

Weather Defender

# Tutorial 2: Maps & Layers

Step-by-Step Guide

Trial Version

Software Version 1.1

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## Lesson 2: Maps & Layers



A video of this tutorial is available at: [www.weatherdefender.com/tutorials.aspx](http://www.weatherdefender.com/tutorials.aspx)

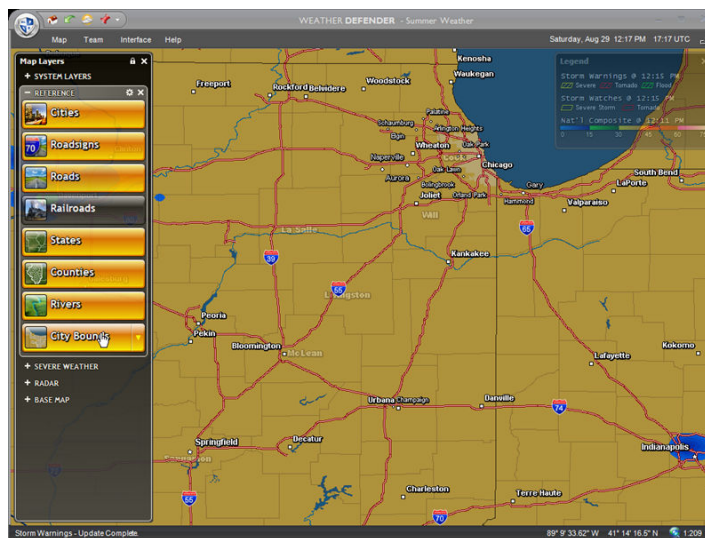
In this lesson, you will learn:

- the meaning of each layer in simple terms
- How to access the Winter Weather map included in this demo.

### **The Map Layers Window – Summer Weather Map (Default)**

The semi-transparent window along the left side of the screen is your **Map Layers** window. It allows you to control which layers are visible on your map. If you close this window, you can display it again by clicking **Interface** tab, then the **Layers** button.

The **System Layers** group contains a few Layers which are used internally by the application. There is usually no need control these.



The **Reference Layers** group contains geographic references. These are:

- Cities & Towns
- Major roads (highways and interstates)
- Railroads
- State outlines

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- County outlines
- Rivers
- City or Urban boundaries.

Next we have the **Severe Weather** Layers, which contain:

- Storm tracks - tells you where the storms are going to be up to one hour into the future (3 hours for the Commercial Version). Activate this layer and zoom in on a particular storm to see the path displayed as a white line with estimated times of arrival. Note that hovering over the yellow icon at the start of the track will display a visual path of the storm, along with specific details about that storm like rainfall intensity and chance of hail.
- Lightning - This layer displays lightning strikes over the past hour. The most recent strikes are in white. Lightning strikes are displayed in a 150 by 150 mile region from the center of your map (or 300 by 300 mile region in the Commercial Version), and are updated every 2 minutes
- Storm Watches - Storm Watches are government-issued watches for large areas where severe weather is expected to develop in the next 4-6 hours. These include Tornado and Severe Thunderstorm Watches.
- Storm Warnings - Storm Warnings are government-issued warnings for small areas where severe weather is imminent or presently occurring. These can include Tornadoes, Severe Thunderstorms, Flash Floods, or coastal Marine Hazards. By zooming in closer on a particular warning, you can read the forecaster's bulletin by clicking the Blue icon displayed next to the warning.

Then we have **Radar Layers**. Your options are:

- Local Radar - displays a radar image from the nearest monitoring station. If you reposition your map, this layer will automatically determine the nearest radar station and update with a new image.
- National Radar - displays radar imagery for the whole country.

Put simply, Radar measures the intensity of rainfall. This is measured in decibels, and the color scale is displayed in your **Map Legend**.

- Blue is usually nothing – ground clutter or high humidity close to the radar site.
- Green is light rain, up to a quarter-inch per hour

- Yellow is moderate rain, up to an inch per hour
- Red is heavy rain, and can be 2 to 8 inches per hour. These would be thunderstorms.
- Anything beyond red is extreme: more than 10 inches per hour and likely large hail, maybe even tornadoes.

Finally, there are the **Base Layers**, which create a background for your map. They include:

- Satellite displays – shows cloud imagery from orbiting satellites.
- Temperature displays – shows a color-coded temperature map. Color definitions are displayed in the Map Legend window.
- Lakes, Topography, World Countries, and Lat-Lon Grids – are all for geographic reference and your viewing preference.

### **Accessing the Winter Weather Map**

To access the Winter Weather map in Weather Defender, click on the **Shield** menu and **Open Map**.

Select **Winter Weather** from the file window and click **Open**.

### **The Map Layers Window – Winter Weather Map**

The **Reference Layers** are the same for the Winter Map.

The **Winter Hazards Layers** are home to:

- Snow reports - provides you with reports on snow depth, freezing rain, extreme winds and other winter hazards as reported by actual field observers.
- Warnings - provides you with government-issued warnings for every season. These can include Blizzards, Heavy Snow, Sleet, and many other types of warnings.
- Advisories - provides the longest-range government-issued notices about hazardous weather. These are often issued one or more days in advance of the expected threat.

The Winter Weather Map includes a local radar like the Summer Weather Map, but instead of a National Composite radar, it has a Winter Radar to display snow, sleet, and rain all in the same image.

Included in the Base Layers on the Winter Map, you will find county-based Watches. A government-issued watch is issued after advisories but before warnings, usually within a few hours of the expected event.

### **More Maps & Layers**

Several more maps and layers are available when you upgrade to the full retail version.

### **A special note about Zoom levels**

The map's zoom level will often determine the amount of detail displayed by a particular geographic layer. For example, when zoomed out to a national scale, only the largest cities are displayed. Zooming in to an individual state or closer will cause smaller cities to be displayed. So if you turn on a layer and don't see something you expected, try zooming in to find it.