

**MONTHLY REPORT ON THE GREEN DROP WASTE WATER QUALITY COMPLIANCE FOR  
UTHUKELA DISTRICT MUNICIPALITY  
MONTH : APRIL 2020**

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**Compiled by** : GENERAL MANAGER: MUNICIPAL HEALTH SERVICES & WSA

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Portfolio (WSH) : 09/06/2020

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**1. PURPOSE**

For the committee to note the Green Drop Waste Water quality compliance report per system for the month of April 2020.

**2. BACKGROUND / DISCUSSION**

The Green Drop regulation process measures and compares the results of the performance of the Water Services Authorities and their Providers and subsequently rewards or penalizes according to the minimum requirements.

The program focuses on the entire business of the municipal wastewater services. The risk analysis focuses on the wastewater treatment function. This allows the regulator to have insight into the treatment components of the municipal business; it also allows the municipality to identify and prioritize the critical risk areas within its Waste Water Treatment Plants processes and to take the necessary corrective measures in order to mitigate the risks. On the 1<sup>st</sup> of October 2018, the Green Drop Certification programme migrated to the DWS Integrated Regulatory Information System.

**3.1 REPORT**

**WASTE WATER:**

Sewage treatment is the process of removing contaminants from wastewater, primary from household sewage and industries. The treatment process includes physical, chemical and biological processes to remove these contaminants and produce environmentally safe treated wastewater.

**WASTE WATER QUALITY INDICATORS:**

Quality indicators are determined through Laboratory tests to assess suitability of wastewater for disposal or re-use. The tests selected measure physical, chemical and biological characteristics of the wastewater.

During the month of April 2020, nine (9) Waste Water Treatment Works were monitored. The Wembezi Ponds control samples were taken but due to no outflow, no compliance sample was taken. Therefore, no values are included in the attached Waste Water Quality Compliance Report.

**3.1.1 Microbiological quality:** Refers to the presence of organisms that cannot be individually seen by the naked eye, such as protozoa, bacteria and viruses. Many of these microbes are associated with the transmission of infectious water-borne diseases such as gastroenteritis and cholera. Microbiological quality can be improved by increasing or optimising chlorination in the final sewage outflow.

During the month of April 2020, no microbiological analysis of Waste Water Treatment Works was conducted due to chemical challenges currently being experienced in the UThukela Internal Laboratory.

**3.1.2 Physical quality:** Solid material in wastewater can either be dissolved, suspended or settled and can be reduced by conducting on-site analysis and implementing the necessary changes in plant operations. (Example: de-sludge frequently to reduce build-up of sludge)

The Bergville WWTW, Colenso WWTW, Estcourt WWTW, Ezakheni WWTW, Ladysmith WWTW and Winterton WWTW complied with the requirements of acceptable physical quality for wastewater.

**3.1.3 Chemical quality:** Virtually any chemical may be found in wastewater, but routine testing is commonly limited to a few chemical elements of significance. The nature and concentration of dissolved organic substances in domestic/industrial inflow contributes to the organic load on the sewage treatment works. Plant operations needs to be optimised in order to improve the chemical quality of the final effluent.

The Bergville WWTW, Ezakheni WWTW, Ladysmith WWTW and Winterton WWTW complied with the requirements of acceptable chemical quality for wastewater.

### **3.2 SAMPLES TAKEN**

According to Department of Water and Sanitation General Waste Water Quality Standards, a minimum of 36 samples must be taken. Total number of Waste Water samples taken for the month of April 2020: 9

### **3.3 INDUSTRIAL SAMPLING**

No industrial sample run was conducted during the month of April 2020 due to the COVID 19 Lockdown period. Average COD values were used to generate accounts for submission to the Finance Dept. for billing procedures.

## **ALFRED DUMA LOCAL MUNICIPALITY & INKOSI LANGALIBALELE LOCAL MUNICIPALITY**

NIL

### **4. FINANCIAL IMPLICATIONS**

2019/2020 Budget

### **5. LEGISLATION**

5.1 Waste water discharge standards DWA 2010 guideline

5.2 National Water Act (no 36 of 1998)

5.3 DWS Green Drop Requirements (IRIS)

### **6. ATTACHMENT**

Waste Water Quality Compliance Report for the month of April 2020.

### **7. RECOMMENDATION**

1. That the committee notes the report on the April 2020 Green Drop Waste Water Quality Compliance.
2. That the committee supports the submission of the report to Water, Technical and Health Portfolio Committee.

*For noting*

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**BH KHOZA**  
**GENERAL MANAGER: MHS&WSA**

06/05/2020

**WASTE WATER QUALITY COMPLIANCE REPORT FOR THE MONTH OF MARCH 2020 AND APRIL 2020 COMPARATIVE**

<b>MICROBIOLOGICAL COMPLIANCE</b>				<b>PHYSICAL COMPLIANCE</b>				<b>CHEMICAL COMPLIANCE</b>						
Discharge Standard: ➤ Faecal Coliform - 1000 cfu/100ml				Discharge Standard: ➤ Electrical Conductivity - < 170mS/m above Intake ➤ pH – 5.5 – 9.5 pH Units ➤ Suspended Solids – 25.0mg/l				Discharge Standard: ➤ COD - 75mg/l ➤ Ortho phosphate – 10mg/l ➤ Ammonia as N – 3mg/l						
WWTW	Mar - 2020 % Compliance	Rating	Apr - 2020 % Compliance	Rating	WWTW	Mar - 2020 % Compliance	Rating	Apr - 2020 % Compliance	Rating	WWTW	Mar - 2020 % Compliance	Rating	Apr - 2020 % Compliance	Rating
Colenso	0.00%	U	Not analysed	E	Colenso	99.90%	E	99.90%	E	Colenso	66.66%	U	50.00%	U
Ezakheni	50.00%	U	Not analysed	E	Ezakheni	99.90%	E	99.90%	E	Ezakheni	99.90%	E	99.90%	E
Ladysmith	0.00%	U	Not analysed	E	Ladysmith	99.90%	E	99.90%	E	Ladysmith	99.90%	E	99.90%	E
Estcourt	0.00%	U	Not analysed	E	Estcourt	87.50%	E	99.90%	E	Estcourt	62.50%	U	0.00%	U
Wembezi Ponds	No compliance sample available	-	compliance sample available	-	Wembezi Ponds	No compliance sample available	-	compliance sample available	-	Wembezi Ponds	No compliance sample available	-	compliance sample available	-
Ekuvukeni	0.00%	U	Not analysed	U	Ekuvukeni	87.50%	U	25.00%	U	Ekuvukeni	87.50%	U	50.00%	U
Bergville	0.00%	U	Not analysed	E	Bergville	87.50%	E	99.90%	E	Bergville	0.00%	U	99.90%	E
Winterton	99.90%	E	Not analysed	E	Winterton	99.90%	E	99.90%	E	Winterton	99.90%	E	99.90%	E
<b>UTHUKELA DM</b>	<b>18.74%</b>	<b>U</b>			<b>UTHUKELA DM</b>	<b>82.71%</b>		<b>89.20%</b>		<b>UTHUKELA DM</b>	<b>64.54%</b>	<b>U</b>	<b>71.37%</b>	<b>U</b>

Compliance below 80% - U      Compliance between 80 – 90% - F      Compliance between 90 – 95% - G      Compliance above 95% - E