

Marine Biology Data Geographic Information System Requirements

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Build a PostGIS database.

Given a file the program should build a PostGIS database from the data contained within the file.

Be able to take several different file formats as input.

The data may be in binary files and be formatted in different ways. The program may have to detect how the data is formatted. Other times it can be told what format the files are in. An error message should be displayed if an unsupported format is tried.

Input shall be checked for input that is invalid.

Given a format or after detecting the format anything that does not match shall be discarded and an error displayed. The program will attempt to continue past the invalid section.

Switch between PostGIS databases.

The user may want to have different databases for different data and should be able to select which one to use for the programs functions.

Add to an existing PostGIS database.

After a database has been created new data should be able to be added to it. An error should be displayed if an unsupported file format is tried.

Name the PostGIS database.

Name the database.

Change the name of the PostGIS database.

Change the name of the database.

Remove data from the PostGIS database.

Bad data once discovered should be able to be removed.

PostGIS database must have a date field.

The key feature of this whole program is the ability to access data for a given date.

Given a date and location(latitude and longitude range) return raw data.

Several output formats should be supported such as comma separated value format.

Access all user functions through a plugin menu in QGIS.

All the above functions to manage the database and import files and output data should exist in the plugin menu for this program in QGIS.