical lessons. The collective aim is to expedite improvements, foster sustainability, and optimize excellence across all key players in the water sector.

Learning Outcomes

- Understanding the Blue Drop Certification System
- Water Safety Planning in Blue Drop Compliance
- Step-by-step guide to the Blue Drop assessment process
- Roles and responsibilities of regulatory bodies and water utilities
- Understanding the regulatory framework governing water quality
- Preparing for a Blue Drop Assessment
- Infrastructure and Treatment Process Design for Blue Drop Compliance
- Water Treatment Compliance
- Implementing treatment quality compliance SANS 241
- Asset Management for Blue Drop Systems
- Water Quality Monitoring and Surveillance for Blue Drop
- Green Drop Assessment Process
- Designing a Green Drop Implementation Plan
- Technical Aspects of Green Drop
- Integration of Blue Drop and Green Drop for Comprehensive Water Security
- Regulatory Compliance and Reporting
- No Drop - Water Conservation and Leak Management
- No-Drop Assessments
- Overview of the No Drop certification process

Who should attend

- Water Resource Managers
- Environmental Engineers
- Water Services and Infrastructure Directors
- Water Quality Scientists
- Water Quality Managers
- Water Quality Analysts
- Effluent Quality Managers
- Environmental Health Officers
- Hydrologists
- Water Resource Planner
- Public Health Officials/Inspectors
- Regulatory Compliance Specialists
- Regulatory Compliance Officers
- Water Conservation Officers
- Water Treatment Plant Managers
- Water Treatment Plant Operators
- Water Treatment Supervisors
- Process Controllers
- Utility Managers
- Water Policy Analysts
- Researchers in Environmental Sciences
- Civil Engineers (Water Infrastructure)
- Water Project Managers

Day 1-3 Blue and Green Drop

Part one

Session 1: Introduction to Water Security in South Africa

- Overview of water resources in South Africa
- Importance of water security for sustainable development
- Introduction to water quality assessments
- Analyzing the role of governance in water security
- Policy frameworks for sustainable water management
- Understanding the regulatory framework governing water quality
- SANS 241

Session 2: Blue Drop Certification System Demystified

- Understanding the Blue Drop Certification System
- Historical context and evolution of the program
- Objectives and benefits of achieving Blue Drop status
- Water Safety Planning in Blue Drop Compliance
 - o Understanding the principles and importance of water safety planning
 - o Integration of water safety plans into the overall water management strategy

Session 3: Blue Drop Assessment Process

- Step-by-step guide to the Blue Drop assessment process
- Detailed walkthrough of the Blue Drop assessment process
- Roles and responsibilities of regulatory bodies and water utilities
- Process Control Strategies for Blue Drop Standards
- Common challenges and opportunities in the assessment process
- Preparing for a Blue Drop Assessment

Session 4: Infrastructure and Treatment Process Design for Blue Drop Compliance

- Design considerations for water treatment plants and distribution systems
- Incorporating advanced technologies to meet and exceed Blue Drop standards
- Balancing infrastructure design with environmental sustainability
- Troubleshooting and Problem-Solving in Water Treatment
- Water Treatment Compliance



Part two

Session 5: Water Quality Management

- Overview of water quality management principles
- Importance of water quality for public health and ecosystems
- Criteria and parameters for assessing drinking water quality

Session 6: Water Quality Monitoring and Surveillance for Blue Drop

- Importance of routine monitoring in achieving and maintaining Blue Drop compliance
- Types of monitoring programs and their implementation
- Practical considerations for water quality surveillance
- Sampling credibility
- Submission of drinking water quality results

Session 7: Analyzing Blue Drop Assessment Data

- Understanding the data generated during a Blue Drop assessment
- Techniques for analyzing water quality data
- Identifying trends and areas for improvement

Session 8: Asset Management for Blue Drop Systems

- Importance of effective asset management in maintaining compliance
- Strategies for managing water treatment infrastructure
- Utilizing data-driven approaches for asset maintenance

Session 9: Case Studies and Best Practices

- Examining successful Blue Drop certified water utilities
- Learning from best practices in water quality management
- Common features and strategies of successful systems
- Lessons learned from challenges and improvements

Part three: Green Drop Water Status

Session 1: Introduction to Green Drop Certification System

- Overview of the Green Drop Certification System
- Criteria for assessing wastewater treatment and disposal
- Link between Green Drop and sustainable water resource management

Session 2: Green Drop Assessment Process

- Detailed examination of the Green Drop assessment process
- Roles and responsibilities of stakeholders in wastewater management
- Addressing challenges in wastewater treatment and compliance

Session 3: Designing a Green Drop Implementation Plan

- Developing a step-by-step plan for Green Drop implementation
- Setting realistic goals and milestones
- Involving stakeholders and community engagement

Session 4: Monitoring and Assessment

- Methods for monitoring water management performance
- Key performance indicators and metrics
- Using data to improve water management practices

Part four

Session 5: Technical Aspects of Green Drop

- Infrastructure requirements for Green Drop implementation
- Technology and tools for efficient water management
- Case studies of successful technical implementations

Session 6: Integration of Blue Drop and Green Drop for Comprehensive Water Security

- Understanding the interconnection between drinking water and wastewater management
- Developing integrated strategies for holistic water security
- Policy implications and regulatory frameworks

Session 7: Wastewater Asset Management

- Process Audit reporting
- Implementation of audits findings
- Inspection of sewer reticulation network and pumpstation/s.
- Sanitation / wastewater Infrastructure Asset Register
- Operation and maintenance budget and comparative expenditure
- Maintenance records
- Storm-water management plan in relation to sewer system
- Water Demand Management Plan in relation to treatment capacity
- Possible initiatives to improve partnership with smaller municipalities

Session 8: Case Studies and Best Practices in Wastewater Management

- Analysis of successful Green Drop certified wastewater treatment plants
- Identification of key factors contributing to success
- Exploring innovative and sustainable wastewater management practices

Session 9: Regulatory Compliance and Reporting

- Reporting requirements for Blue Drop and Green Drop certification
- Strategies for maintaining ongoing compliance
- Role of government, NGOs, and private sector in shaping water policies



Day 4: No Drop Certification Programme

Session 1: No Drop - Water Conservation and Leak Management

- Overview of the No Drop Program
- Strategies for water conservation and leak detection
- Case studies on successful water-saving initiatives

Session 2: Water Conservation Technologies and Practices

- Overview of technologies promoting water conservation
- Best practices for reducing water consumption in various sectors
- Case studies illustrating successful implementation of water-saving technologies

Session 3: Non-Revenue Water (NRW)

- Reviewing the factors that influence NRW
- Identifying the methodologies and technologies to assess the scale of NRW
- Building a water balance using the top down approach
- Building a water balance using the bottom up approach
- NRW reduction strategies
- NRW master planning

Session 4: Leak management and detection

- The Importance of leakage reduction
- Metering for leakage detection
- Zone management
- Pressure monitoring and management

Session 5: No-Drop Assessments

- Introduction to the assessment areas
- How to identify the “low hanging fruit”
- Determining the evidence that must be presented in order to claim points
- How to achieve bonus points
- From master planning to meter management – how to maximise your No-Drop score

Session 6: Water Auditing and Monitoring

- Conducting water audits to identify wastage and inefficiencies
- Setting up monitoring systems for water usage
- Using data to improve water conservation efforts

Session 7: Integrating No Drop into Urban Planning

- Incorporating water conservation into urban development projects
- Designing water-efficient infrastructure
- Green building practices and sustainable landscaping

Session 8: Certification Process

- Overview of the No Drop certification process
- Preparing for assessments and audits

Session 9: Challenges and Solutions

- Identifying common challenges in implementing the No Drop Programme
- Discussing solutions and strategies for overcoming obstacles
- Learning from real-world examples of successful problem-solving

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GPW

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Name: _____

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