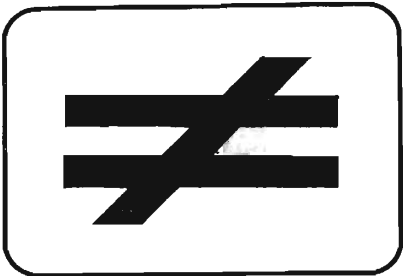


PC 11/11/3/6



WATER



NO 6

"Over half the population of the Third World lacks safe drinking water. Three quarters have no sanitation at all. Estimates are that 80% of the world's diseases are linked to water."
Development Vol. VIII No 9 November 1980

THE IMPORTANCE OF WATER

Man makes direct contact with water in food and drink, in washing and in recreation. Contact with water cannot be avoided so care must be taken to ensure that such contact does not endanger the health of the community, because this can happen if precautions are not taken to eliminate harmful bacteria from water supplies. Water is essential to life and in the first instance there should be an adequate supply and secondly it must be clean or be able to be made clean. Water-associated diseases include bilharzia, cholera and typhoid

BILHARZIA

There is no immunization against this disease. Education in hygiene in particular, and public health measures where possible, are the best in first line prevention.

CHOLERA

Nearly 2000 people have been treated for cholera and 27 have died since an epidemic broke out in the eastern Transvaal in late 1980. There is no danger of this disease breaking out in organized communities with clean drinking water.

TYPHOID

The debilitating effects of the drought in KwaZulu increase typhoid's impact - Greytown hospital records up to 50% more cases of typhoid and gastroenteritis admitted this year. Prevention depends mainly on proper treatment of sewage and purification of water supplies.

SWEETWATERS

This community is part of the Zwartkop "location" established in 1846 for approximately 8000 people. It has grown over the years and in 1971 the figure was 80 000, the recent census put the population at 106 000 and aerial surveys suggest that the figure is probably closer to 200 000.

The area is administered under the Zulu tribal system which means that it has a chief and indunas controlling the community and is part of the Vulindlela regional tribal authority.

In February 1971 a press headline read: "Plight of Zwartkop" (Daily News 18/2/71) and exposed the water problem to the citizens of Natal; nine years later as a result of serious drought, people began to show some concern for the "plight of Zwartkop". In July 1980 the KwaZulu Government ordered a probe into the conditions. (Natal Witness 18/7/80).

The Pietermaritzburg City Engineer called on the KwaZulu Government to seriously consider installing a water reticulation system at Sweetwaters and surrounding areas" (NW 7/8/80). He also said that an emergency water supply could be drawn from the Mount Michael water main at Sweetwaters as a short-term solution. "He called for the medium to long-term solution to be given urgent attention by the KwaZulu Government and the Umgeni Water Board ... (and) that the Council formally approach these authorities and recommended that urgent action be taken" (NW 21/8/80). However, KwaZulu Government representatives told a special meeting that "the short-term situation in the Sweetwaters area was not grave" (NW 21/8/80).

The information and table given overleaf suggests that the situation is unsatisfactory and that water supplies need to be improved for the whole Sweetwaters area.

PACSA

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WATER ANALYSIS : SWEETWATERS

Twelve water points in Sweetwaters were tested over various periods from August 1979 to March 1981. The standard given to the water is based on two tests which give:

- * the probable number of coli like bacteria (probably but not always of faecal origin).
- * the number of faecal coli per 100 millilitres of water.

The presence of faecal coliform bacteria shows that the water has probably been polluted by excreta. Although this in itself does not provide conclusive evidence of danger, it is enough to suggest that the water is potentially dangerous. Laboratory examination of a single water sample does not justify the conclusion that all is well and that the water is drinkable. Contamination is often intermittent, e.g. after a heavy rain, and may not be detected by checking a single sample.

The table below makes it evident that all is not well in the Sweetwaters area and that something must be done.

WATER POINT	Makalibiri's (spring with storage)	Caluga (stormwater drain)	Emadvaleni (spring)	Clinic (borehole)	Zayeka Road (stream)	Kwa Zondi (spring)	Kwa Mpulo (partially fenced waterhole)	Epaklani (spring)	Kwa Shange (spring)	Kwa Mabhuzi (spring)	Malladie (Rhuselo's protected spring)	Kwa Nyuba (spring)
PERIOD OF TESTS	5/80 to 3/81	8/79 to 3/81	7/80 to 3/81	7/80 to 3/81	8/79 to 8/80	8/80 to 9/80	8/79 to 5/80	8/80 to 9/80	8/80 to 9/80	8/80 to 9/80	8/80	5/80
STANDARD OF WATER	excellent to unsatisfactory	unsatisfactory to excellent	unsatisfactory	excellent to unsatisfactory	unsatisfactory	excellent to unsatisfactory	unsatisfactory	excellent to suspicious	excellent to satisfactory	excellent to unsatisfactory	excellent	unsatisfactory
RANGE OF PROBABLE NO. OF PRESUMPTIVE COLI PER 100 ml WATER	1 to 180+	0 to 50	25 to 180+	0 to 180+	25 to 180+	0 to 25	90 to 180+	0 to 6	0 to 3	0 to 90	0	180+
RANGE OF NO. OF FAECAL COLI PER 100 ml WATER	0 to 13	0 to 6	0 to 180+	0 to 160	7 to 13	0 to 8	1 to 90	0	0	0 to 12	0	0

A QUESTION OF PRIORITIES

The 1980 edition of the Braby's Directory to Pietermaritzburg states that the city has: "an aggregate capacity of 182 megalitres, which ensures an ample supply of pure water to all parts of the water supply area, and allow(s) for unrestricted expansion of the City's services".

PACSA acknowledges that developing water reticulation and water sanitation systems to Sweetwaters will be costly -

- BUT ... the State spends R5.5 million a day on the defence force.
 ... the Province spends R41 million on a new hospital for whites.
 ... the Municipality budgets R193 000 for the Republic Festival.
 ... the Church spends hundreds of thousands of rands on buildings in Pietermaritzburg.

Thus it cannot be said that we cannot afford it. It is that our present priorities make no provision for it.

CHRISTIAN RESPONSE

If Christ is the Living Water - we as his hands and his feet must do all in our power to ensure that water for living becomes a reality for our neighbour.