

**SKILLS DEVELOPMENT
PROGRAMMES FOR
WATER AND WASTE
WATER PROCESS
CONTROL AND
MANAGEMENT**

Ehlanzeni District Council

- Introduction
- **Access to safe drinking water is essential to health and is a basic human right. Thus the Minister of Water Affairs and Forestry, under section 26(c), (e) and (f) of the National Water Act, 1998 (Act No. 36 of 1998) has made the regulation that all Water and Waste Water Plants should comply to the Schedule as stipulated.**

The schedule, under the Water Services Act (Act no. 108 Of 1997)

- o is aimed at ensuring that no person will be allowed to operate a drinking water supply system or waste waterworks unless the person holds a valid process controller licence. .**

- **The Act also requires that all water and waste water works need to be registered with the Department of water Affairs. This is to ensure that the people entrusted with the responsibility to clean our water are well equipped to deliver quality service.**

- **The owner of a public water system is responsible for meeting all of the legal requirements that apply to the Water Act.**

Aim

- **The aim of this program is assist municipalities/owner of a public water system to comply with the standards and legislature required for producing safe drinking water, as well as, the discharge of acceptable quality effluent, as proposed by Water Affairs, Blue and Green drop incentive based programmes and the Sans: 241 quality guidelines.**

Objectives

- **To capacitate and develop municipal workers who are currently working in the field of Water and Waste Water treatment.**
- **To ensure that all personnel involved in the water sector are competent and also comply with the water services act 108 requirements.**
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- **To ensure that all water and waste water works in each municipality are registered and also comply with the necessary legislature.**

- **The Department of Water Affairs seeks to improve service delivery through regulation; ensuring water services, (drinking water quality SANS: 241) that complies with requirements.**
- **It is clear that output-based regulation would not suffice in an environment where there is a lack of expertise and understanding, thus the Incentive-based regulation was then introduced**
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Legislation Framework

- **The owner of a waterworks, must, from the date of its registration, under regulation 3, ensure that that a Waterworks Supervisor, a Process Controller are employed as set out in schedule. These people must have NQF recognized qualifications.**

- **NQF skills programs**
- **Skills development has been given a central role in the requirements for ensuring regulatory compliance.**
- **Skills programs (plant operation, keeping of records, safety, conducting tests, reporting data etch)**

- **By introducing short courses we register the learners against the above mentioned SAQA qualification 136 credits.**



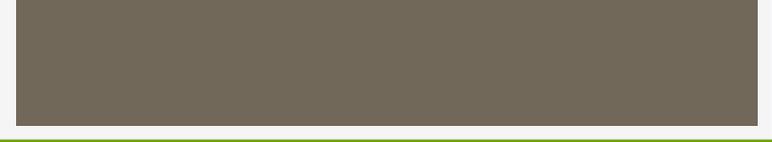
- **Students will be registered, and will receive a student number. All credits for short courses, or skills programs, can be” banked”, for the learners, until enough credits are obtained for a full NQF qualification. A certificate will only be awarded once the correct amounts of credits, assessment, and moderation of the modules have taken place.**

- ***“NQF certificate programs “***
- **NQF certificate programs cover all aspects of the curriculum, and will therefore take a process controller up to the, DWA Class II, III, IV and V registration, depending on the years of experience and qualification achieved.**

Conclusion

- **SAQA Qualification ID 58951 136 credits**
- **NQF certificate programs cover all aspects of the curriculum, and will therefore take a process controller up to the, DWA Class II, III, IV, registration, depending on the years of experience and qualification achieved.**
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o The program are integrated into lifelong learning and certified career paths

All applicants are requested to submit:

- **Name and surname**
- **Copy of I.D. Document**
- **Certificates of highest school qualifications**
- **Process controller class registration**

- **Candidates will have to do a written assessment, to determine the training levels required. (NQF Level 1,2,3,4 or a NQF skills program)**
- **On the basis of this assessment, and should, applicants meet the competency, training records can be updated, and training can commence.**

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Drinking Water

	Course credits	Days	Number of learners
1. The water cycle M130	5	2	2
1. Stay healthy, safe and productive, a work guide M276	12	3	2
1. Demonstrate knowledge of water treatment process M131	8	3	2
1. Operate coagulation flocculation & sedimentation M132	10	4	2
1. Operate media filtration M279	9	3	2
1. Operate chlorine dosing process M 134	5	3	2
1. Conduct sampling & process control tests M285	8	4	3
1. Operate chemical dosing systems and interpret MSD M284	14	4	2

Waste Water

Description/Unit standard/Module no	Course credits	Days	Number of learners
1. Demonstrate knowledge of the waste water process M 129	8	2	2
1. Operate inlet works M 145	5	2	
1. Operate primary settling processes in waste water treatment m 144	5	1	2
1. Demonstrate knowledge of activated sludge processes in waste water M187	6	3	2
1. Handle and dispose of water & waste water sludge	5	2	2

- **Exclusion**
- **Exclusions refer to transport costs to a training venue**

- **Certificate: Water and Wastewater Treatment Operations**
- **SAQA ID 58951 NQF2 (Water & Wastewater Electives) 136 credits to be**
- **Introduced in short courses**
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- **Should the Municipality not have trained coaches and assessors they can be**
- **trained at an extra cost of**
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- **Commencement Agreement to be signed**

Regulation 2834

- **Section III relates to classification and registration of Process Controllers in terms of the National Water Act, no employee may operate or work on a water works unless he/she is registered with the National DWAE (regulator)**

- **Most of the employees from the 5 x district municipalities, has been re-registered according to the data collected, received, and captured. Some process controller data, are still incomplete due, to lack of proof of educational and work experiences.**

- **A challenge exist due to fact that 90% of process controllers have only received an class 0 classification**
- **The plants do not comply to the minimum of employees required per shift, and as per plant registration and classification of process controllers as per regulation 2834.**

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- **Out of this data it was noticeable that a great number of process controllers are over 45 years and thus, capacity building remain a problem, due to retiring workforce and literacy challenges**

- **Water and waste water are a critical scarce, specialised field, and requires highly skilled personnel , to comply Regulation 2834, final water quality, risk profiling and protocol according to SANS 242:1:2 regulation and general plant compliance and operation.**

- **Additional trained staff, need to be appointed, to comply to requirements of Regulation 2834 Draft 17 as per plant classification, how many employees per shift, and the level of operator classification, required. Some of the employees working on the plants are general workers, and have had no training to perform plant operations, and are not allowed to work on the plants according to Regulation 2834 schedule 17.**

- **No coaching and mentoring are taking place, and there is no indication of personnel development, training and continuous capacity building. Regulation 2834 schedule 17, stipulates that all process controllers should obtain a minimum of 30 credits, per year for compliance**
- **Blue and Green Drop bonus point can also not be obtained, unless proof of training are submitted.**

proposed training program

- **ABET for the young illiterate below 50 years**
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- **Literate process controllers 30 credit skills packages OR NQF Learnerships on different levels**
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- **Old literate technical skills program specially modified for them**
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- **Blue Drop compliance training 30 credits per year skills program packages Regulation 2834 (schedule 17)**

THANK YOU

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