



Lake water quality, 2009–13

Metadata

File Identifier

95f4bf18-02c7-e327-2b71-53a749f921cb

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

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Environmental.Reporting@mfe.govt.nz

Role

Role Code
distributor

Date Stamp

Date
2016-02-18

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
Lake water quality, 2009–13
Date

Abstract

"The Lake Trophic Level Index (TLI) characterises the life supporting capacity of a lake based on nutrient enrichment. In general, the higher the TLI score, the poorer the water quality in the lake. Lakes with extremely poor quality are rarely suitable for recreation and provide poor quality habitat for aquatic species. Care should be taken when interpreting these results. Monitored lakes consist of about 4 percent of all New Zealand lakes, and programmes may focus on those that have poor water quality or are at risk due to the type of land use in their catchment. After checking for data consistency, the lakes considered suitable for national comparison are sparsely and unevenly distributed, with gaps in the Manawatu, Taranaki, Tasman, Marlborough, Otago, and West Coast regions. The lakes considered in the analysis are located mainly in Northland, Bay of Plenty, Hawke's Bay, and Canterbury. This dataset relates to the ""Lake water quality: trophic level index"" measure on the Environmental Indicators, Te taiao Aotearoa website. "

Status

Progress Code
completed

Point Of Contact

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Role

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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

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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

169.849371717177.169465379-44.6998796825-34.5860717112

Distribution Info

Distribution

Transfer Options

Digital Transfer Options

On Line

Online Resource

Linkage

URL

<https://data.mfe.govt.nz/layer/53310-lake-water-quality-200913/>

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: "The Trophic Level Index (TLI) has been calculated using three separate water quality measurements – total nitrogen, total phosphorus, and chlorophyll–a. Total nitrogen and total phosphorus are nutrients. Large amounts encourage the growth of algae and weed species which can lead to poor water quality. Chlorophyll–a is the green colour in plants and its measurement indicates how much algae the lake has. TLI scores less than three indicate low levels of nutrients and algae which is characteristic of clear or blue lakes. TLI scores greater than four indicate eutrophic conditions with high amounts of nutrients and algae. Large shallows may naturally score higher. There are also other important characteristics of lake condition such as the types of fish and aquatic plants present which are not described by the TLI. The TLI is used to place lakes into nutrient–enrichment categories, known as trophic states (Burns et al, 2000): - Microtrophic (TLI < 2) lakes are very clean, and often have snow or glacial sources (eg Lake Pukaki in Canterbury). - Oligotrophic (TLI 2–3) lakes are clear and blue, with low levels of nutrients and algae (eg, Lake Rotoma in the Bay of Plenty). - Mesotrophic (TLI 3–4) lakes have moderate levels of nutrients and algae (eg, Lake Rerewhakaaitu in the Bay of Plenty). - Eutrophic (TLI 4–5) lakes are green and murky, with higher amounts of nutrients and algae (eg, Lake Rotoroa in Northland). - Supertrophic or Hypertrophic (TLI > 5) lakes have extremely high levels of phosphorus and nitrogen are overly fertile. They are rarely suitable for recreation, and habitat for desirable aquatic species is limited (eg, Lake Forsyth in Canterbury). Care should be taken when interpreting these results. Monitored lakes consist of approximately 4 percent of all lakes, and programmes may focus on those that have poor water

quality, or are at risk due to land use in their catchment. The lakes included in this analysis, after filtering for continuity, are sparsely and unevenly distributed, with gaps in the Manawatu, Taranaki, Tasman, Marlborough, Otago and West Coast regions. The accuracy of the data source is of medium quality.
Reference: Burns, N, Bryers, G, & Bowman, E (2000). Protocols for monitoring trophic levels of New Zealand lakes and reservoirs. Available from www.mfe.govt.nz."

Metadata Constraints

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