



Dissolved Reactive phosphorus, 2009–2013

Title
Dissolved Reactive phosphorus, 2009–2013

Creator
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Description
"Phosphorus is an essential nutrient for plant and animal life. Phosphorus can vary due to differences in land use, climate, elevation, and geology. 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 "Geographic pattern of phosphorus in river water" measure on the Environmental Indicators, Te taiao "

Source
Source: National Institute of Water and Atmospheric Research, regional councils 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. 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. Estimates of median phosphorus across New Zealand is based on monthly or quarterly phosphorus concentrations from the 16 regional councils (500 and 442 river sites for total phosphorus and dissolved reactive phosphorus respectively) and 77 sites along 35 major rivers measured monthly by NIWA. This is inferred from the predominant land cover in a catchment and the surrounding landscape characteristics, such as, climate, elevation, and geology. 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."

Coverage
-46.6296622637 167.534694771 -35.0386283946 177.881584208

Identifier
<https://data.mfe.govt.nz/layer/52696-dissolved-reactive-phosphorus-20092013/>

Language
eng

Subject
New Zealand

Subject
WATER

Subject
WATER-Quality

Subject
environment