

Working with WMS Data

QGIS Tutorials and Tips



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WMS

WMS (Web Map Service) is a standard protocol for requesting maps over the Internet. It is part of the OpenGIS Consortium's Web Map Service Interface. WMS allows a client to request a map from a server, and the server returns the map as a series of image tiles. WMS is used by many GIS applications, including QGIS, to display maps from remote servers.

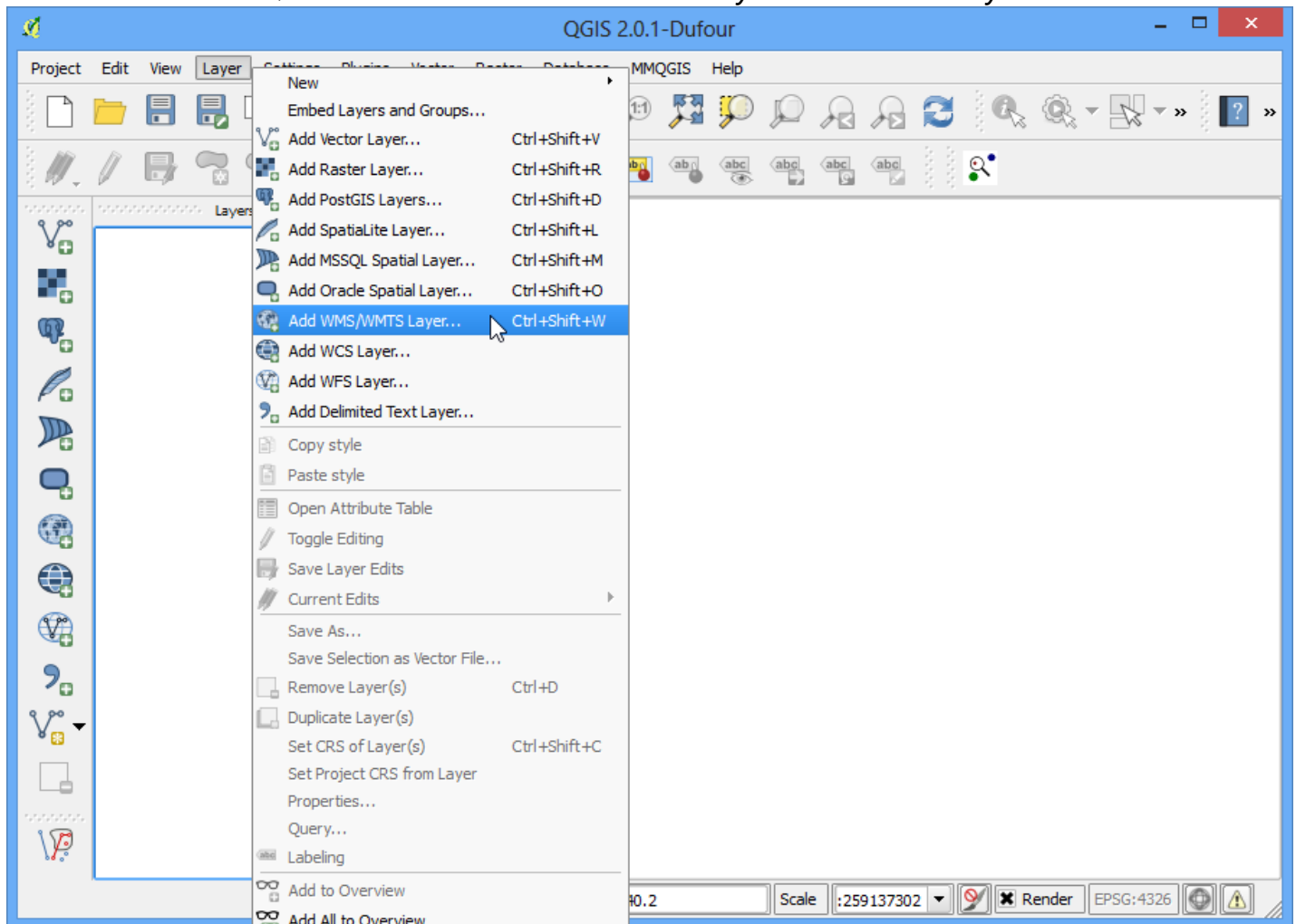
Mineral Resources

Mineral Resources, USGS.

URL: [MRDATA]

QGIS

1. QGIS Layer Add WMS Layer...



2.  Layers  New.

The screenshot shows the 'Add Layer(s) from a Server' dialog box. The 'New' button is highlighted with a red circle. The dialog has tabs for 'Layers', 'Layer Order', 'Tilesets', and 'Server Search'. Below the tabs is a toolbar with buttons: 'Connect', 'New', 'Edit', 'Delete', 'Load', 'Save', and 'Add default servers'. A table with columns 'ID', 'Name', 'Title', and 'Abstract' is present. Below the table is a section for 'Image encoding' and an 'Options' section with fields for 'Layer name', 'Tile size', and 'Feature limit for GetFeatureInfo'. The status bar at the bottom shows 'Ready'.

```
3. ##### WMS. ##### GetCapabilities. ##### W
##### MRDATA USGS ##### GetCapabilities URL #####
http://mrdata.usgs.gov/services/ca?request=getcapabilities&service=WMS&version=1.1.1
##### OK.
```



Create a new WMS connection

Connection details

Name: MRDATA USGS

URL: <http://mrdata.usgs.gov/services/ca?request=getcapabilities&service=WMS&version=1.1.1&>

If the service requires basic authentication, enter a user name and optional password

User name:

Password:

Referer:

☐ Ignore GetMap URI reported in capabilities

☐ Ignore GetFeatureInfo URI reported in capabilities

☐ Ignore axis orientation (WMS 1.3/WMTS)

☐ Invert axis orientation

☐ Smooth pixmap transform

OK Cancel Help

Name	MRDATA USGS
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URL <https://www.fishbase.org/services/ca?request=getcapabilities&service=WMS&version=1.1.1&>

If the service requires basic authentication, enter a user name and optional password

User name

Password

Referer

- ☐ Ignore GetMap URI reported in capabilities
- ☐ Ignore GetFeatureInfo URI reported in capabilities
- ☐ Ignore axis orientation (WMS 1.3/WMTS)
- ☐ Invert axis orientation
- ☐ Smooth pixmap transform

OK

Help

4. **Connect** 函数用于连接数据库。其原型如下：
`int connect(char *host, char *user, char *passwd, int port, int flags, int timeout)`
 其中，`host` 为数据库主机名，`user` 为数据库用户名，`passwd` 为数据库密码，`port` 为数据库端口号，`flags` 为连接标志，`timeout` 为连接超时时间。该函数返回连接成功的句柄，失败则返回 -1。



5. **Image encoding** - This option allows you to select the image encoding format for the layer. The available formats are PNG, PNG8, JPEG, GIF, and TIFF. PNG is the default format.

- Image encoding:** PNG - This is the default format. JPEG - This format is used for compressed images. TIFF - This format is used for high-quality images. GIF - This format is used for small images. PNG8 - This format is used for small images with a limited color palette.
- Options:** Layer name - This is the name of the layer. Tile size - This is the size of the tiles used for the layer. Feature limit for GetFeatureInfo - This is the maximum number of features that can be returned by the GetFeatureInfo request.
- Image encoding:** QGIS - This option allows you to select the image encoding format for the layer. The available formats are PNG, PNG8, JPEG, GIF, and TIFF. PNG is the default format.
- Image encoding:** This option allows you to select the image encoding format for the layer. The available formats are PNG, PNG8, JPEG, GIF, and TIFF. PNG is the default format.

Layer name, Tile size, Feature limit for GetFeatureInfo, and Image encoding. The 'Add' button is at the bottom right.

Layer Properties - California_Geology

General

Style

Transparency

Metadata

Metadata

Description

Title

Abstract

Keyword list

Format

Attribution

Title

Url

MetadataUrl

Url

Type

Format

Properties

Server Properties

Property	Value
WMS Version	1.1.1
Title	California_Geology
Abstract	
Keywords	
Online Resource	-
Contact Person	Peter M. Schweitzer

Restore Default Style

Save As Default

Load Style ...

Save Style ...

OK

Cancel

Apply

Help