



water & forestry

Department:
Water Affairs and Forestry
REPUBLIC OF SOUTH AFRICA

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MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

NATIONAL ASSEMBLY: QUESTION 186 FOR WRITTEN REPLY

A draft reply to the above-mentioned question asked by Ms A T Lovemore (DA), is attached for your consideration, please.

DIRECTOR-GENERAL

DATE: 02/07/09

DRAFT REPLY APPROVED/ AMENDED

MS B P SONJICA, MP
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

DATE: 14. 07. 2009

NATIONAL ASSEMBLY

FOR WRITTEN REPLYQUESTION NO 186

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 19 JUNE 2009
(INTERNAL QUESTION PAPER NO 3)

186. Ms A T Lovemore (DA) to ask the Minister of Water and Environmental Affairs:

- (1) What were the results of the analysis of the water samples taken from the river water in the area after eight people died in Mpheko village in the Eastern Cape;
- (2) whether water from rivers are regularly tested for bacteriological contamination; if not, why not; if so, which rivers;
- (3) whether any bacteriological analysis of water from any other rivers in the past three months have revealed a risk to human health; if not, how was this conclusion reached if so, what are the relevant details?

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REPLY:

- (1) Table 1 below reflects the results of the water samples taken from two sources in Mpheko from which the community of the deceased got its water after the disruption of municipal supply.

Table 1

Determinant	Units	Recommended SANS 241 standard	Phantsi kwentaba spring	Mpeko River
Colour	mgPt-Co/l	<20	129	1
Conductivity	mS/m	< 150	14	50
Dissolved calcium	mgCa/l	< 150	2.6	28
Dissolved Magnesium	mg Mg/l	< 70	2.6	19
E. coli	Colonies per100ml	0	1190	258
Flouride	Microgaram /l	1000	840	290
Nitrate	mgN/l	10	0.7	1.4
Odour	Descriptive	Not specified	0	0
Oxygen absorbed	mgO2/l	Not specified		
pH	pH units	5.0-9.5	7	7.9<
Potassium	mgK/l	< 50	0.8	0.8
Sallmonella	Present or detected	Not detected		
Sodium	mgNa/l	< 200	22	39
Soluble organic carbon	mgC/l	< 10		

Determinant	Units	Recommended SANS 241 standard	Phantsi kwentaba spring	Mpeko River
Sulphate	mg SO ₄ /l	< 400	72.1	9.68
Total Iron	mg Fe/l	< 0.2	6.28	0.24
Total alkalinity	mg CaCo ₄ /l	Not specified	48	170
Total coliforms	Colonies per 100ml	0	1290	336
Total hardness	mgCaCo ₄ /l		17	148
Total manganese	mgMn/l	< 0.1	0.11	0.02
Turbidity	NTU	< 1	239	9.8

- (2) Yes, water is tested for bacteriological contamination in all major rivers in WMA 12 (the affected area) and also in those rivers where there are waste water discharges.

Below is a list of all rivers which are regularly tested:

Mthatha Area: Mthatha, Mbhashe, Mgwali, Xuka, Mngazana, Slang, Mthakatye, Tsitsa, Mjanyane, Siphethu, Cefane, All Saints, Xokonxa, Mngazi, Ntafufu, Mzintlawa, Isinangwana, Ngododo, Cumngce and Hlambehlala Rivers.

East London Area: Nahoon, Kubusie, Buffalo, Keiskamma, Yellowwoods, Komani, Klipplaat, Thorn and Hex Rivers.

- (3) Yes, since most of the rivers mentioned below run through human settlements, it is expected that they would reflect varying degrees of cfu/100ml, which is indicative of faecal contamination.

The results below reveal a risk to human health if such water is consumed without any form of treatment as the South African Drinking Water Guidelines indicate that water which is safe for human consumption should show 0 cfu/100ml.

It should be noted that the Department discourages drinking directly from any water resource by humans as its mandate is to manage water resources for fitness for use not for direct drinking purposes.

Table 2 and 3 below reflects the bacteriological analysis of the samples.

Table 2- Mthatha Area

River Name	No. monitoring points	Frequency	Range in cfu/100ml
Mthatha	10	Monthly	4 points above town ranges from 488-2400 Point 5 – 10 reads > 2400
Mbhashe	3	Bi-monthly	654-2400
Mgwali	2	Bi-monthly	687-2400
Xuka	2	Bi-monthly	285 - 2400
Mngazana	1	Bi-monthly	816- 2400
Slang	2	Monthly	1129- 2400
Mthakatye	2	Bi-monthly	1733- 2400
Tsitsa	3	Bi-monthly	567- 2400

River Name	No. monitoring points	Frequency	Range in cfu/100ml
Mzimvubu	3	Bi-monthly	205- 2400
Tina River	2	Bi-monthly	326- 2400
Mjanyane	2	Monthly	1589- 2400
Siphethu	2	Monthly	260- 1990
Cefane	2	Monthly	1121- 2400
All saints	2	Monthly	548- 2400
Xokonxa	2	Monthly	>2400
Mngazi	1	Bi-monthly	550- 2400
Ntafufu	1	Bi-monthly	250- 2400
Mzintlava	2	Bi-monthly	154- 2419
Isinangwana	2	Bi-monthly	1545- 2400
Ngododo	2	Quarterly	>2400
Cumngce	2	Quarterly	>2400
Hlambehlala	2	Quarterly	890- 2400

Table 3: East London Area

River Name	No. monitoring points	Frequency	Range in cfu/100ml
Nahoon	10	Monthly	138 - 2420
Kubusie	9	Monthly	122 - 2420
Buffalo	12	Monthly	129 -3600 @ Mlakalaka weir KWT Railway samples 435 - 2400
Keiskamma	8	Monthly	172- 2420
Yellowwoods	4	Monthly	140 - >2400
Komani	2	Monthly	178 - 2420
Klipplaat	2	Monthly	400 - >2400
Thorn	2	Monthly	135 - 2420
Hex	2	Monthly	312 - 2800