Weather Message WxMap
Adding a Street Roads Layer

WxMap supports multiple GIS layers. The default installation includes the county layer and state layer. You can download additional layers that include: county zones, marine zones, rivers and interstate roads. These additional layers are included in the WxMapLayers download from the Weather Message website.

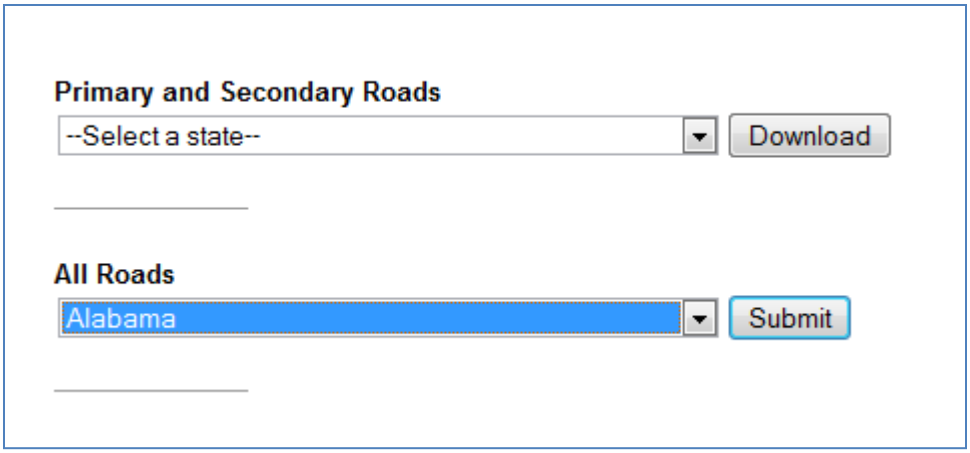
This document describes the steps for adding a street road layer using the Census Bureau's TIGER/Line® shape database. A roads layer can be quite useful in determining the area enclosed in a polygon.

Note: WxMap can read several GIS formats. Contact Weather Message Support to see if your specific format is supported.

Download TIGER/Line Roads

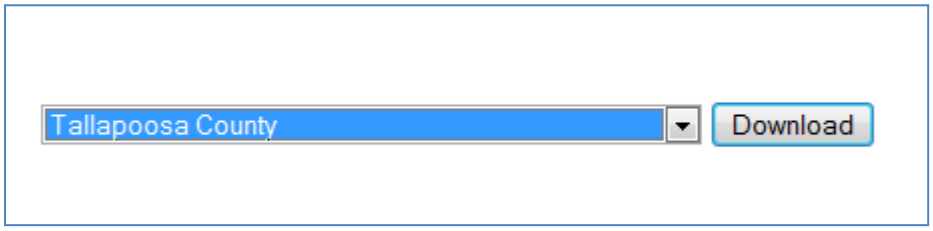
Begin by downloading the TIGER/Line Roads layer for your county or state. The following link is for the 2010 shape files. http://www.census.gov/cgi-bin/geo/shapefiles2010/main

Select Roads in the layer type box and click submit.

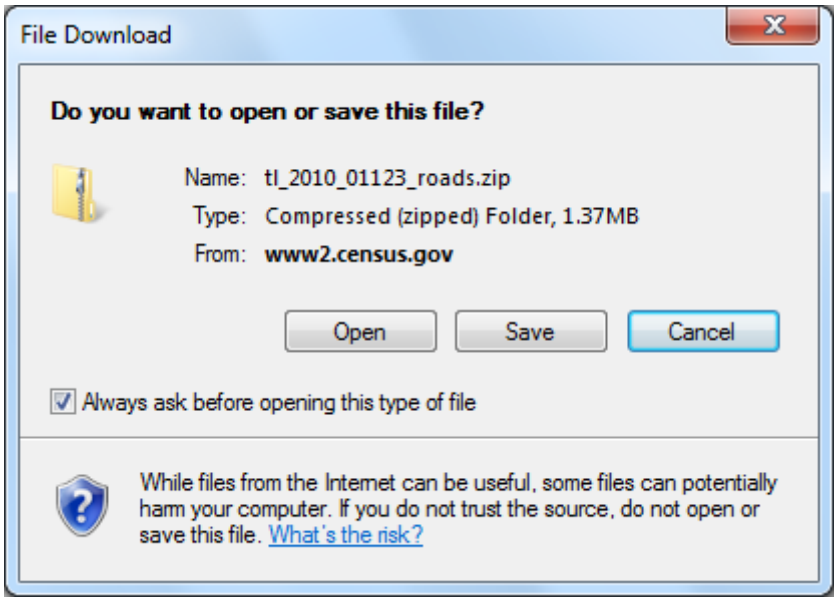


For all state roads, select your state below "Primary and Secondary Roads" and click Download. For the roads for a specific county, select your state under All Roads and click Submit.

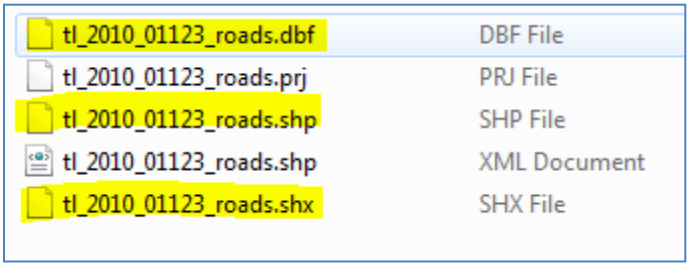
If you selected "Primary and Secondary Roads", you will not see this screen. You will see the "File Download" window that follows this step.



Select your county and click Download.



Select Open to open the roads layer zip file.



The zip file will contain the above files. The ones highlighted in yellow are the ones that you need for the roads layer. Select the three files and copy them to c:\program files\wxmesgnet\map directory.

Create an ini file for the layer

WxMap needs to know some information about the map files. You can provide this information by creating an ini file that is named just like the map files. In this example, the map files are named *tl_2010_01123_roads*. You will want to create *tl_2010_01123_roads.shp.ini* in c:\program files\wxmesgnet\map directory.

Open notepad and insert the following text.

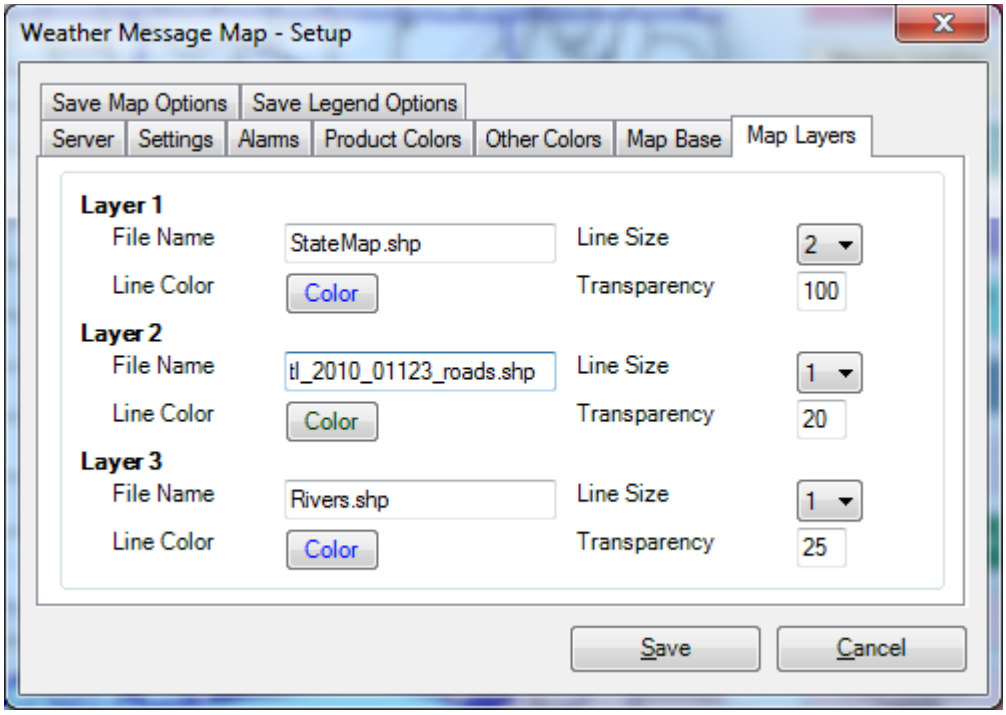
```
[TatukGIS Layer]
MinZoom=-400
MaxZoom=-1.7E308
Transparency=50
;Scope=roadflg = 'Y'

Area.Color = Color.White
Area.Pattern = Transparent
Area.OutlineStyle=SOLID
Area.OutlineColor = White
Area.OutlineWidth = -1
Area.OutlineColor=White
Area.OutlinePattern=Transparent
Area.SmartSize=0
Area.SmartSizeField=

Line.Style=SOLID
Line.Color=Blue
Line.Width=-1
Line.Pattern=SOLID
Line.OutlineStyle=SOLID
Line.OutlineColor = Blue
Line.OutlineWidth = -1
Line.OutlinePattern = Transparent
Line.SmartSize=0
Line.SmartSizeField=

Label.Field=FULLNAME
Label.Allocator=True
Label.Duplicates=False
Label.Visible=True
Label.Alignment=Follow
Label.Position=Flow
Label.Color=White
Label.Font.Name=Arial
Label.Font.Size=7
Label.Font.Color=Black
Label.Font.Style=
Label.Pattern=Transparent
Label.OutlineStyle=SOLID
Label.OutlineColor = White
Label.OutLinePattern=Transparent
Label.OutLineWidth=0
Label.SmartSize=
Label.SmartSizeField=
```

Note: Information about the above settings will be discussed later.

Save these settings to c:\program files\wxmesgnet\wxmap\tl_2010_01123_roads.shp.ini

Configure WxMap

You are now ready to configure WxMap to display this roads layer. Start WxMap and click File and Setup. Click the Map Layers tab. Change on of the additional layers to display the roads layer.

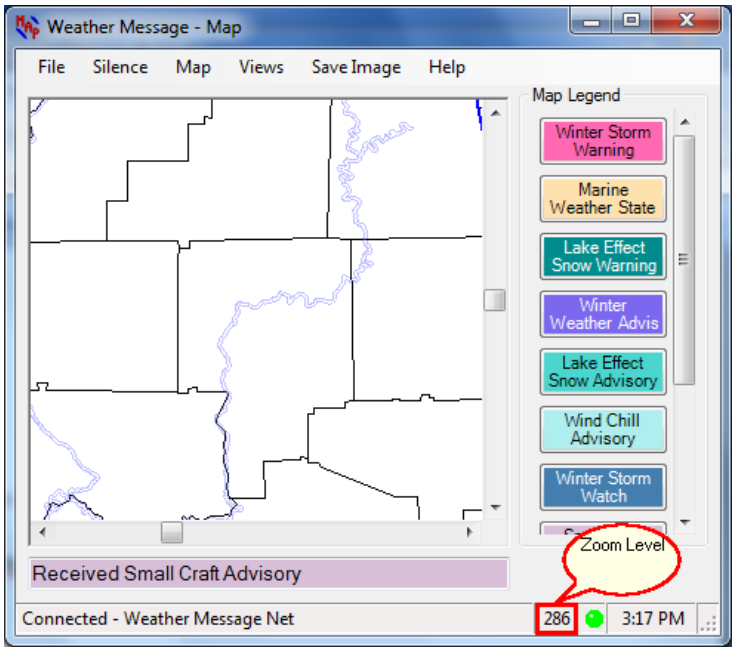


Note: The color, line size, and transparency settings are taken from the tl_2010_01123_roads.shp.ini file. The ini file overrides the settings in the program.

Save your changes. Stop and restart WxMap.

Viewing the Roads Layer (Setting Zoom Level)

When you start WxMap, the roads may not be visible for the selected county.

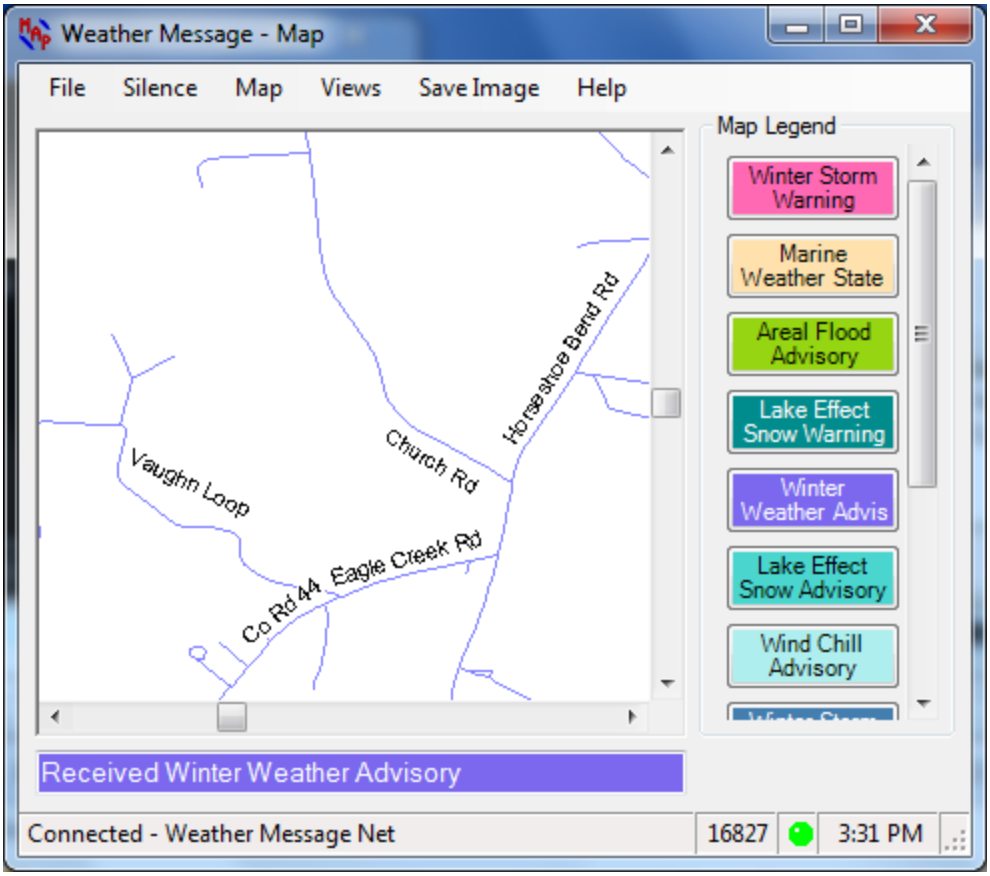


The map's zoom level and roads layer's ini settings control when the roads are displayed. In the map above, the zoom level is 286 and the roads layer is not displayed. If you look at the ini settings, you

will find the line *MinZoom=-400*. The -400 tells WxMap to not display the roads layer until the zoom level reaches 400.

Note: The MinZoom level is specified as a negative number. This number represents pixels on the screen.

When the map is zoomed to at least 400, the roads will appear.



Configuration File Settings

The configuration file (ini) not only controls when the roads layer will be displayed. It also configures the font, size and colors of the road names and features. The following information is a summary of the settings that can be used in the ini file.

Transparency
: Transparency value. If 0 then transparent, if 100 then not transparent.

MinZoom
: Starting visibility zoom. If negative then value refers to pixels.

MaxZoom
: Ending visibility zoom. If negative then value refers to pixels. Zoom must be between MinZoom and MaxZoom to make the layer visible.

Scope
: Use this property as a SQL-like query (WHERE clause) to define the displayed objects in the shape file. This is not used in the above example.

Area Settings
The following settings are used to describe the area occupied by each map object.

Area.Color
Specifies the color for the area. This can be a color name, or a RGB value in the format 220:120:50.

Area.Symbol
Specifies the path and name of an image to be used for the symbol.

Area.SymbolSize
Specifies the size of the symbol to fill the area. The number should be entered as a negative value to specify pixels.

Area.SymbolGap
Specifies the gap between symbols. The number should be entered as a negative value to specify pixels.

Area.SymbolRotate
Specifies the value to rotate the symbol. The value is entered as radians.

Area.Pattern
Specifies the pattern to use to fill the area. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Area.OutlineColor
Specifies the color for the area outline. This can be a color name, or a RGB value in the format 220:120:50.

Area.OutlineWidth
Specifies the outline width. The number should be entered as a negative value to specify pixels.

Area.OutlineStyle
Specifies the outline style. Values are: SOLID, DASH, DOT, DASHDOT, DASHDOTDOT, and CLEAR.

Area.OutlineSymbol
Specifies the path and name of an image to be used for the symbol's outline.

Area.OutLineSymbolGap
Specifies the gap between symbols. The number should be entered as a negative value to specify pixels.

Area.OutLineSymbolRotate
Specifies the value to rotate the symbol. The value is entered as radians.

Area.OutlinePattern
Specifies the pattern to use to fill the area. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Area.SmartSize
Specifies the minimum size that is to be visible. The number should be entered as a negative value to specify pixels.

Line Settings

The following settings are used to describe the lines drawn for each map object.

Line.Color
Specifies the color for the line. This can be a color name, or a RGB value in the format 220:120:50.

Line.Width
Specifies the line width. The number should be entered as a negative value to specify pixels.

Line.Style
Specifies the line style. Values are: SOLID, DASH, DOT, DASHDOT, DASHDOTDOT, and CLEAR .

Line.Symbol
Specifies the path and name of an image to be used for the symbol.

Line.SymbolGap
Specifies the gap between symbols. The number should be entered as a negative value to specify pixels.

Line.SymbolRotate
Specifies the value to rotate the symbol. The value is entered as radians.

Line.Pattern
Specifies the pattern to use to draw the line. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Line.OutlineColor
Specifies the color for the line outline. This can be a color name, or a RGB value in the format 220:120:50.

Line.OutlineWidth
Specifies the outline width. The number should be entered as a negative value to specify pixels.

Line.OutlineStyle
Specifies the outline style. Values are: SOLID, DASH, DOT, DASHDOT, DASHDOTDOT, and CLEAR.

Line.OutlinePattern
Specifies the pattern to use to fill the area. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Line.SmartSize
Specifies the minimum size that is to be visible. The number should be entered as a negative value to specify pixels.

Label Settings

The following settings are used to describe the labels that are drawn for each map object. (In our example, the road names.)

Label.Visible

Specifies whether labels are visable. Values are: TRUE or FALSE.

Label.Allocator

Specifies whether to an allocator to determine if labels are overlapped. Values are: TRUE or FALSE. Setting the value to TRUE will prevent labels from overlapping.

Label.Duplicates

Specifies whether to paint duplicate lables. Values are: TRUE or FALSE.

Label.Field

Specifies the field name in the data base that contains the text for the label.

Label.Alignment

Specifies the alignment of the label. Values are: SINGLE, LEFTJUSTIFY, CENTER, RIGHTJUSTIFY, and FOLLOW. FOLLOW is valid only for lines and means: rotate and follow the shape.

Label.Position

Specifies the position of the label. Values are: ANY, FLOW, LEFT, UPCENTER, UPRIGHT, MIDDLELEFT, MIDDLECENTER, MIDDLERIGHT, DOWNLEFT, DOWNCENTER, DOWNRIGHT, UPRRIGHTFIRST, UPLEFTFIRST, and MIDDLEFIRST. FLOW means that the label placement will be computed dynamically to guarantee label visibility.

Label.Color

Specifies the back ground color for the label. This can be a color name, or a RGB value in the format 220:120:50.

Label.Font.Name

Specifies the name of the font used to draw the text for this label.

Label.Font.Size

Specifies the font size for the label's text.

Label.Font.Style

Specifies the font style for the label's text. Values are: fsBold, fsItalic, fsUnderline, and fsStrikeOut .

Label.Font.Color

Specifies the font color for the label. This can be a color name, or a RGB value in the format 220:120:50.

Label.Height

Specifies the minimum height for labels. The number should be entered as a negative value to specify pixels.

Label.Pattern

Specifies the pattern to use to fill the label. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Label.Width

Specifies the label width. The number should be entered as a negative value to specify pixels.

Label.OutlineColor

Specifies the outline color for the label. This can be a color name, or a RGB value in the format 220:120:50.

Label.OutlineWidth

Specifies the label's outline width. The number should be entered as a negative value to specify pixels.

Label.OutlinePattern

Specifies the pattern to use to fill the area. Values are: SOLID, BDIAGONAL, FDIAGONAL, CROSS, DIAGCROSS, HORIZONTAL, VERTICAL, and TRANSPARENT .

Label.SmartSize

Specifies the minimum size that is to be visible. The number should be entered as a negative value to specify pixels.