



## Water clarity trends, 2009–2013

### Metadata

#### File Identifier

826064c2-d319-292b-4812-2b49590515b8

#### 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  
Water clarity trends, 2009–2013  
Date

##### Abstract

Water clarity is a measure of underwater visibility in rivers and stream. Water clarity can be reduced by the presence of fine particles like silt, mud or organic material in the water. This affects the habitat and feeding of aquatic life like fish and aquatic birds. Water clarity is an important indicator of the health of a waterway, and is also a consideration for recreational activities like swimming and wading. This dataset relates to the "River water quality trends: clarity" measure 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

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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

Creative Commons Attribution 3.0 New Zealand by Ministry for the Environment

Access Constraints

Restriction Code

license

Resource Constraints

Legal Constraints

Use Limitation

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Restriction Code

copyright

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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

167.534694771177.881584208-46.6296622637-35.0386283946

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.mfe.govt.nz/layer/52685-water-clarity-trends-20092013/>

## Data Quality Info

### DQ \_ Data Quality

#### Scope

##### DQ \_ Scope

###### Level

###### Scope Code

dataset

###### Level Description

###### Scope Description

###### Other

dataset

## Lineage

### LI \_ Lineage

#### Statement

Source: NIWA Method: Water clarity is measured using a black disc the size of a soccer ball. The disc is placed in the water, and viewed through an underwater viewing box at increasing distances until the black disc disappears from sight. This provides a consistent measure of the greatest distance an object can be seen through the water (Davies–Colley, 1988). NIWA have measured monthly water clarity consistently at 77 sites along 35 major rivers between 1989 and 2013. These 35 rivers drain about 50 percent of New Zealand’s land area. This long–term measurement data is particularly useful for tracking changes in water clarity over time (Ballantine and Davies Colley, 2014). 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: Ballantine, DJ & Davies–Colley, RJ (2014). Water quality trends in New Zealand rivers: 1989–2009. Environmental Monitoring and Assessment, 186(3), 1939–1950. Davies–Colley, RJ (1988). Measuring water clarity with a black disc. Limnology and Oceanography, 33(4), 616–623. Accessed 18 August 2015 from [www.horizons.govt.nz](http://www.horizons.govt.nz).

## Metadata Constraints

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