

NITRATE IN GROUNDWATER

Why is it a hazard and how to control it?

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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.

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NOTE

As it is customary in South Africa, nitrate concentrations in this publication are generally expressed as an equivalent quantity of nitrogen, i.e. $\text{NO}_3\text{-N}$ 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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