



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

### Metadata

#### File Identifier

33d7125b-2869-dc49-b83d-0ee80f7a621b

#### 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

##### Address

##### Delivery Point

23 Kate Sheppard Place, PO Box 10362

##### City

Wellington 6143

##### Country

New Zealand

##### Electronic Mail Address

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****Responsible Party****Organisation Name**

Environmental Reporting, Ministry for the Environment and Statistics New Zealand

**Position Name**

Analyst

**Contact Info****Contact****Address****Address****Delivery Point**

23 Kate Sheppard Place, PO Box 10362

**City**

Wellington 6143

Country

New Zealand

Electronic Mail Address

Environmental.Reporting@mfe.govt.nz

Role

Role Code

distributor

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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Restriction Code  
license

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 NO<sub>3</sub>-N. Concentrations of nitrate-nitrogen above 11.3 g/m<sup>3</sup> 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 NH<sub>4</sub>-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/m<sup>3</sup> or 0.002 g/m<sup>3</sup>, 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 (NO<sub>3</sub>). Aquifers with low oxygen concentrations instead store nitrogen as ammoniacal nitrogen (NH<sub>4</sub>-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](http://www.health.govt.nz)."

## Metadata Constraints

### Legal Constraints

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