



# Quantum Map: a free, open source desktop mapping application

NIWA's National Centre for Environmental Information is working to continually improve access to the country's extensive stores of environmental data – and to enable that data to be output in a range of user-focused ways.

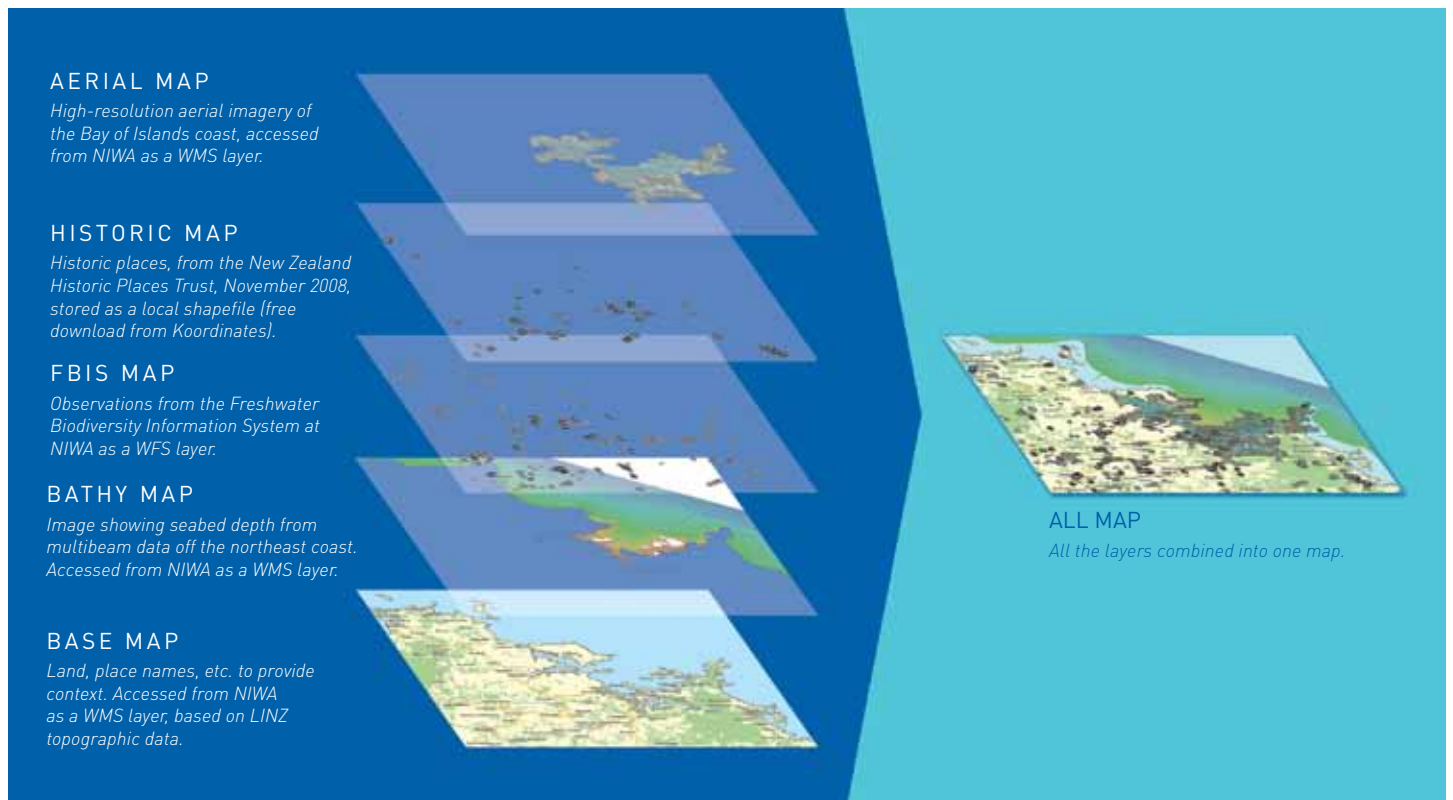
Quantum Map is an open source desktop mapping application based on the popular Quantum GIS (Geographic Information System) application. It comes complete with a custom plug-in that enables easy access, via the Internet, to NIWA's map data.

## View, build and edit maps – on your desktop

Quantum Map is a sophisticated but easy-to-use application that displays existing maps, or converts data into maps, on your desktop. Data may be sourced locally (i.e., from the user's PC or network) or via the Internet. NIWA has joined a number of other agencies to make selected datasets freely available, via OGC Web Services (see below), to Quantum Map users.

Once a dataset has been mapped using Quantum Map, the user can:

- add additional layers of data, imported from local or remote sources
- open and add geo-referenced images as map layers (for example, geotiffs and images with Word files)
- control which layers are visible at any time
- zoom in and out, and scroll horizontally and vertically
- identify individual features in a map layer and view information attached to each
- define symbologies – to set the colours, styles and symbols used to represent points, lines and polygons in any layer
- specify the transparency of any layer – to see other layers beneath
- create new map layers (datasets) by digitising new points, lines and polygons
- edit map layers (move or delete points; move, reshape or delete lines and polygons)
- store maps for later editing and use
- print.



Various layers, showing WMS maps, WFS datasets and local data files overlaid to form a single queryable map. The user can control the symbols and transparency of layers, as well as make individual layers invisible as required to make the working map less cluttered.

## Industry co-operation – for the benefit of the user

NIWA is part of the Open Geospatial Consortium (OGC) – an industry-led body which defines standards enabling interoperability between various GIS applications and web mapping sites. Two of those standards relate directly to the way Quantum Map functions:

- Web Map Services (WMS): Quantum Map requests a dataset from the server, already in map form, and displays it locally.
- Web Feature Services (WFS): Quantum Map requests a dataset from the server and plots the data on the local map.

For complex spatial datasets with thousands or millions of points, and for satellite images and aerial photography, sourcing via WMS is generally better as much less data has to be transferred. WFS (local plotting) is better suited to smaller datasets.

## One simple download

Installing Quantum Map is as simple as one download (as a Windows installer package) from the NIWA website. Go to <http://www.niwa.co.nz/software/quantum-map> to download and run the file to install the application.

The full Quantum GIS application, upon which Quantum Map is based and which offers analytical and advanced editing capability, can be downloaded at <http://www.qgis.org>.

## Web-based support

Additional information on installing and using Quantum Map is provided by NIWA in the form of frequently asked questions, at <http://www.niwa.co.nz/software/quantum-map/faq>. Here users will also find links to useful information about Quantum GIS, to which many users may wish to upgrade once they have become familiar with Quantum Map.

## Find out more

For general information about Quantum Map and other NIWA tools for accessing environmental data, please contact:

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