



Nitrate, ammonia and dissolved reactive phosphorus concentrations, NGMP sites, 2004–13

Metadata

File Identifier

8cc69f39-cc5d-848f-7769-27a2809462e3

Language

eng

Character Set

Character Set Code

utf8

Hierarchy Level

Scope Code

dataset

Hierarchy Level Name

dataset

Contact

Responsible Party

Organisation Name

Environmental Reporting, Ministry for the Environment and Statistics New Zealand

Position Name

Analyst

Contact Info

Contact

Address

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Delivery Point

23 Kate Sheppard Place, PO Box 10362

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Country

New Zealand

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Environmental.Reporting@mfe.govt.nz

Role

Role Code

distributor

Date Stamp

Date

2016-02-16

Metadata Standard Name

ANZLIC Metadata Profile: An Australian/New Zealand Profile of AS/NZS ISO 19115:2005, Geographic information - Metadata

Metadata Standard Version

1.1

Reference System Info

Reference System

Reference System Identifier

Identifier

Code

2193

Identification Info

Data Identification

Citation

Citation

Title

Nitrate, ammonia and dissolved reactive phosphorus concentrations, NGMP sites, 2004–13

Date

Abstract

"At high concentrations, nitrate–nitrogen may have health impacts where it is for untreated drinking water, and it is also plant nutrient which can contribute to excessive plant and algae growth, potentially damaging the ecological health of rivers and lakes. Ammoniacal nitrogen can be toxic to fish, animals and people at moderate concentrations. Nitrate can be an indicator of general groundwater degradation as often it is accompanied by other pollutants from human activities, such as faecal pathogens and pesticides. Dissolved reactive phosphorus is a plant nutrient which can contribute to excessive plant and algae growth, damaging the ecological health of rivers and lakes if it enters surface water. Surplus phosphorus can originate on land from fertilizer or animal manure, where it can be drained or leached into groundwater as dissolved reactive phosphorus. It can also occur naturally in aquifers as a result of water–rock interaction. This dataset relates to the "Groundwater quality: phosphorus" and "Groundwater quality: nitrogen" measures on the Environmental Indicators, Te taiao Aotearoa website. "

Status

Progress Code

completed

Point Of Contact

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Resource Maintenance

Maintenance Information

Maintenance And Update Frequency

Maintenance Frequency Code

irregular

Resource Format

Format

Name

*.xml

Version

Unknown

Descriptive Keywords

Keywords

Keyword

New Zealand

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Jurisdictions

Date

Edition

Version 2.1

Edition Date

Date

2008-10-29

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-jurisdic.xml#anzlic-jurisdic>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Descriptive Keywords

Keywords

Keyword

WATER

Keyword

WATER-Quality

Type

Keyword Type Code

theme

Thesaurus Name

Citation

Title

ANZLIC Search Words

Date

Edition

Version 2.1

Edition Date

Date
2008-05-16

Identifier

Identifier
Code
<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-theme.xml#anzlic-theme>

Cited Responsible Party

Responsible Party
Organisation Name
ANZLIC the Spatial Information Council

Role

Role Code
custodian

Resource Constraints

Legal Constraints

Use Limitation

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Access Constraints

Restriction Code
license

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Language

eng

Character Set

Character Set Code

utf8

Topic Category Code

environment

Extent

EX _ Extent

Geographic Element

EX _ Geographic Description

Identifier

Authority

Citation

Title

ANZMet Lite Country codelist

Date

Edition

Version 1.0

Edition Date

Date

2009-03-31

Identifier

Identifier

Code

<http://asdd.ga.gov.au/asdd/profileinfo/anzlic-country.xml#Country>

Cited Responsible Party

Responsible Party

Organisation Name

ANZLIC the Spatial Information Council

Role

Role Code

custodian

Code

nzl

Extent

EX _ Extent

Geographic Element

EX _ Geographic Bounding Box

168.062024961177.983651864-46.3112305763-34.8484765361

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.mfe.govt.nz/layer/52707-nitrate-ammonia-and-dissolved-reactive-phosphorus-concentrations-ngmp-sites-200413/>

Data Quality Info

DQ _ Data Quality

Scope

DQ _ Scope

Level

Scope Code

dataset

Level Description

Scope Description

Other

dataset

Lineage

LI _ Lineage

Statement

Source: GNS Science Method: "Nitrogen concentration in groundwater is measured by taking a sample of water from a well, which is then sent to a laboratory for chemical analysis. Nitrate is measured and reported as the elemental nitrogen equivalent, described as nitrate–nitrogen, or NO₃–N. Concentrations of nitrate–nitrogen above 11.3 g/m³ can affect whether groundwater can be safely used for drinking water supply (Ministry of Health, 2008). Nitrate–nitrogen is also a plant nutrient which can contribute to excessive plant and algae growth, damaging the ecological health of rivers and lakes, if it enters surface water. Ammoniacal nitrogen includes readily available forms of ammonia and ammonium. These are collectively reported as the elemental nitrogen equivalent; ammoniacal nitrogen, or NH₄–N. Dissolved reactive phosphorus concentration in groundwater is measured by taking a sample of water from a well, which is then sent to a laboratory for chemical analysis. The laboratory detection limit for DRP was either 0.004 g/m³ or 0.002 g/m³, depending on the site or laboratory used. GNS Science manages a National Groundwater Monitoring Programme (NGMP). This involves quarterly sampling by regional council staff of over 100 groundwater monitoring sites around New Zealand. Many of these sites monitored are for non–potable uses (e.g. irrigation and stock drinking water). Sources of nitrogen include animal urine, sewage discharges, leaking septic tanks, dairy effluent and fertilizers. The form that the nitrogen takes in the groundwater is influenced by the amount of oxygen available in the aquifer (underground water bearing rock or

sediment). Aquifers rich in oxygen, often those which are shallow and have young water, store nitrogen as nitrate (NO₃). Aquifers with low oxygen concentrations instead store nitrogen as ammoniacal nitrogen (NH₄-N). The accuracy of the data source is of high quality. Reference: Ministry of Health (2008). Drinking-water standards for New Zealand 2005 (revised 2008). Available from www.health.govt.nz."

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