NITRATE IN GROUNDWATER

Why is it a hazard and how to control it?

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Report to the Water Research Commission by
CSIR, Natural Resources and the Environment,
Stellenbosch

WRC Report No. TT 410/09

August 2009

Obtainable from

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The publication of this report emanates from a project entitled *Managing Anthropogenic Nitrogen Input for Protecting Groundwater Resources: Conveying Research Results to Government Authorities, Water Supply Agencies, other Stakeholders and Consultants*
(WRC Project No. K8/603

ISBN 978-1-77005-873-6

Printed in the Republic of South Africa

ABSTRACT

The occurrence of high nitrate levels in groundwater has to be recognised as a threat to humans and animals. Infant methaemoglobinaemia and nitrate poisoning of livestock occur at unexpected times and places. An important reason is that nitrate concentrations are variable, particularly under extreme climatic conditions. All instances of nitrate pollution related to anthropogenic sources can be managed to reduce or eliminate nitrogen inputs and for protecting groundwater resources. Hence the purpose of this book is to present the facts related to the health hazard, describe processes leading to nitrate pollution of groundwater, and to present strategies to eliminate nitrate pollution.

ACKNOWLEDGEMENTS

Research on nitrate in groundwater has been an on-going topic for decades and in the southern African region it was supported by several institutions while collaboration across country boundaries ensured progress in getting to grips with the issue.

Locally, funding for the research was provided by the Water Research Commission, CSIR and the Department of Science and Technology. Participants and collaborators are the Department of Geological Survey and the Department of Water Affairs, Botswana, the Federal Institute for Geosciences and Natural Resources (BGR), Germany, the Ministry of Agriculture, Water and Rural Development, Namibia, as well as the Department of Water Affairs and Forestry, South Africa, and the Department of Veterinary Science, University of Pretoria. All of these institutions made valuable contributions to the study of nitrate by providing data, logistics, and the funding of their own research.

NOTE

As it is customary in South Africa, nitrate concentrations in this publication are generally expressed as an equivalent quantity of nitrogen, i.e. NO_3-N in mg/L. As some of the papers and maps were compiled also for use in the neighbouring countries using different conventions, some maps and graphs also show the equivalent concentrations expressed as nitrate (NO_3).

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