



## Total phosphorus trend, 1989–2013

### Metadata

#### File Identifier

b07dd2c0-9df6-8eeb-29bb-a26c86a5d96e

#### 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  
2016-01-21

#### 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  
Total phosphorus trend, 1989–2013  
Date

##### Abstract

"Phosphorus is an essential nutrient for plant and animal life. Total phosphorus (TP) includes all concentrations in a sample, whether dissolved, in solid form or bound to sediment in the river. Dissolved reactive phosphorus (DRP) is the portion which is dissolved and can immediately support plant and algae growth. Excess phosphorus in our rivers can cause large amounts of (sometimes toxic) algae to grow, which can harm river health and reduce the recreational and aesthetic value of rivers. This dataset relates to the ""River water quality trends: phosphorus "" measure on the Environmental Indicators, Te taiao "

##### Status

Progress Code  
completed

##### Point Of Contact

Responsible Party  
Organisation Name  
Environmental Reporting, Ministry for the Environment and Statistics New Zealand  
Position Name

Analyst

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### 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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Access Constraints

Restriction Code

license

Resource Constraints

Legal Constraints

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Restriction Code

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Use Constraints

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

167.534694771177.881584208-46.3894482934-35.2744930255

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

## Data Quality Info

### DQ \_ Data Quality

#### Scope

##### DQ \_ Scope

##### Level

##### Scope Code

dataset

##### Level Description

##### Scope Description

##### Other

dataset

## Lineage

### LI \_ Lineage

#### Statement

Source: National Institute of Water and Atmospheric Research Method: "In New Zealand, most phosphorus enters our rivers and lakes attached to eroded soil (Elliot et al 2005). While bound to sediment, it is not immediately available as a nutrient for plants and algae. However, over time and in the right conditions bound phosphorus can gradually dissolve, stimulating growth of aquatic algae for many years (Ekholm 1994). Two forms of phosphorus are reported on: – Total Phosphorus, which accounts for all the phosphorus in our rivers regardless of the form it is in. This includes the portion which is dissolved and available to plants and algae now, and that which is bound to soil or sediment and may become available in the future. – Dissolved reactive phosphorus, indicates how much phosphorus is immediately available to support algae and plant growth. Samples for phosphorus analysis are collected from the river at fixed locations, and sent to a laboratory for chemical analysis. NIWA have measured monthly phosphorus consistently at 77 sites along 35 major rivers between 1989 and 2013 enabling changes over time to be calculated. These 35 rivers drain about 50 percent of New Zealand's land area. Trends over shorter time periods can be assessed using regional council data. However, these monitored sites are not representative of the national river network because they tend to be located in more problematic areas. The data was flow-adjusted before trend analysis, to remove the influence of variation in stream flow. Flow adjustment means the reported trends better reflect for the effects of controlling factors other than flow. The accuracy of the data source is of high quality. Reference: Elliott, AH, Alexander, RB, Schwartz, GE, Shanker, U, Sukias, JPS, & McBride, GB (2005). Estimation of nutrient sources and transport for New Zealand using the hybrid mechanistic-statistical model SPARROW. *Journal of Hydrology (NZ)*, 44(1), 1–27."

## Metadata Constraints

### Legal Constraints

### Use Limitation

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