

## Ekurhuleni Metropolitan Municipality Water Quality Report 2009

According to the Constitution, the Municipal Structures Act and the Water Services Act, responsibility for the provision of water and sanitation services lies with the municipalities. Ekurhuleni Metropolitan Municipality has to ensure the provision of effective, efficient and sustainable water services. The provision of water services also includes the communication of activities related to, amongst others, hygiene promotion, the wise use of water and the quality of our water.

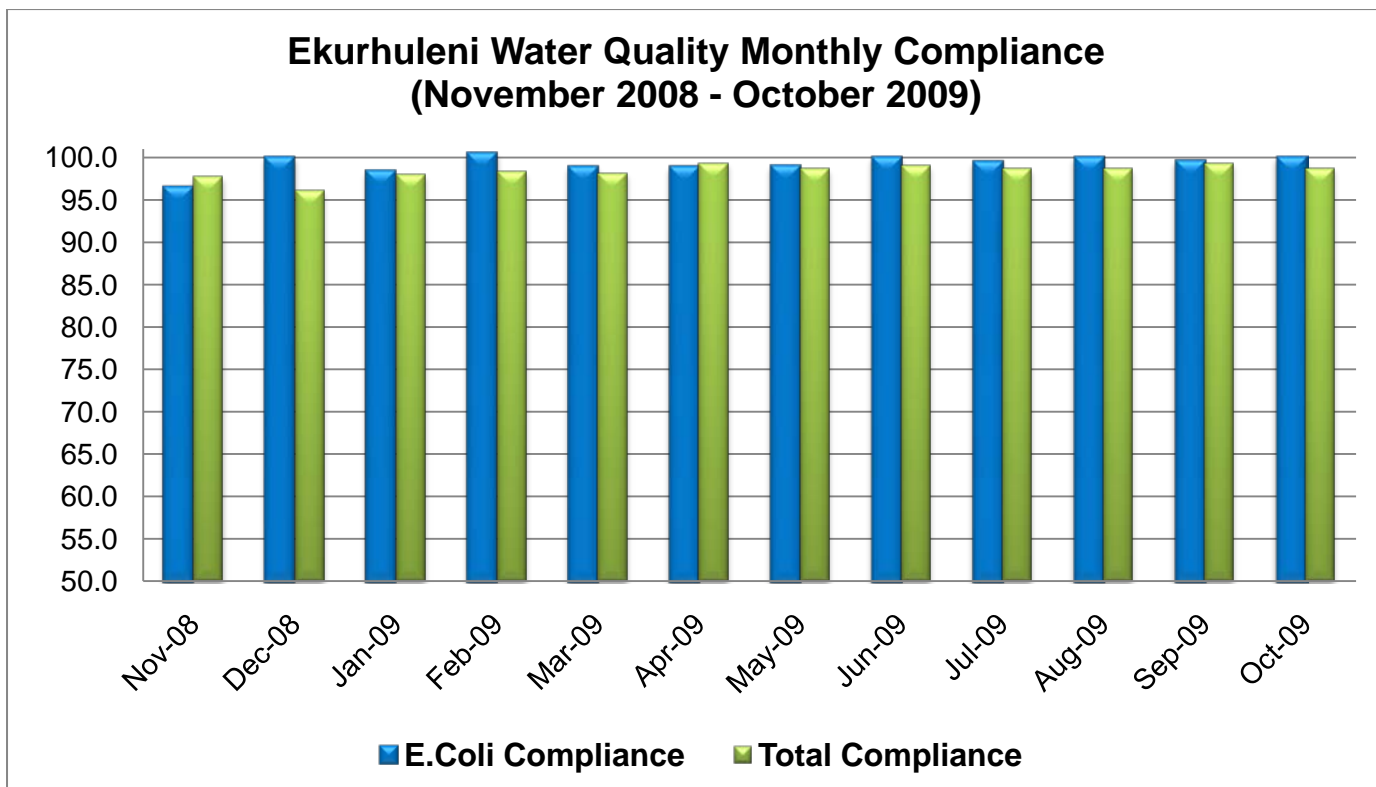
In 2009 Ekurhuleni Metropolitan Municipality received the prestigious Blue Drop certification, issued by the Department of Water Affairs. This prestigious award is only granted if 95% compliance with the Blue Drop Certification programme criteria is met. The Blue Drop status achieved by Ekurhuleni is indicative of Ekurhuleni's efficacy with regards to overall management of drinking water quality.

**Water quality** is the physical, chemical and biological characteristics of water. It is most frequently used by reference to a set of standards against which compliance can be assessed. Drinking water quality is subject to the South African National Standard SANS 421 Drinking Water Specification. According to SANS 241, it is recommended that municipalities publish a yearly report on the quality of the water supplied to its consumers. As part of our efforts towards transparency we are publishing this report highlighting Ekurhuleni's Water Quality compliance with the SANS 241 regulations.

**Microbiological Compliance:** Microbial water quality is the state of the water with respect to the absence (good water quality) or presence (poor water quality) of micro-organisms. Microbial water quality is usually indicated by reporting the number of indicator organisms (E. Coli) present in a given volume of water. SANS 241 requires 97% compliance.

**Total Compliance:** Total compliance is inclusive of both microbiological compliance and chemical compliance. Chemical water quality refers to the nature and concentration of dissolved substances such as salts, metals and organic chemicals. SANS 241 requires min 95% compliance.

As indicated in the graph below, Ekurhuleni Metropolitan Municipality has met all the compliance requirements for SANS 241.



**Figure 1:** Monthly E. Coli (microbiological) and total compliance of Ekurhuleni potable water to SANS 241 requirements.

**Table 1:** Full Water Quality Compliance Report for the year from November 2008 to October 2009

Element	Number of Analyses	Number of Compliant Analyses	Percentage Compliance
Aluminium as Al	149	148	99.3
Calcium as Ca	5	5	100.0
Cadmium as Cd*	7	0	0.0
Chloride	145	145	100.0
Free Chlorine	1 607	1 610	100.2
Cobalt as Co	39	39	100.0
Conductivity	2 378	2 378	100.0
Chromium as Cr	39	39	100.0
Copper as Cu	39	39	100.0
E Coli Form Bacteria	2 446	2 429	99.3
Fluoride as F	150	150	100.0
Iron as Fe	196	182	92.9
Mercury as Hg*	97	57	58.8
Heterotrophic Plate Count	2 448	2 441	99.7
Potassium as K	38	38	100.0
Magnesium As Mg	38	38	100.0
Manganese as Mn	149	146	98.0
Ammonia Nitrogen as N	2	2	100.0
Sodium as Na	149	149	100.0
Nickel as Ni	39	39	100.0
Nitrate and Nitrite	151	151	100.0
Orthophosphate as P	1	1	100.0
Lead as Pb	146	142	97.3
pH	2391	2 390	100.0
Phenols*	6	0	0.0
Sulphates as SO <sub>4</sub>	147	147	100.0
Total Alkalinity	1	1	100.0
Total Coliform Bacteria	2 448	2 424	99.0
Total Dissolved Solids	6	6	100.0
Total Hardness	1	1	100.0
Total Chlorine	574	572	99.7
Turbidity	2 327	2 291	98.5
Vanadium as V	6	6	100.0
Zinc as Zn	39	39	100.0
<b>Total</b>	<b>18 631</b>	<b>18 355</b>	<b>98.5</b>

**\* Notes:** The detection limits of our laboratory equipment cannot reach the very low detection limits required for SANS 241 compliance for Cadmium, Mercury and Phenols. It important to note that even though these parameters are reported as non-compliances, they are not really non-compliances but appear as such due to the limitations of our laboratory equipment. These parameters are monitored by Rand Water up to the detection limits required by SANS 241 and are always within limits. These parameters are, therefore, not a risk to the health of our consumers.

#### **Complaints:**

Should the consumers have any complaints regarding the quality of their water, they must please report to the complaints call centre at 0860 543 000. The residents will receive a reference number that will allow the progress of their complaint to be monitored. Residents are reminded to have their account number, address and contact details at hand when they call.