How to use a Geodatabase in AutoCAD

- Presented Steve Kaufman
- steve.kaufman@ncdps.gov

- http://portal.ncdenr.org/web/lr/geodetic/presentations

Using the Geodatabase in your maps is a simple process.

Go to www.ncfloodmaps.com and download the geodatabase for the county you are interested in

Use QGIS to open the geodatabase and export a dxf file

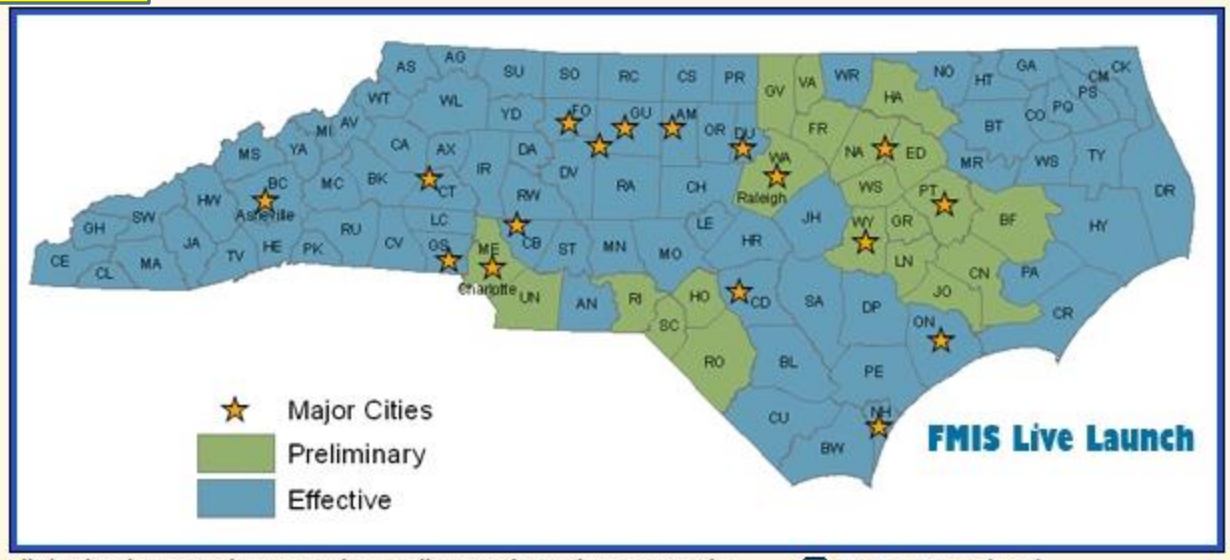
or

Use AutoCAD to open the geodatabase

http://www.ncfloodmaps.com

Digital Flood Maps
Data Download
FIRM Indexes
Status
NFIP Questions
Letters of Map Change
Summary of Map Actions
Basin Plans & Restudy Manual
Links
Contact
Flood Warning Program
NCFMP Program Information
2008 NFIP Quick Guide
CFM Home Study Course

FLOODPLAIN MAPPING INFORMATION SYSTEM [FMIS]



Click the image above to be redirected to the FMIS site. Data Download

NEWS

New CLOMR Procedure for all Cases Effective October 1, 2010 - Endangered Species Act
August 23, 2010

NEWS ARCHIVE

2010 • 2009 • 2008 • 2007 • 2006 • 2005 • 2004 • 2003 • 2002 • 2001 • 2000

LOCATION

NC Floodplain Mapping Program

Street Address:
4105 Reedy Creek Rd.
Raleigh, NC 27607

Mailing Address:
4218 Mail Service Center
Raleigh, NC 27699-4218

Phone: 919-715-5711
Fax: 919-715-0408
Email: Tonda.shelton@ncdps.gov

This website is a free service provided by the State of North Carolina. The latest information on the Floodplain Mapping program is provided here. Learn about the State's partners in this project.

FMIS Floodplain Mapping Information System

NC Floodmaps | FAQs | Contact Us

Home Map Help About

County Data

Select county from map

County:

DFIRM:

Alamance
Alexander
Alleghany
Anson
Ashe
Avery
Beaufort
Bertie
Bladen
Brunswick
Buncombe
Burke
Cabarrus
Caldwell
Camden
Carteret
Caswell
Catawba
Chatham

Select a ... to download da...

Statewide Data

Click a link to download the data file

Terrain Data Grid

DFIRM Panel Shapefile

NCFMP Geodatabase Dictionary

LiDAR Metadata

Engineering & In...

Click a link to download the data f...

Data Coming Soon

Home Map Help About

County Data

Select county from map

County: Alamance

DFIRM:

Select a County and DFIRM to download data.

Statewide Data

Click a link to download the data file

Terrain Data Grid

DFIRM Panel Shapefile

NCFMP Geodatabase Dictionary

LiDAR Metadata

Engineering & Inve

Click a link to download the data file

Data Coming Soon

Download Files

Click a link below to download the data file

Alamance County

Personal Geodatabase

LIDAR DEM 50

LIDAR DEM 20

LIDAR Bare Earth

FIS Report

Select the personal geodatabase to download

DFIRM

Select a DFIRM Panel number from the list above to download the DFIRM PDF.

Imagery

Select a DFIRM Panel numbe from the list above to download th Imagery files.

Get QGIS:
www.qgis.org

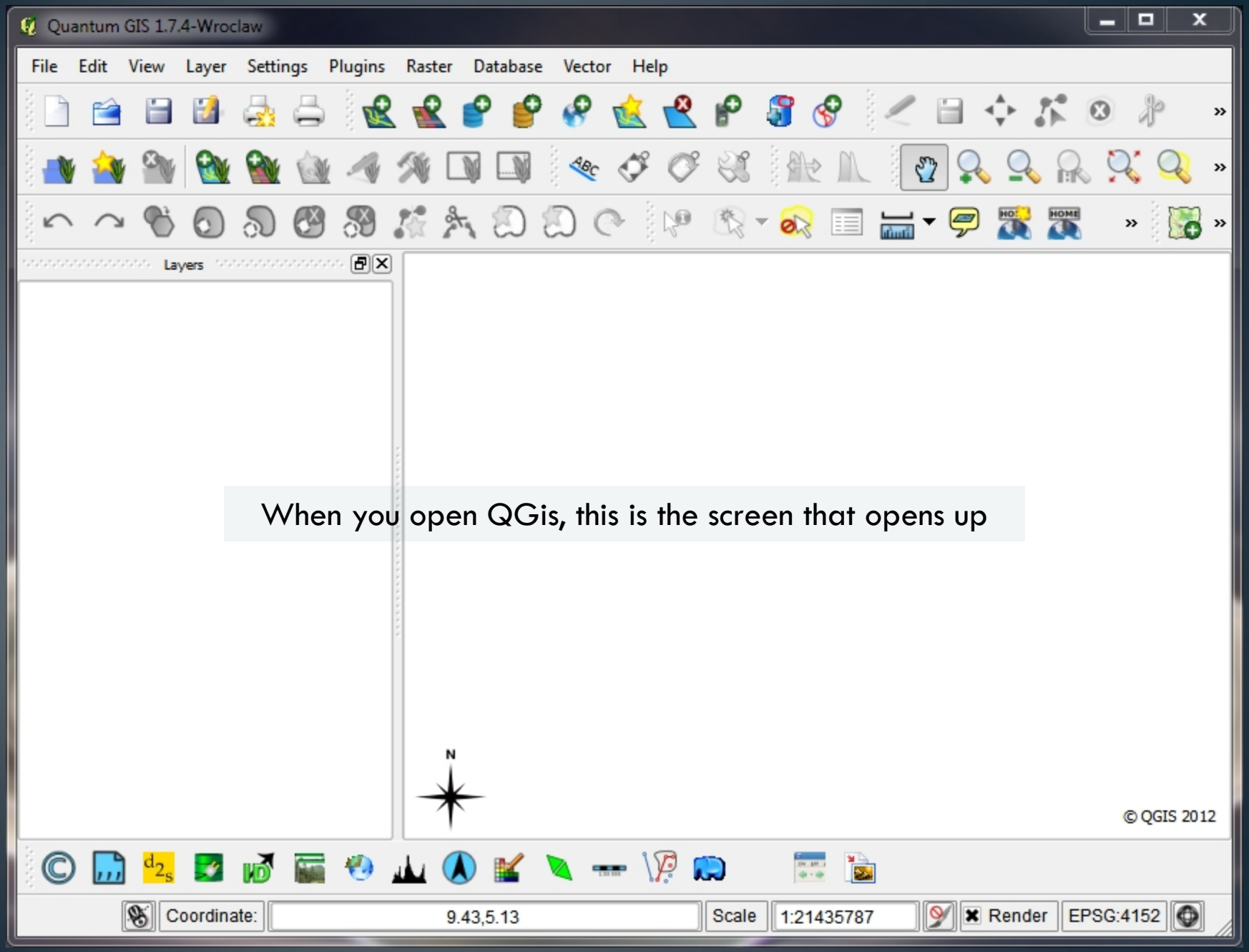
- Click

on the right of the page

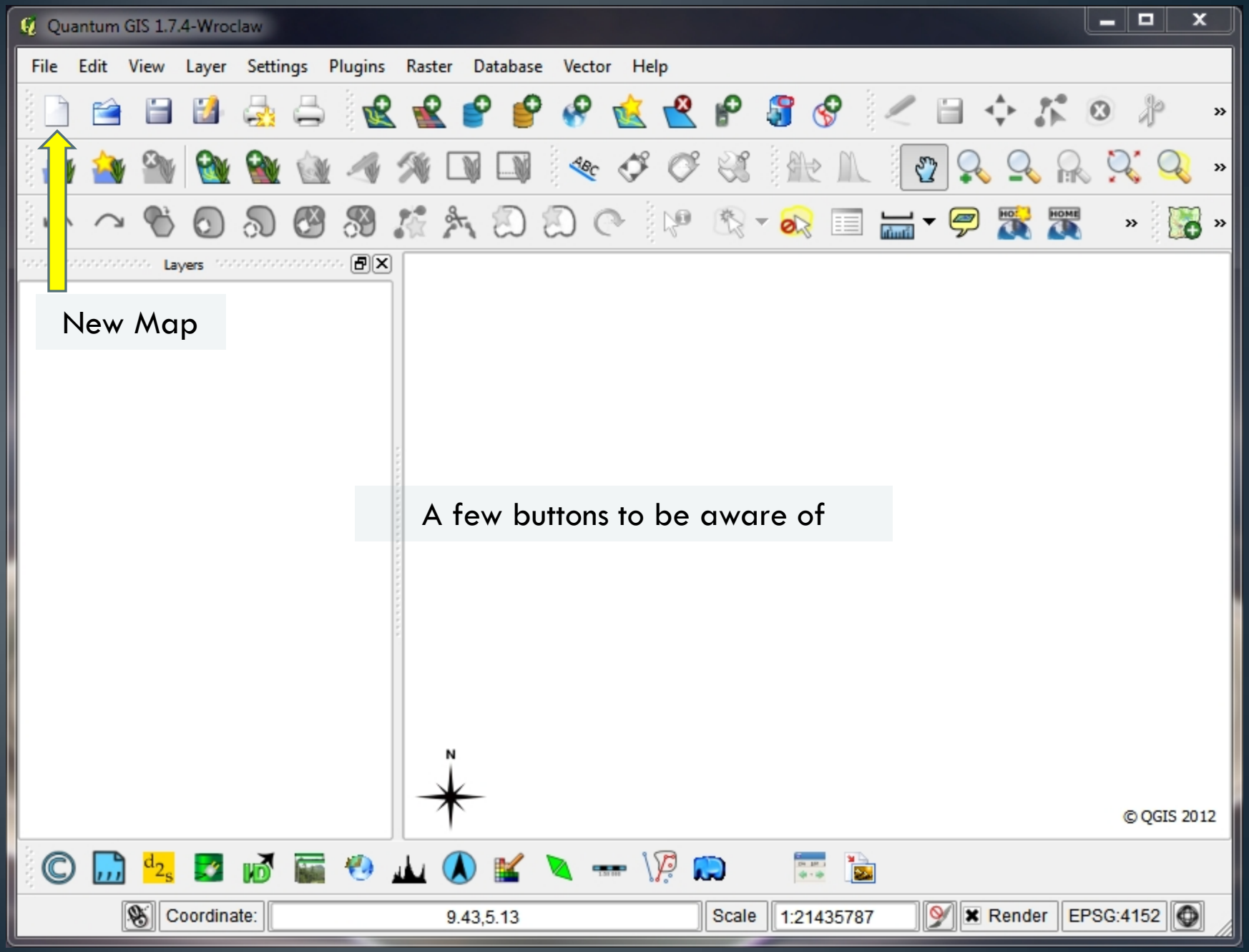
- Scroll down a little to find the windows standalone installer

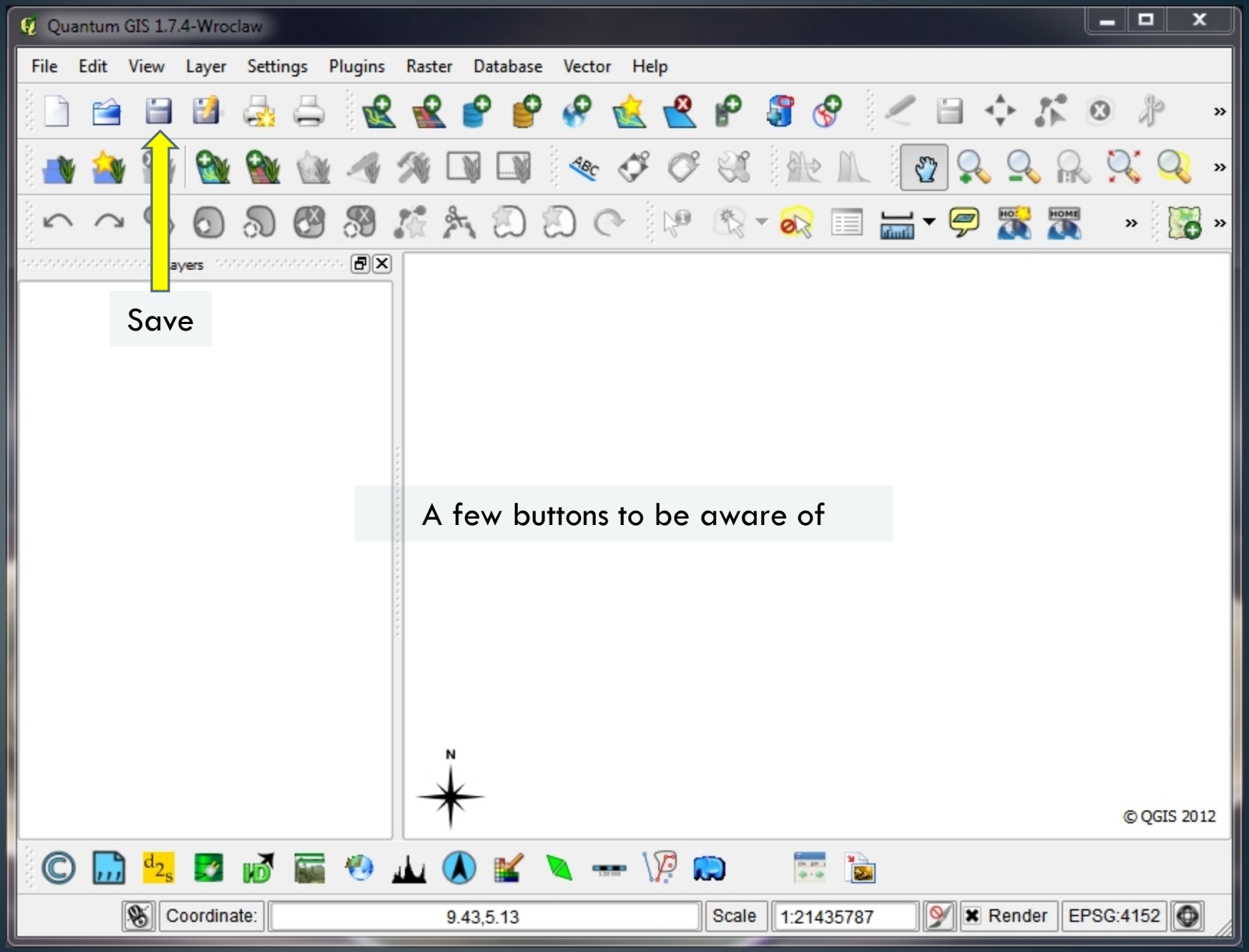
- Download and run the installation

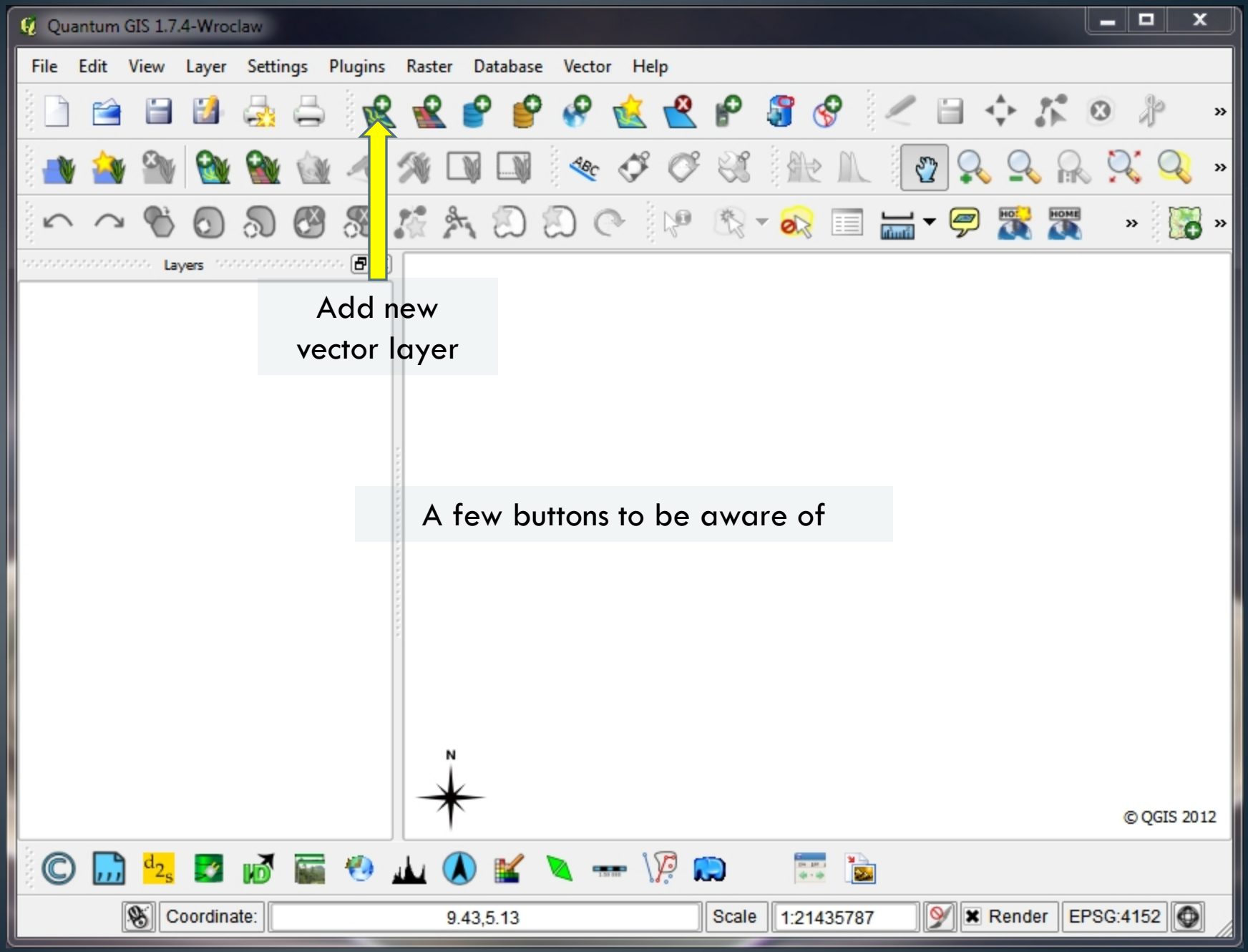
(there are installations for other operating systems available)

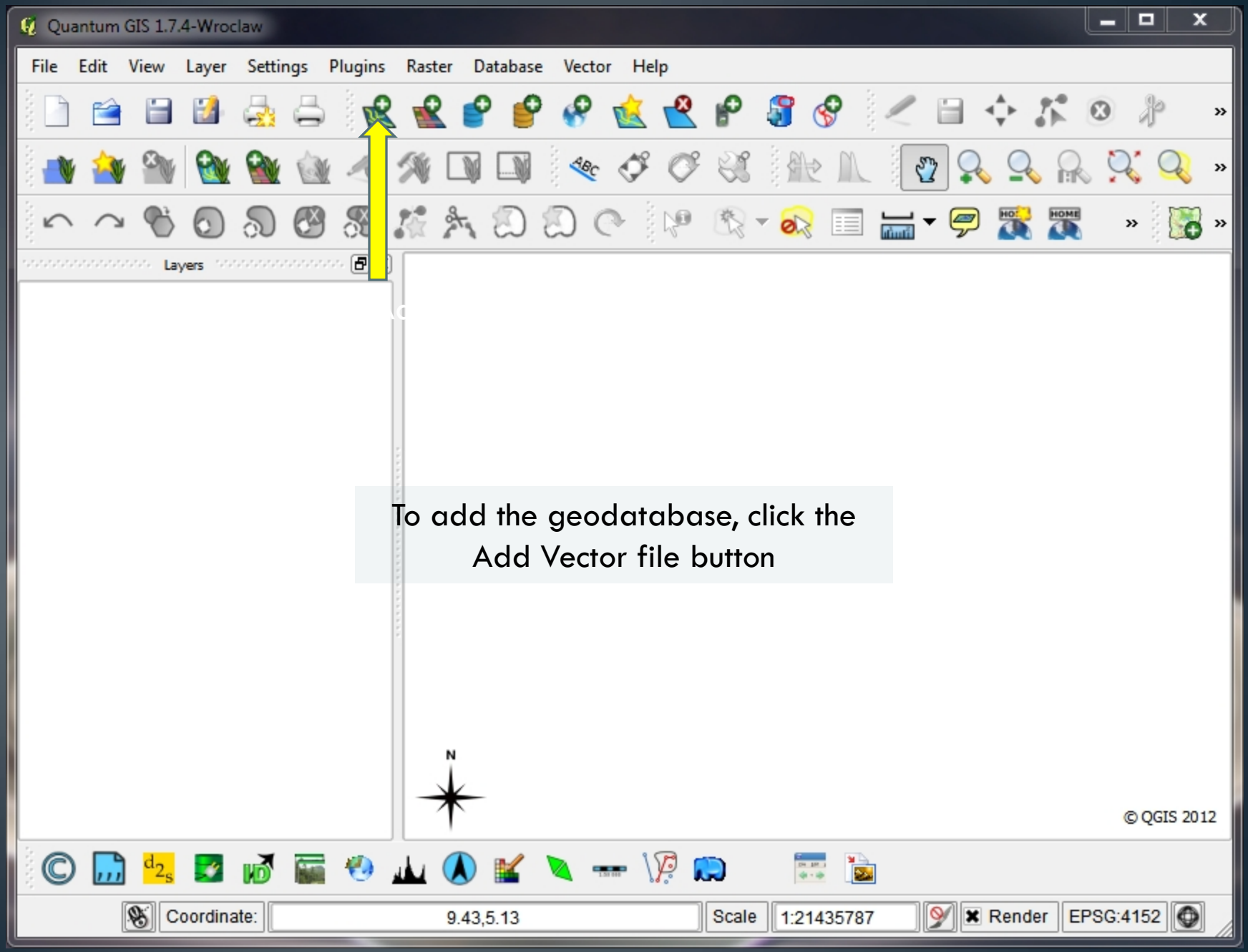


When you open QGis, this is the screen that opens up

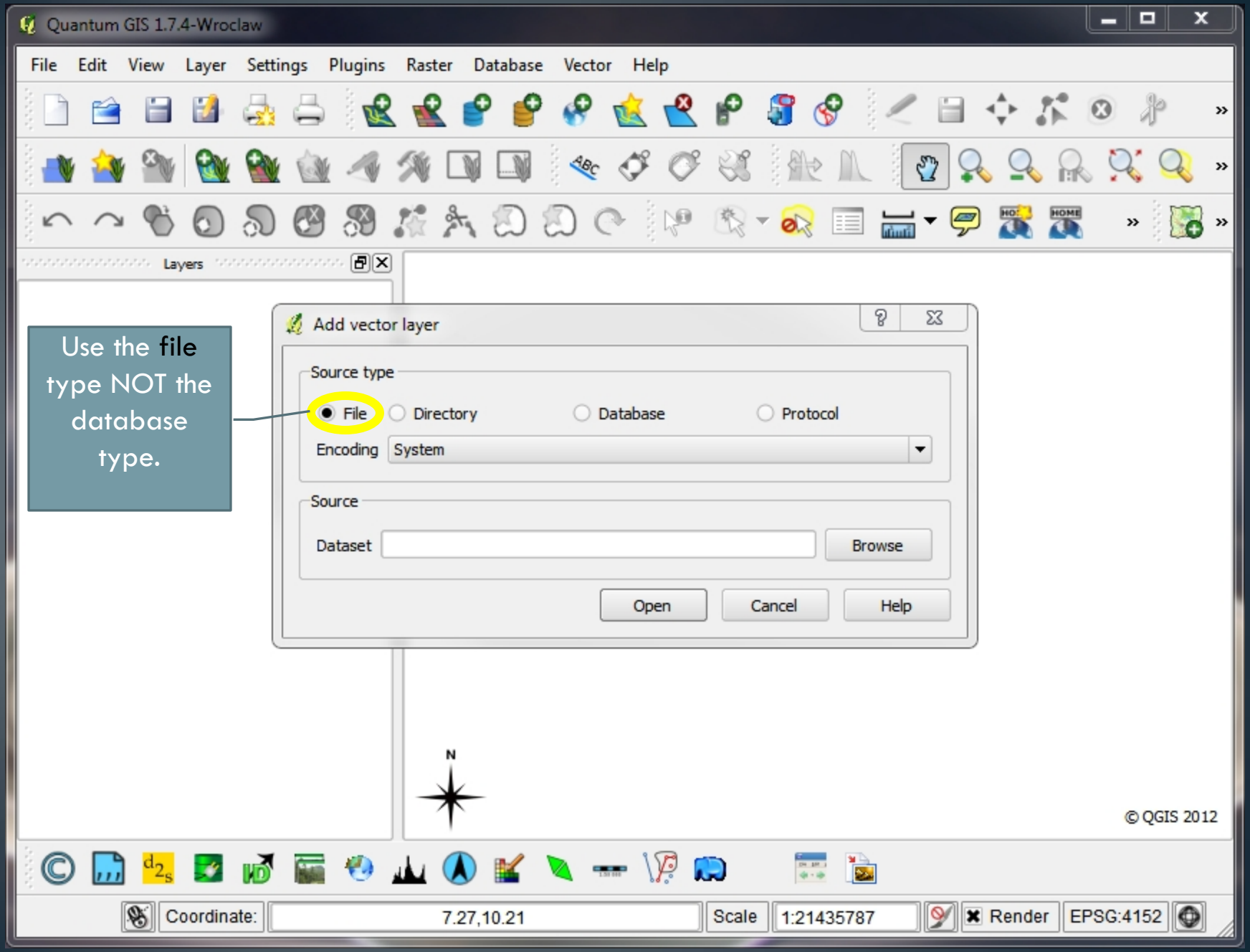

Quantum GIS 1.7.4-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Database
Vector
Help
Layers
New Map
A few buttons to be aware of
N
© QGIS 2012
Coordinate:
9.43,5.13
Scale
1:21435787
Render
EPSG:4152


Quantum GIS 1.7.4-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Database
Vector
Help
Save
A few buttons to be aware of
N
© QGIS 2012
Coordinate:
9.43,5.13
Scale
1:21435787
Render
EPSG:4152

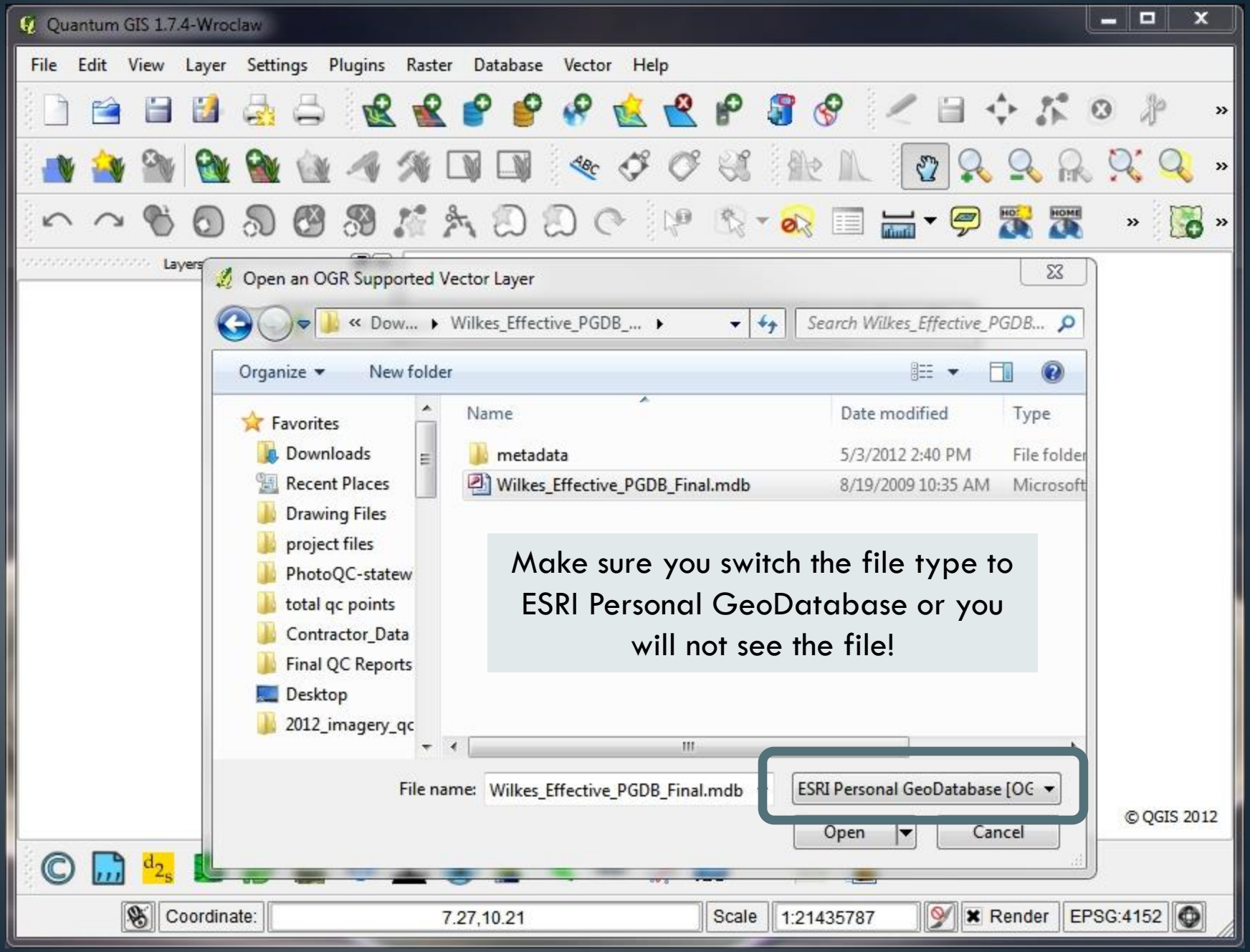

Quantum GIS 1.7.4-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Database
Vector
Help
Layers
Add new vector layer
A few buttons to be aware of
N
© QGIS 2012
Coordinate:
9.43,5.13
Scale
1:21435787
Render
EPSG:4152



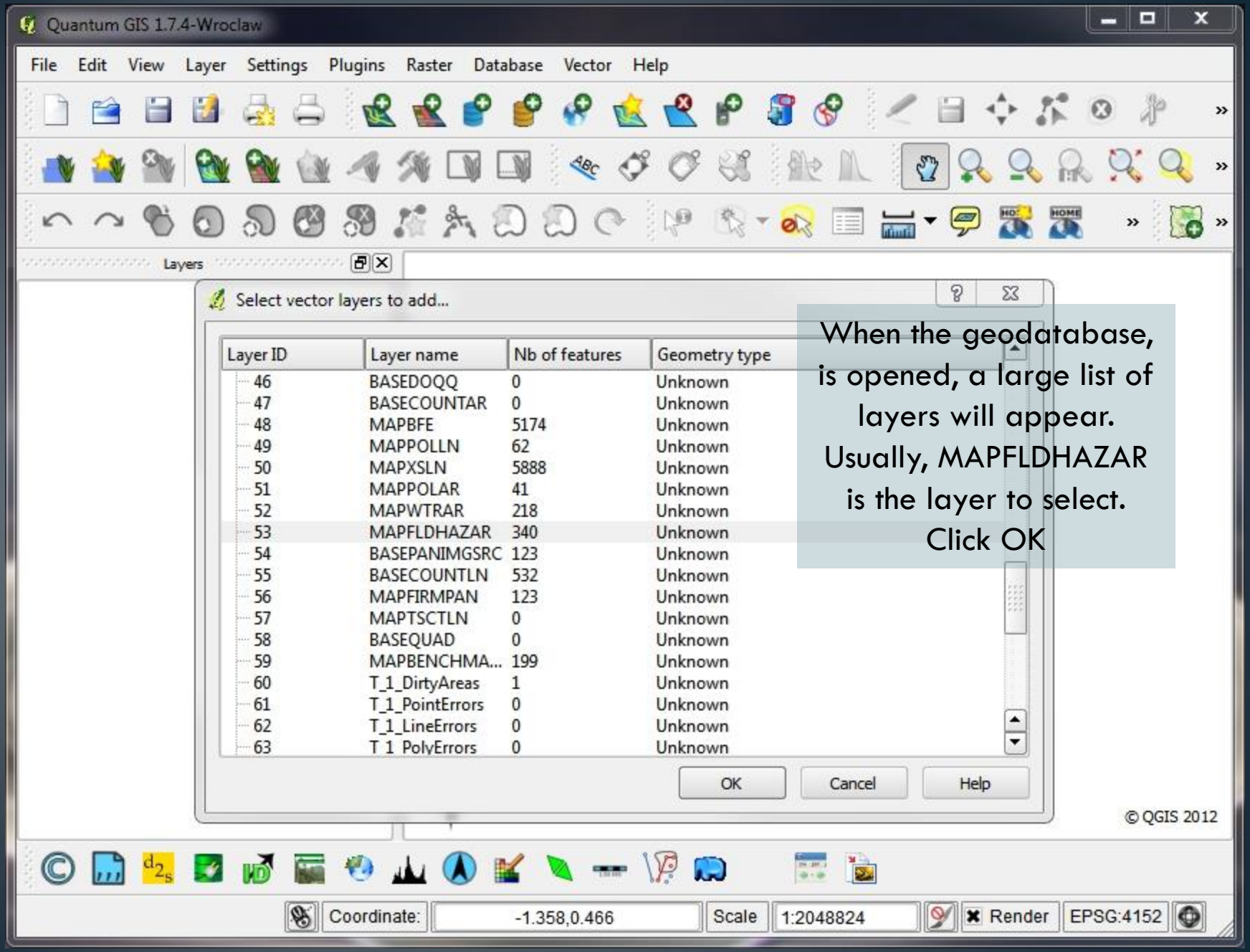
To add the geodatabase, click the Add Vector file button



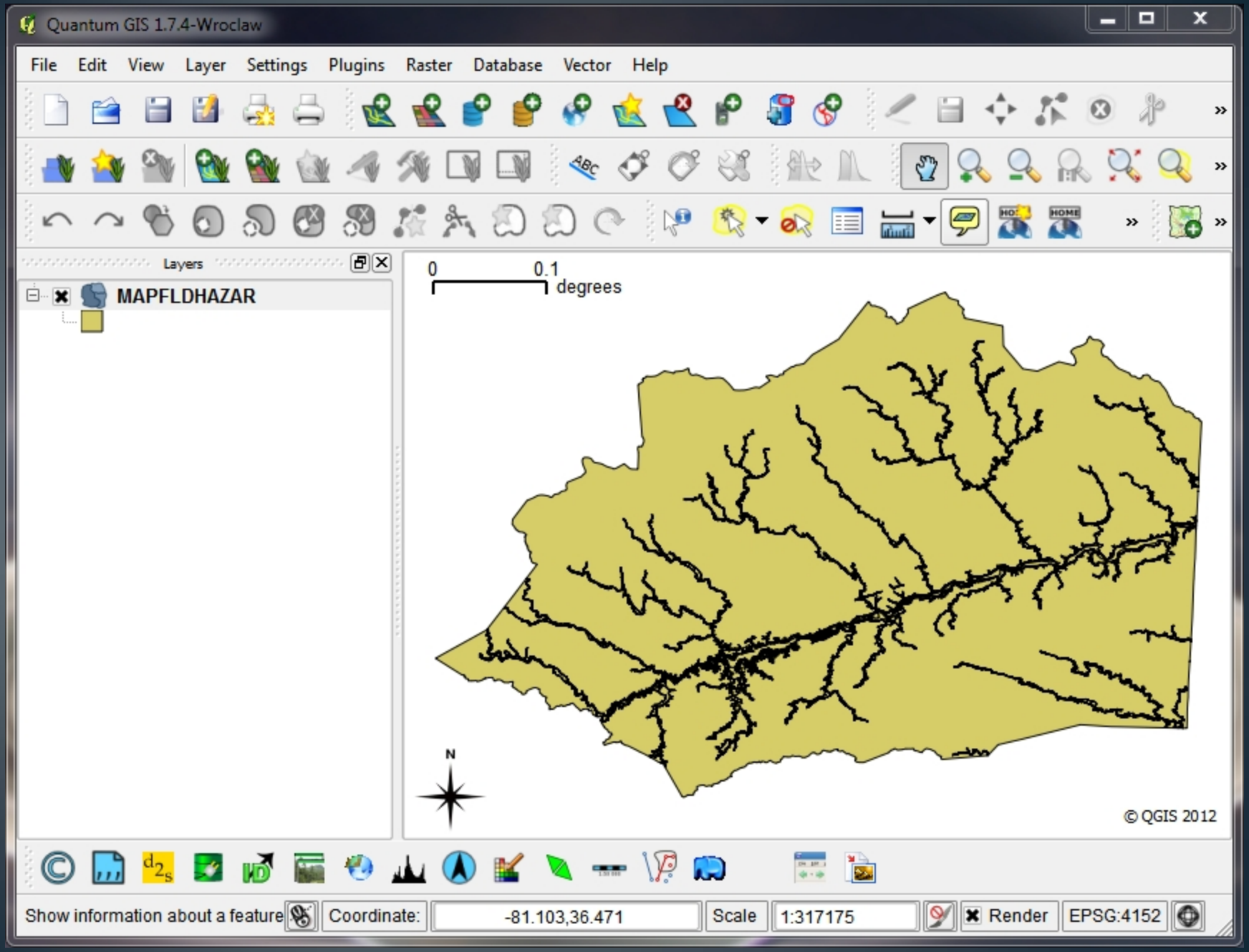
Use the file type NOT the database type.

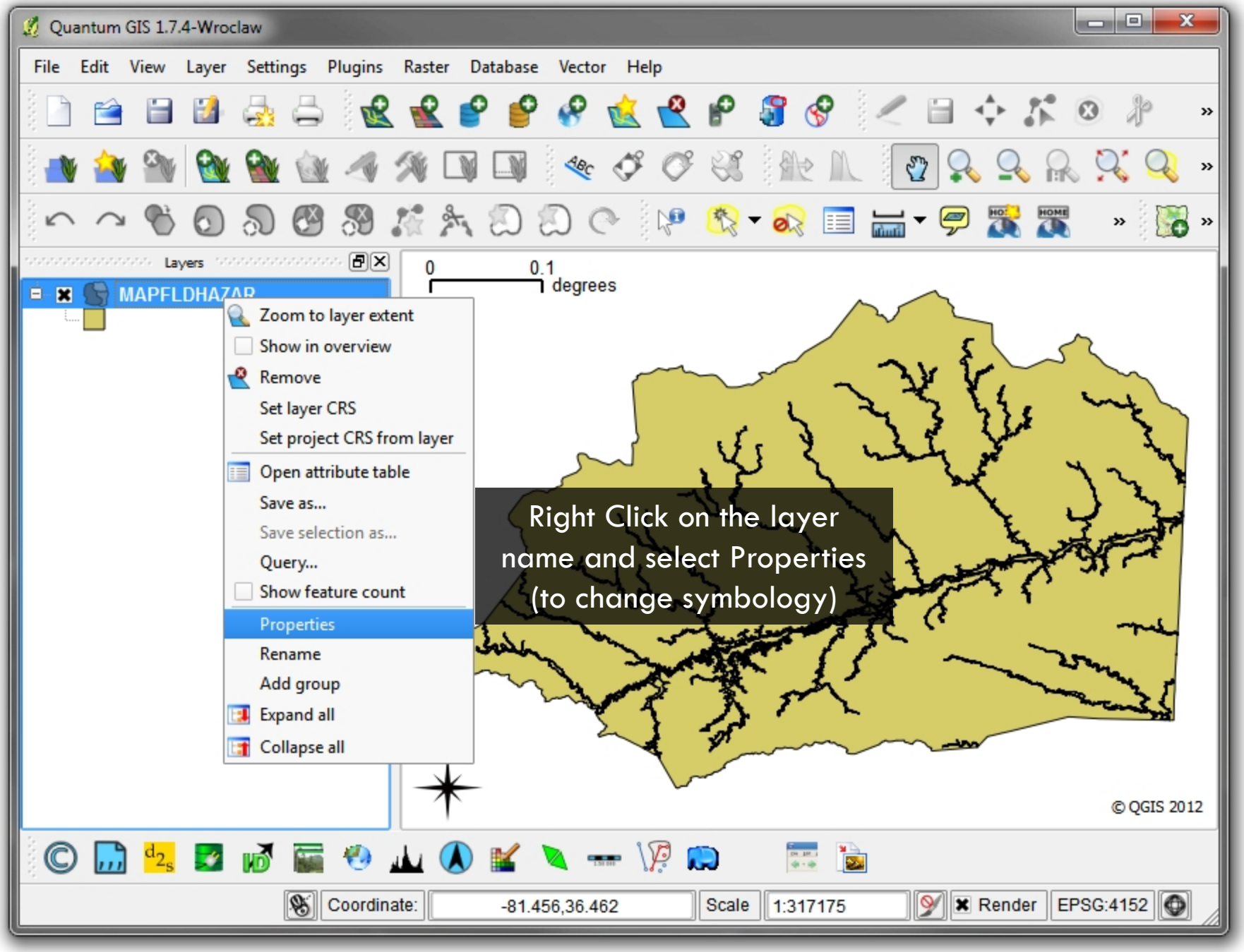


Make sure you switch the file type to ESRI Personal GeoDatabase or you will not see the file!

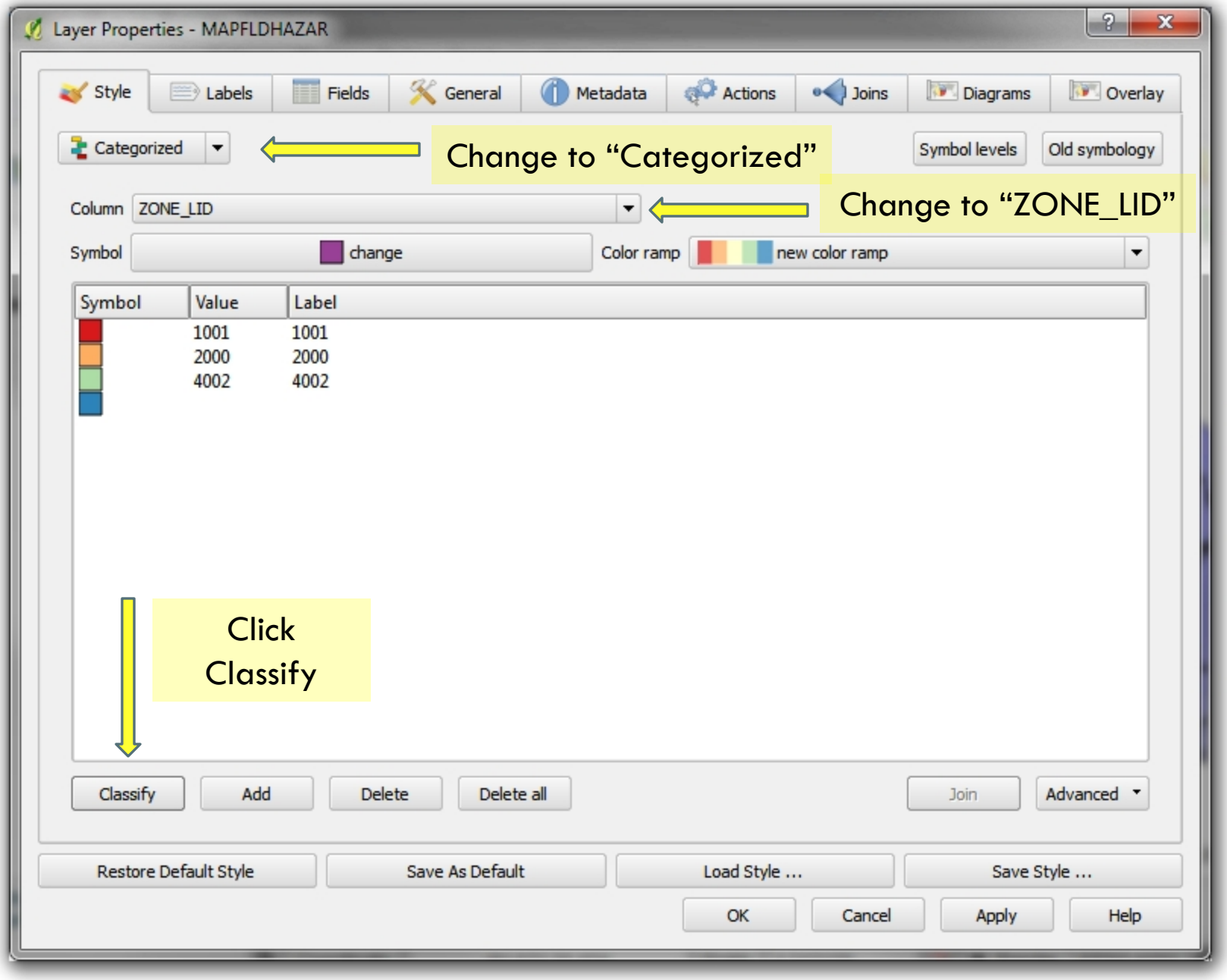


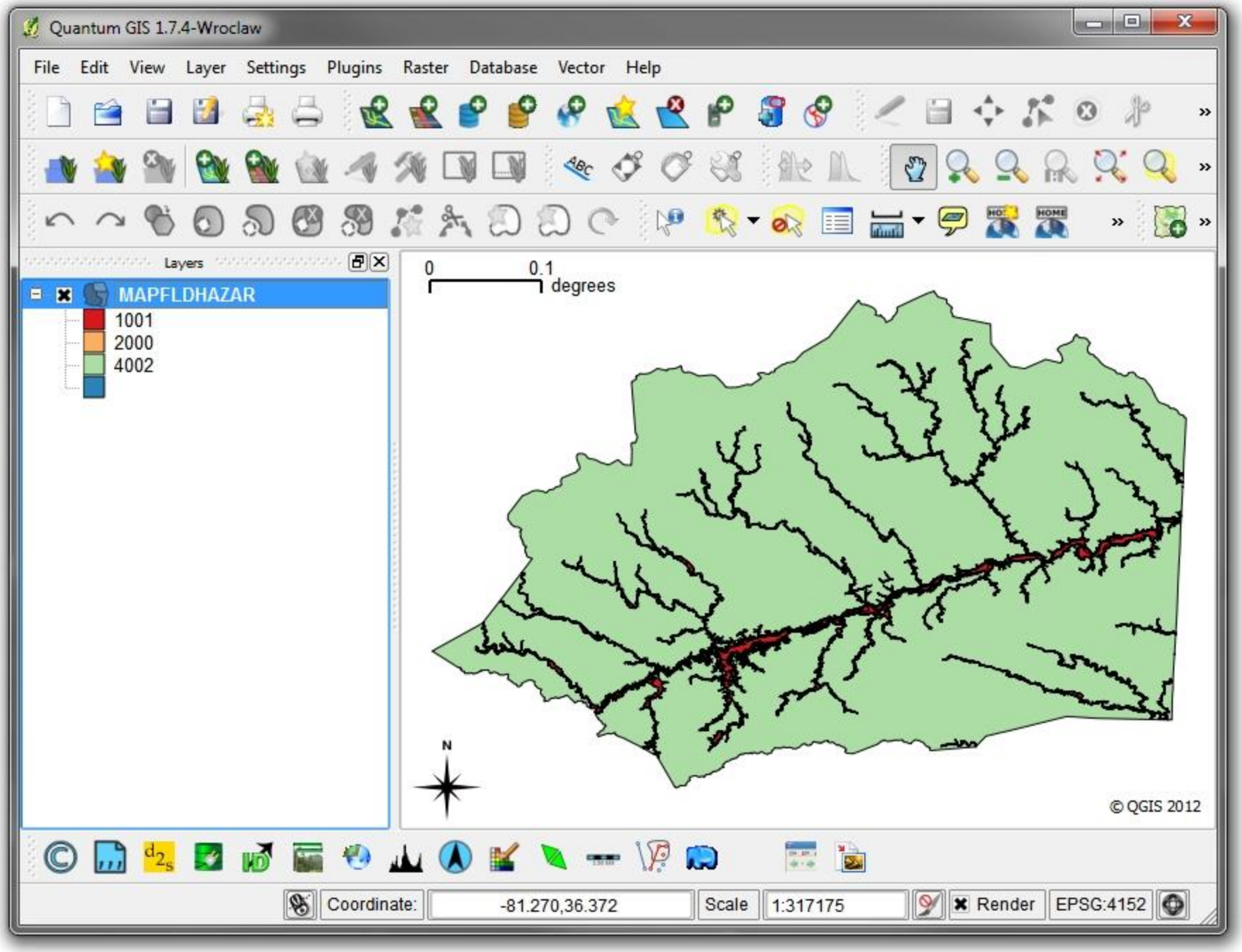
When the geodatabase, is opened, a large list of layers will appear. Usually, MAPFLDHAZAR is the layer to select. Click OK

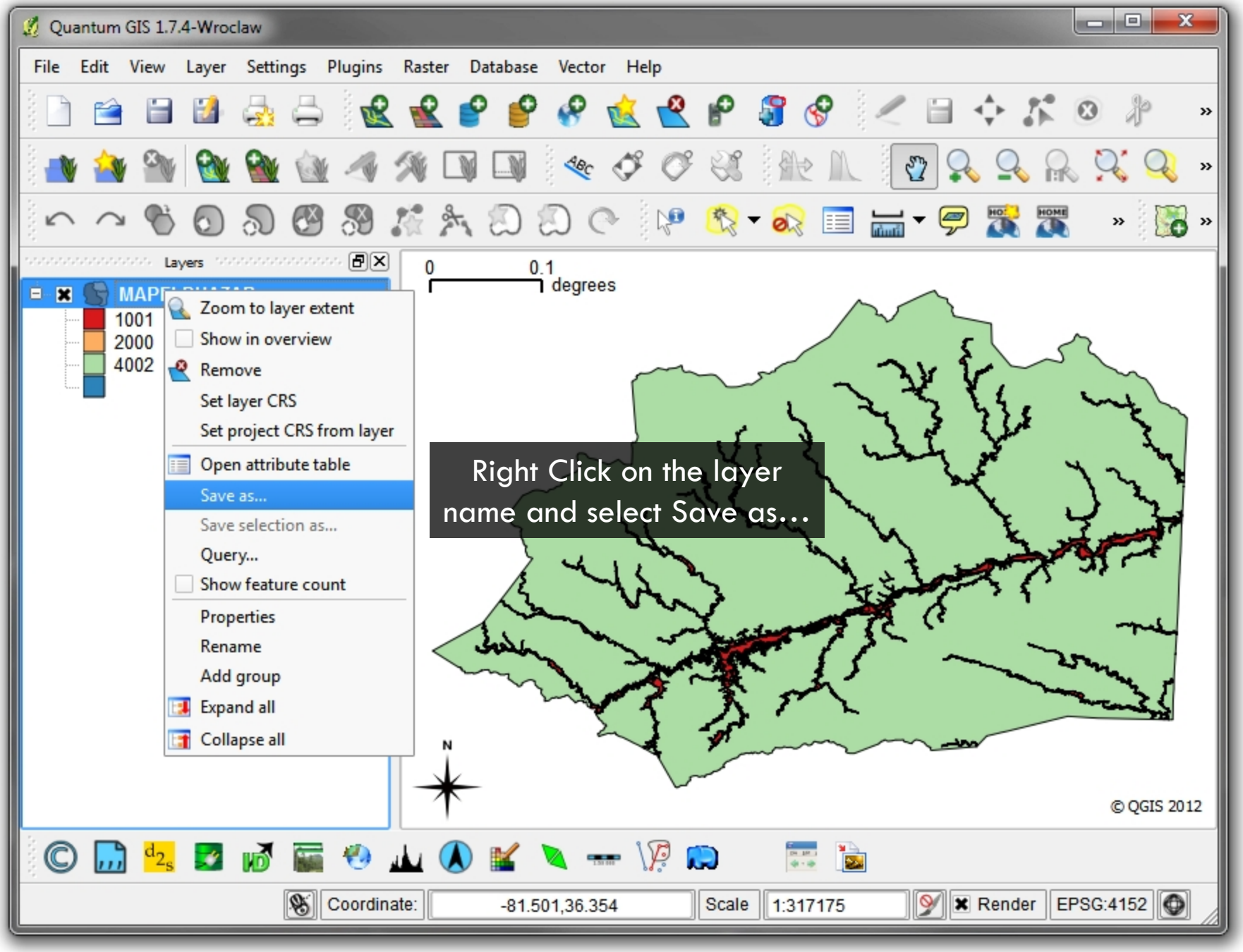

Quantum GIS 1.7.4-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Database
Vector
Help
Layers
MAPFLDHAZAR
0
0.1
degrees
N
© QGIS 2012
Show information about a feature
Coordinate:
-81.103,36.471
Scale
1:317175
Render
EPSG:4152



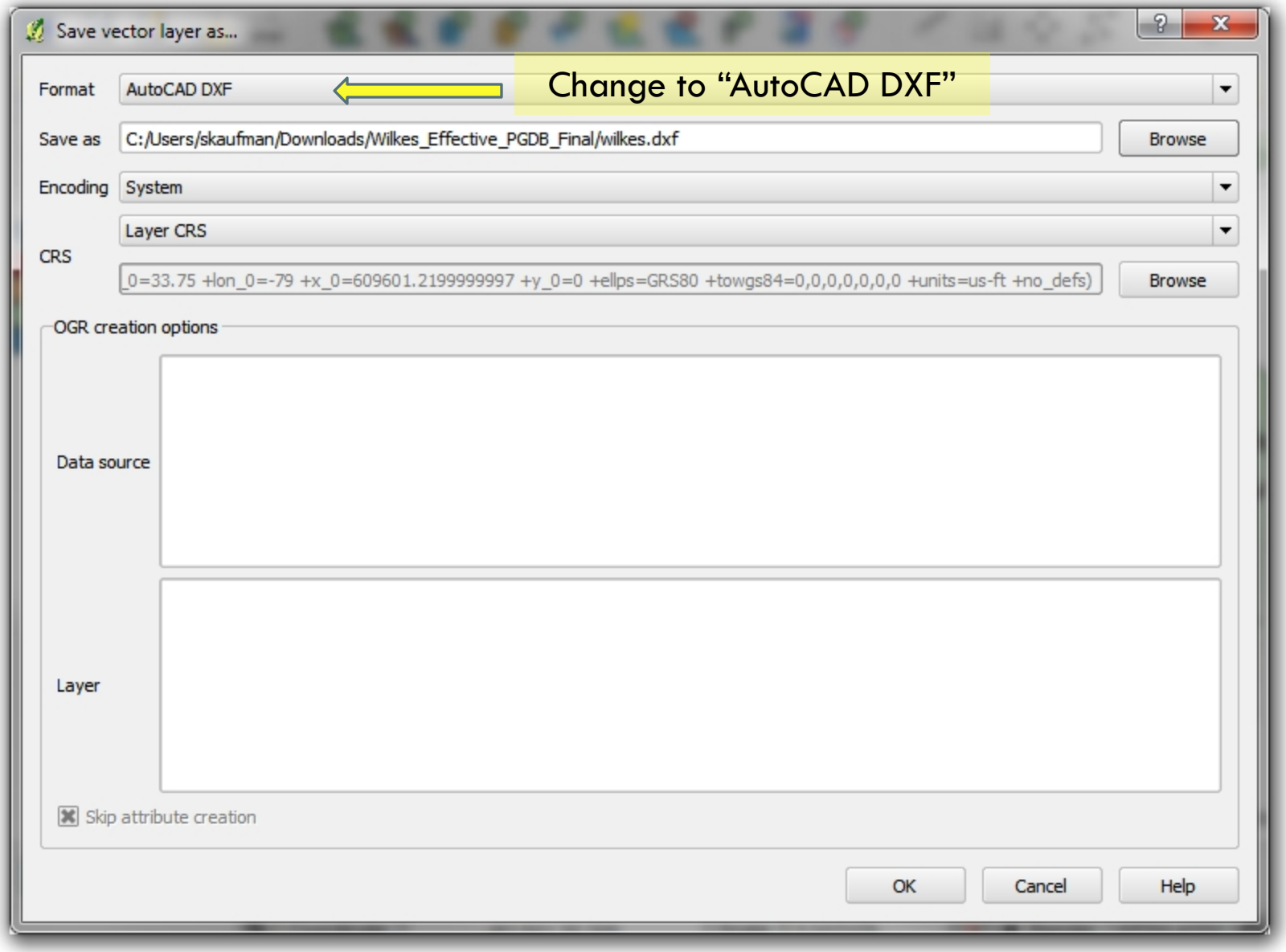
Right Click on the layer name and select Properties (to change symbology)

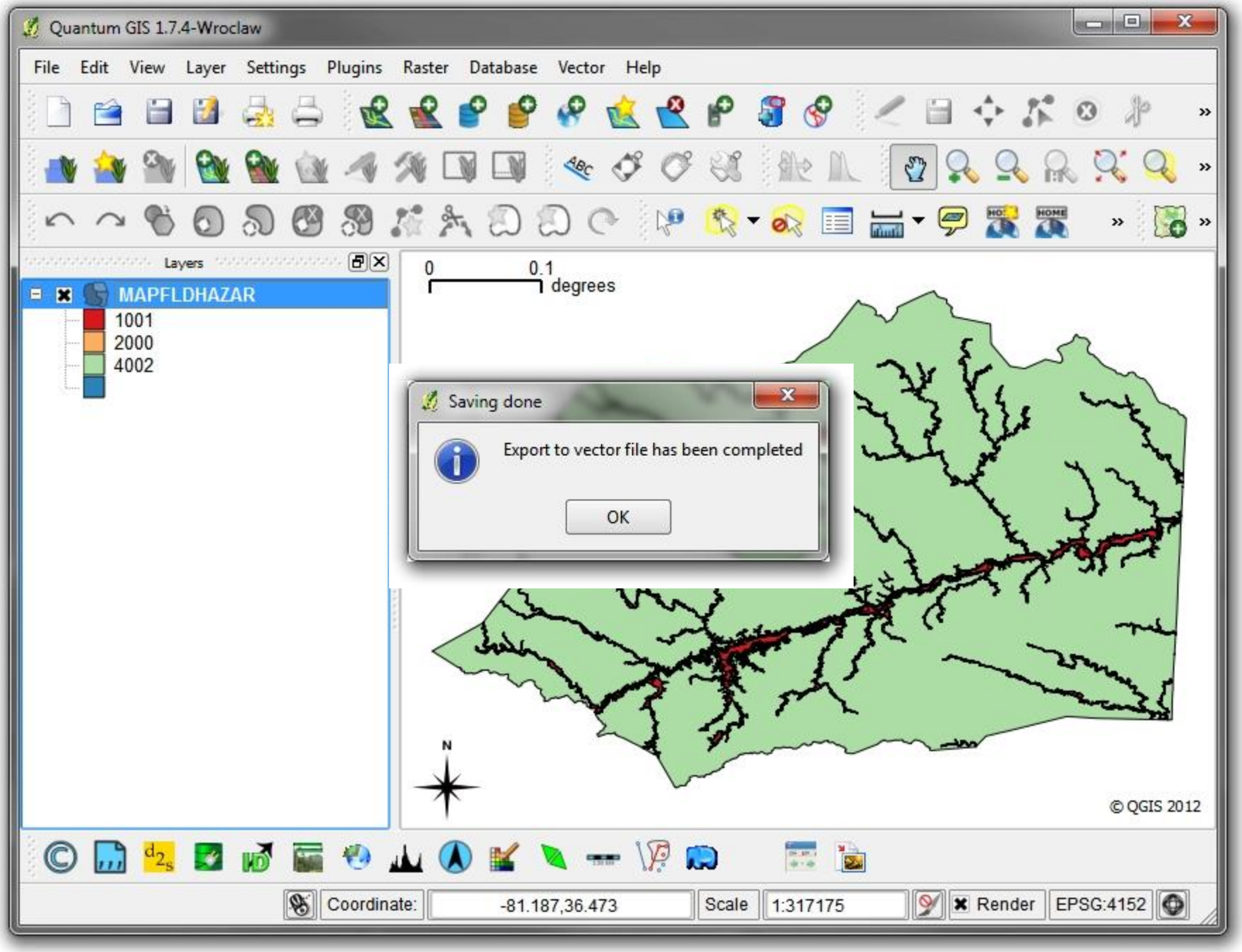

Layer Properties - MAPFLDHAZAR
Style
Labels
Fields
General
Metadata
Actions
Joins
Diagrams
Overlay
Categorized
Change to "Categorized"
Symbol levels
Old symbology
Column
ZONE_LID
Change to "ZONE_LID"
Symbol
change
Color ramp
new color ramp
Symbol
Value
Label
1001
1001
2000
2000
4002
4002
Click
Classify
Classify
Add
Delete
Delete all
Join
Advanced
Restore Default Style
Save As Default
Load Style ...
Save Style ...
OK
Cancel
Apply
Help

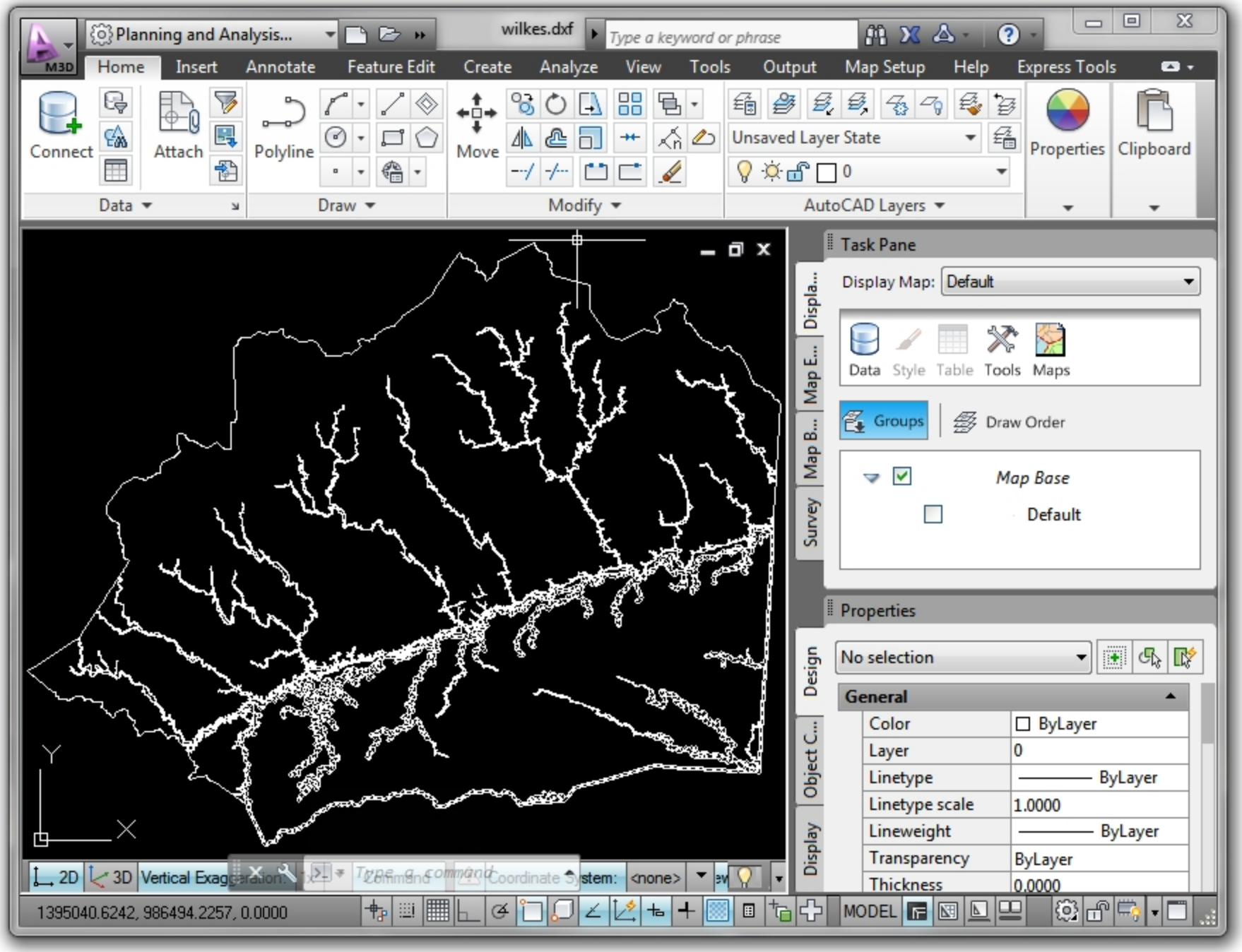

Quantum GIS 1.7.4-Wroclaw
File
Edit
View
Layer
Settings
Plugins
Raster
Database
Vector
Help
Layers
MAPFLDHAZAR
1001
2000
4002
0
0.1
degrees
N
© QGIS 2012
Coordinate:
-81.270,36.372
Scale
1:317175
Render
EPSG:4152



Right Click on the layer name and select Save as…


Save vector layer as...
Format
AutoCAD DXF
Change to “AutoCAD DXF”
Save as
C:/Users/skaufman/Downloads/Wilkes_Effective_PGDB_Final/wilkes.dxf
Browse
Encoding
System
CRS
Layer CRS
_0=33.75 +lon_0=-79 +x_0=609601.2199999997 +y_0=0 +ellps=GRS80 +towgs84=0,0,0,0,0,0,0 +units=us-ft +no_defs)
Browse
OGR creation options
Data source
Layer
Skip attribute creation
OK
Cancel
Help


Quantum GIS 1.7.4-Wroclaw
File Edit View Layer Settings Plugins Raster Database Vector Help
Layers
MAPFLDHAZAR
1001
2000
4002
0 0.1 degrees
Saving done
Export to vector file has been completed
OK
N
© QGIS 2012
Coordinate: -81.187,36.473
Scale 1:317175
Render
EPSG:4152


Planning and Analysis...
wilkes.dxf
Type a keyword or phrase
Home
Insert
Annotate
Feature Edit
Create
Analyze
View
Tools
Output
Map Setup
Help
Express Tools
Connect
Attach
Polyline
Move
Unsaved Layer State
Properties
Clipboard
Data
Draw
Modify
AutoCAD Layers
Task Pane
Display Map:
Default
Data
Style
Table
Tools
Maps
Groups
Draw Order
Map Base
Default
Properties
No selection
General
Color
ByLayer
Layer
0
Linetype
ByLayer
Linetype scale
1.0000
Lineweight
ByLayer
Transparency
ByLayer
Thickness
0.0000
2D
3D
Vertical Exaggeration:
Coordinate System:
<none>
1395040.6242, 986494.2257, 0.0000
MODEL

Open a Geodatabase in AutoCAD Map/Civil

- Go to OSGeo (http://fdo.osgeo.org) and on the left click "Products Using FDO" and note which FDO Version you need.

** Note this may not work with 64 bit AutoCAD

Autodesk

Product	FDO Version
AutoCAD® Map 3D 2012	3.6.0
AutoCAD Map 3D 2011	3.5.0
AutoCAD Map 3D 2010	3.4.0
AutoCAD Map 3D 2009	3.3.1
AutoCAD Map 3D 2008	3.2.1
Autodesk Map 3D 2007	3.0.0
Autodesk Map 3D 2006	2.0.0
Autodesk Map 3D 2005	1.0.0
Autodesk® Topobase™ 2011 (Client & Web)	3.5.0
Autodesk Topobase 2010 (Client & Web)	3.4.0
Autodesk Topobase 2009	3.3.1
AutoCAD® Civil 3D® 2012	3.6.0
AutoCAD Civil 3D 2011	3.5.0
Autodesk® Utility Design 2009	3.3.1
Autodesk® LandXplorer™ Studio Professional 2009	3.4.0
Autodesk® Infrastructure Map Server 2012	3.6.0
Autodesk MapGuide® Enterprise 2011	3.5.0
Autodesk MapGuide Enterprise 2010	3.4.0
Autodesk MapGuide Enterprise 2009	3.3.1
Autodesk MapGuide Enterprise 2008	3.2.2
Autodesk MapGuide Enterprise 2007	3.1.0

•On the lower left side click “Downloads” under the Releases section (http://fdo.osgeo.org/content/downloads). Then click on the version of FDO listed on the previous page.

Available Feature Data Objects Downloads

3.7.0 Beta1	December 2011
3.6.0	April 2011
3.5.0	October 2010
3.4.1	November 2009
3.4.0	April 2009
3.3.2	February 2009
3.3.1	April 2008
3.3.0	March 2008
3.2.3	August 2007
3.2.2	July 2007
3.2.1	March 2007
3.2.0	December 2006

- You will be presented with download options. Select the one most appropriate.

FDO 3.6.0 Downloads

Submitted by gregboone on Wed, 2010-10-27 16:28.

3.6.0	April 8, 2011	Source	Windows 32bit Binaries	Windows 64bit Binaries	Linux Binaries	Documentation

- Select the OGR Provider and download.

Windows 64bit Binaries

The following tar files contains the Windows (64bit) Managed and Unmanaged FDO compiled release binary files.

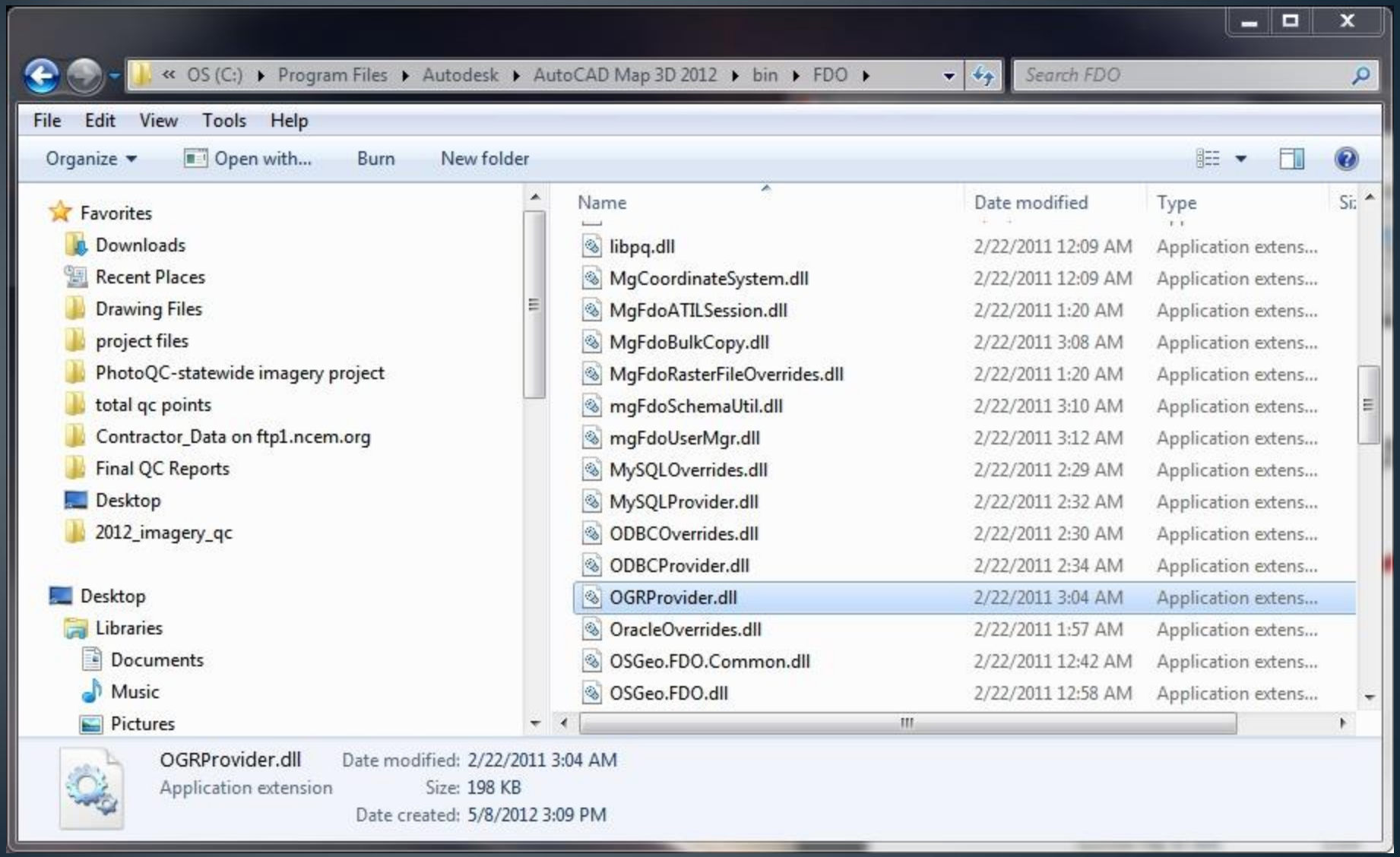
FDO Core

- **FDO API and Common Binaries**

FDO Providers

- **ArcSDE Provider**
- **GDAL Raster Provider**
- **King Oracle Provider**
- **MySQL Provider**
- **ODBC Provider**
- **OGR Provider**
- **PostgreSQL Provider**
- **RDBMS Providers** (SQLServer Spatial, MySQL, PostgreSQL, and ODBC Providers. Generic RDBMS Framework)
- **SDF Provider**
- **SHP Provider**
- **SQLite Provider**
- **SQLServer Spatial Provider**
- **WFS Provider**
- **WMS Provider**

•You may need a program like 7zip to unzip this file. After unzipping, place the OGRProvider.dll into the /FDO/bin/ folder

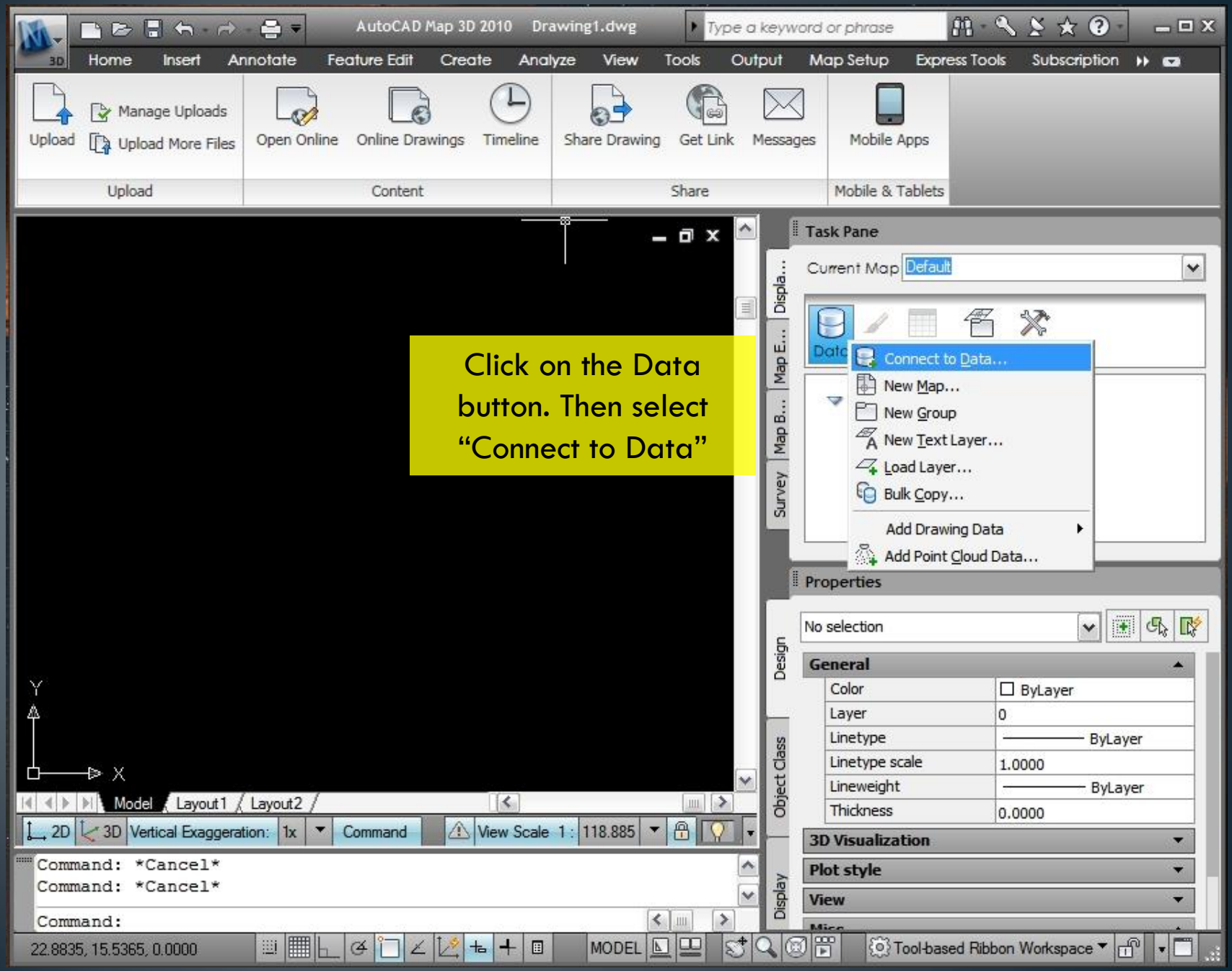


- Open the file providers.xml and add the following to the file:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<FeatureProviderRegistry>

 <FeatureProvider>
    <Name>OGRProvider</Name>
    <DisplayName>OGR mdb Provider</DisplayName>
    <Description>Esri Geodatabase</Description>
    <IsManaged>False</IsManaged>
    <Version>3.6.0.0</Version>
    <FeatureDataObjectsVersion>3.6.0.0</FeatureDataObjectsVersion>
    <LibraryPath>OGRProvider.dll</LibraryPath>
 </FeatureProvider>

<FeatureProvider>
   <Name>OSGeo.WMS.3.6</Name>
   <DisplayName>OSGeo FDO Provider for WMS</DisplayName>
   <Description>Read access to OGC WMS-based data store.</Description>
   <IsManaged>False</IsManaged>
   <Version>3.6.0.0</Version>
   <FeatureDataObjectsVersion>3.6.0.0</FeatureDataObjectsVersion>
   <LibraryPath>WMSProvider.dll</LibraryPath>
</FeatureProvider>
```



Click on the Data button. Then select "Connect to Data"

Data Connections by Provider

Data Connect help

Learn more

- Add ArcSDE Connection
- Add MySQL Connection
- Add ODBC Connection
- Add OGR Connection
- Add Oracle Connection
- Add Raster Image or Surface Connectior
- Add SDF Connection
- Add SHP Connection
- Add SQL Server Connection
- Add SQL Server Spatial Connection
- Add WFS Connection
- Add WMS Connection

FDO Provider for OGR

Add a New Connection

Access to OGR data sources

Connection name:

OGR_1

DataSource: :\wilkes\Wilkes_Effective_PGDB_Final\Wilkes_Effective_PGDB_Final.mdb

ReadOnly: TRUE

Login

Note you have to enter the full path for the geodatabase

Connect

AutoCAD Map 3D 2010 Drawing1.dwg

Home Insert Annotate Feature Edit Create Analyze View Tools Output Map Setup Express Tools Subscription

Upload Manage Upl Upload More

Data Connections by Provider

Data Connect help Learn more

- Add ArcSDE Connection
- Add MySQL Connection
- Add ODBC Connection
- Add OGR Connection
  - OGR_1
- Add Oracle Connection
- Add Raster Image or Surface Connectior
- Add SDF Connection
- Add SHP Connection
- Add SQL Server Connection
- Add SQL Server Spatial Connection
- Add WFS Connection
- Add WMS Connection

OGR

OGR_1 ()

Add Data to Map

Available sources in this connection. Select Items to add to the map as layers.

Edit Coordinate Systems | Refresh

Schema	Coordinate System
MAPBFE	< unknown >
MAPCBRS	< unknown >
MAPCBRSLN	< unknown >
MAPFIRMPAN	< unknown >
MAPFLDHAZAR	< unknown >
MAPFLDHAZLN	< unknown >
MAPGENSTRUCT	< unknown >
MAPLOMR	< unknown >
MAPMT1LOMCPT	< unknown >
MAPPOLAR	< unknown >
MAPPOLLN	< unknown >

Add to Map

Map Coordinate System

< unknown >
< unknown >
< unknown >

Disconnect from Feature Source

To reconfigure this connection, disconnect, and then edit the information.

Disconnect

Data Connect

Model Lay

2D 3D Vertical Ex

Command: _MAPCO

Command:

Command:

Plot style

View

9.8380, 8.4925 , 0.0000

MODEL

Tool-based Ribbon Workspace

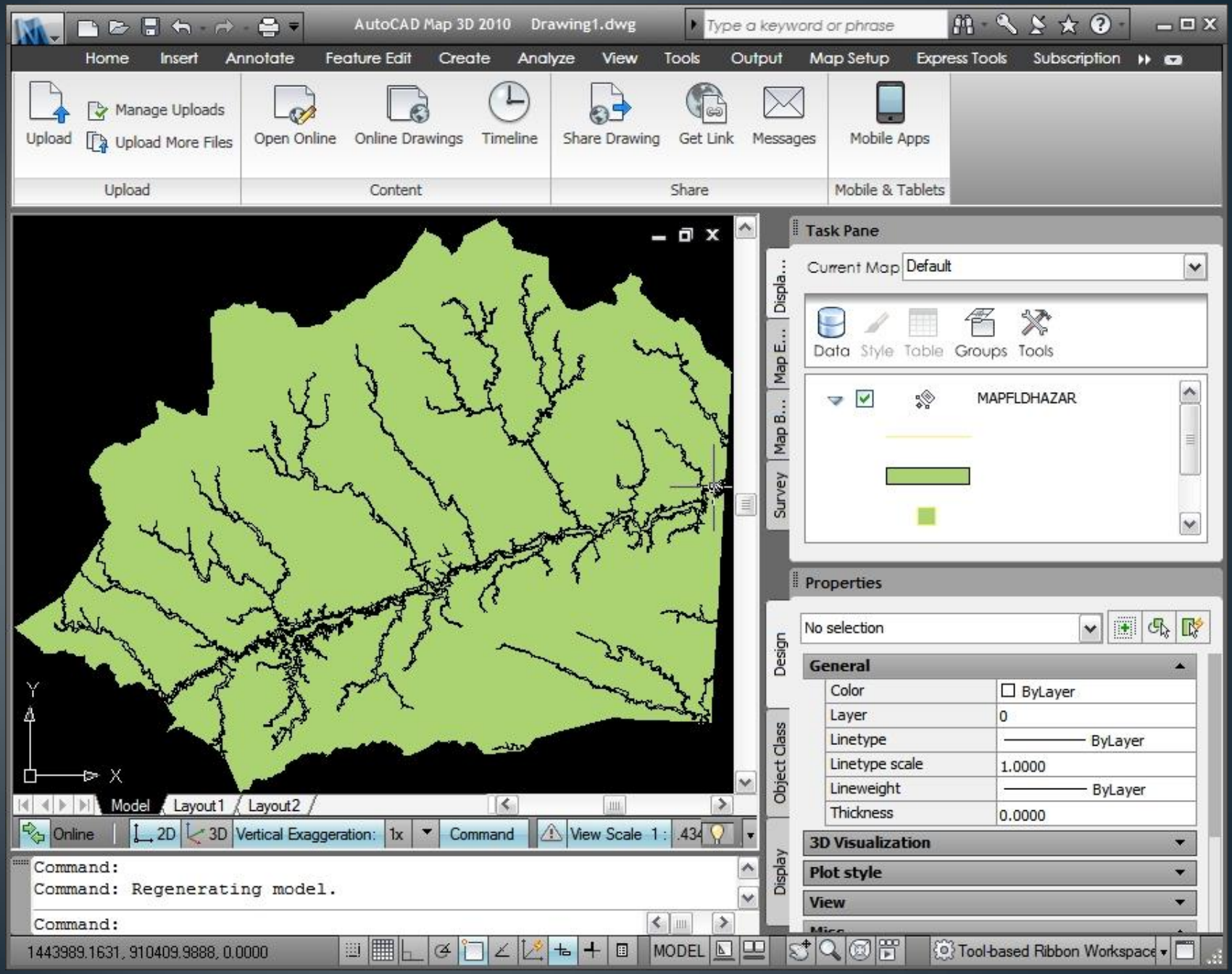

AutoCAD Map 3D 2010 Drawing1.dwg
Type a keyword or phrase
Home
Insert
Annotate
Feature Edit
Create
Analyze
View
Tools
Output
Map Setup
Express Tools
Subscription
Upload
Manage Uploads
Upload More Files
Open Online
Online Drawings
Timeline
Share Drawing
Get Link
Messages
Mobile Apps
Upload
Content
Share
Mobile & Tablets
Task Pane
Current Map
Default
Data
Style
Table
Groups
Tools
MAPFLDHAZAR
Properties
No selection
General
Color
ByLayer
Layer
0
Linetype
ByLayer
Linetype scale
1.0000
Lineweight
ByLayer
Thickness
0.0000
3D Visualization
Plot style
View
Model
Layout1
Layout2
Online
2D
3D
Vertical Exaggeration:
1x
Command
View Scale 1 :
Command:
Command: Regenerating model.
Command:
1443989.1631, 910409.9888, 0.0000
MODEL
Tool-based Ribbon Workspace

Table notes:

ZONE_LID:

1001 = AE

2000 = 0.2 PCT Annual Flood Hazard

4002 = X

V_DATUM_LID:

1010 = NAVD88

LEN_LID:

1010 = FEET

Bonus Round!
(odds and ends)

- http://www.ncfloodmaps.com/ to download geodatabases
- http://www.qgis.org to get the Quantum GIS Program
- http://fdo.osgeo.org/ to download AutoCAD Plugin

- http://www.ncgs.state.us also has a map of contractor surveyed benchmarks that can be used for flood certifications
- http://goo.gl/t5hpX DS World is a NGS Google Earth Program with many ways to search survey monuments
- http://www.7-zip.org/ can be used to unzip .tar and .gz files
- https://code.google.com/p/zscreen/ is an excellent screen capture utility

Questions?

Steve Kaufman

North Carolina Geodetic Survey

(919) 948-7839

steve.kaufman@ncdps.gov

http://portal.ncdenr.org/web/lr/geodetic/presentations