USDA Plant Hardiness Zone Map User Guide

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1.0 USDA Plant Hardiness Zone Map Application

1.1 Introduction

This document provides instructions for using the USDA Plant Hardiness Zone Map (PHZM) Application. The PHZM User Guide is a reference tool to assist you with obtaining plant hardiness zone information for your area of interest. By the end of this guide, you will be able to obtain plant hardiness zone information from a plant hardiness ZIP Code Finder, from static map images and through an interactive GIS-based map.

The PHZM User Guide is divided into two sections:

1. USDA Plant Hardiness Zone Map Application in a JavaScript enabled Internet Browser (Section 2.0)

2. USDA Plant Hardiness Zone Map Application in a JavaScript disabled Internet Browser (Section 3.0)

1.2 Supported Internet Browsers

This application was designed and tested to function properly when using Microsoft Internet Explorer 8.0 and above and Mozilla Firefox 7.0 and above. If you are using an older version of these browsers or another browser and experience any problems with this application, we recommend you upgrade to the current versions. You may click on the links provided to download and upgrade to the current browsers.

Microsoft Internet Explorer: http://www.microsoft.com/internetexplorer/

Mozilla Firefox: http://www.mozilla.org/firefox/

2.0 USDA Plant Hardiness Zone Map Application (JavaScript Enabled Internet Browser)

2.1 Introduction

When you access the USDA Plant Hardiness Zone Map application in a JavaScript *enabled* Internet browser, you will access the home page which looks similar to the graphic below in section 2.2.

If you have a JavaScript *disabled* Internet Browser, it will behave differently on some pages. To review those differences, click here

2.2   USDA PHZM Home Page

The USDA PHZM Home page consists of a Plant Hardiness ZIP Code Finder and static images of the plant hardiness zone map for the continental United States, Alaska, Hawaii, and Puerto Rico.

2.2.1   Plant Hardiness ZIP Code Finder

The Plant Hardiness ZIP Code Finder allows you to retrieve a plant hardiness zone and temperature range for a ZIP Code using the following steps. First, make sure you are in the Home Page or select the **Home** tab on the toolbar to return to the Home page.

Step 1: Access the ZIP Code Finder
Enter a five-digit ZIP Code in the **Enter ZIP Code** search field and click the **Find** button.

Step 2: Answer CAPTCHA Challenge
A CAPTCHA Challenge will be displayed the first time you access the ZIP Code Finder from the home page. Enter the displayed CAPTCHA phrase in the **Enter code** field and click **Validate**. If you need audio assistance, click the **Audio** button to activate the CAPTCHA audio. Click the **Reload** button to refresh (change) the CAPTCHA image.

Step 3: View Plant Hardiness Zone

After answering the CAPTCHA question, the plant hardiness zone and temperature range will be displayed below the **Enter ZIP Code** search field.

2.2.2 Static Map Images

There are two ways to access static map images of the plant hardiness zone map for the continental United States, Alaska, Hawaii, and Puerto Rico; each option is described below. To access, first make sure you are in the Home page or select the **Home** tab on the toolbar to return to the **Home** page.

Option 1
Click on a state in the continental United States, Alaska, Hawaii, or Puerto Rico on the plant hardiness zone map.
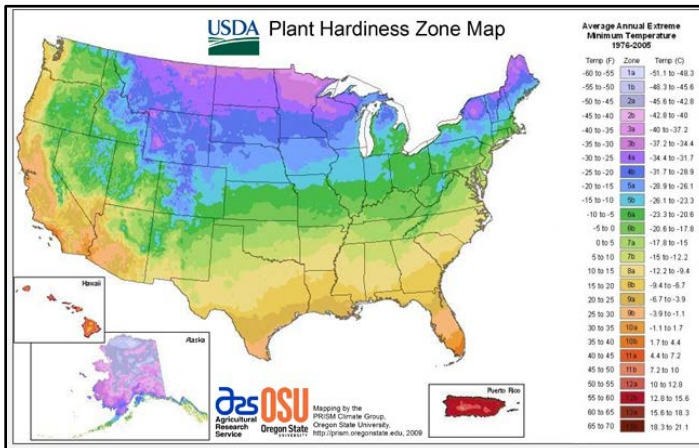
A new pop-up window will display the selected plant hardiness zone map. To close the map, click the X button in the top right-hand corner of the pop-up window.
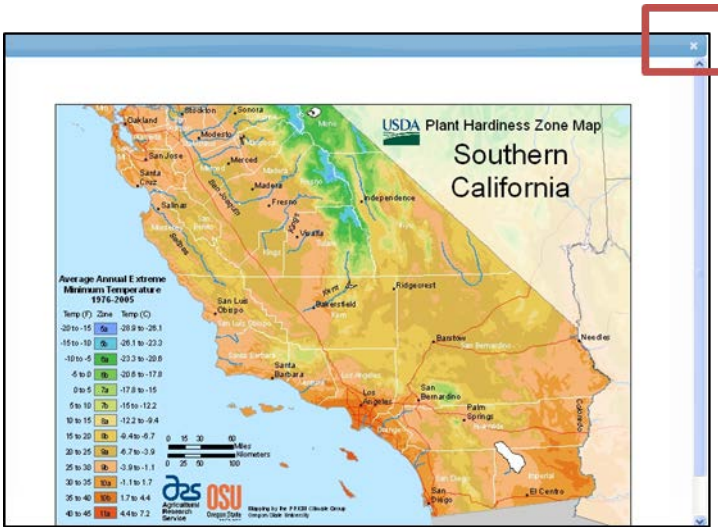
Option 2
Select a state (including Puerto Rico) from the **View Your State Map** drop-down menu.
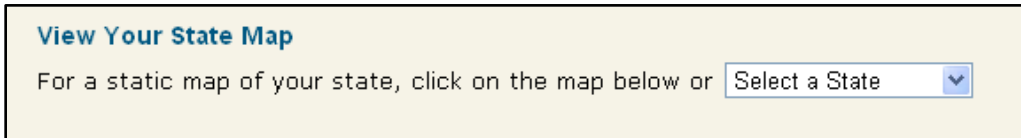
Click on a state (including Puerto Rico) in the drop-down menu.
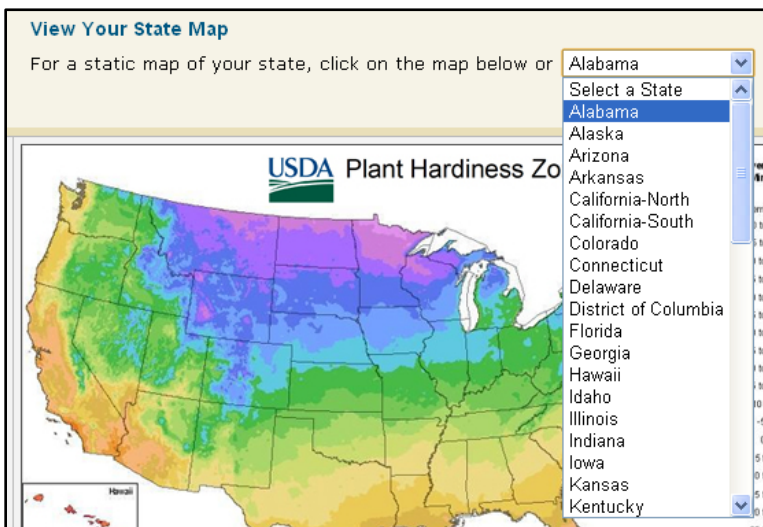
A new pop-up window will display the selected plant hardiness zone map. To close the map, click the X button in the top right-hand corner of the pop-up window.
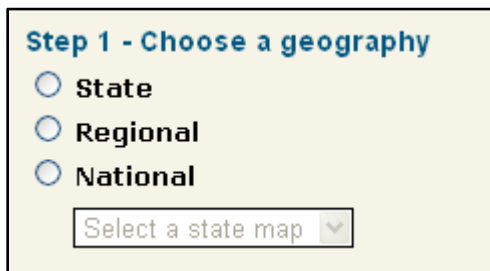
2.3   USDA PHZM View Maps Page

The USDA PHZM View Maps page consists of a three-step wizard (i.e., selection process) to obtain state, regional or national plant hardiness zone maps in three different dots-per-inch (dpi) resolutions.

2.3.1   View Maps Wizard

Access state, regional or national plant hardiness zone maps in three different resolutions using the following steps. To access the Wizard, make sure you are in the View Maps page or select the **View Maps** tab on the toolbar to return to the View Maps page.

Step 1: Choose a geography – Select the State, Regional or National button.
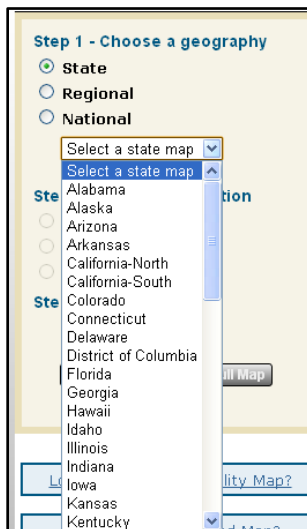
After selection, a drop-down menu will appear. Select the state, region, or national map of interest. If State is selected, the drop-down menu will default to a list of state maps. If Regional is selected, the drop-down menu will default to a list of regional maps. If National is selected, the drop-down menu will default to a list of national maps.

Step 2: Select **a resolution** – After the geography selection, select the Standard, Medium, or High resolution button.

Step 3: View a map – After the resolution selection, you have three options for accessing the map: Preview Map, Open Full Map, or Save Full Map. These options are further described in the next section. Select one of the options, and you should be able to access your map accordingly.

2.3.2 Viewing the Map

This section describes the functionality associated with each of the available options for viewing the map defined in the View Maps Wizard (section 2.3.1).

2.3.2.1 Preview Map Button

Click the **Preview Map** button. The map will appear within the PHZM window.

2.3.2.2   Open Full Map Button

Click the **Open Full Map** button. The map will appear in a new window. You can print this map using the browser default printing menu option or button.

2.3.2.3   Save Full Map Button

Click the **Save Full Map** Button. Your default browser download window will appear, prompting you to open the file or save the file to your computer. Select "Save File" to save it locally.
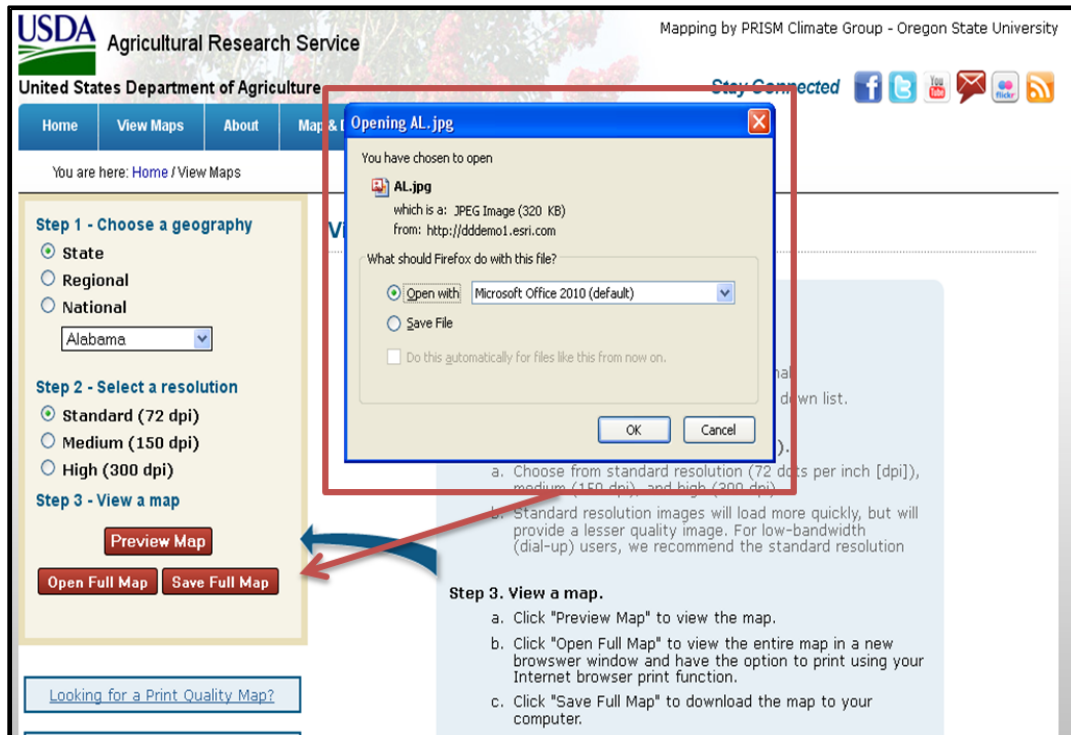
2.4 USDA PHZM About Pages

The USDA PHZM About pages consist of detailed information regarding the following topics: Maps & Gardening, What's New, Map Making, Acknowledgments, and Copyright.

2.4.1 About Page Content

There are two ways to access About page content; each option is described below. To access, make sure you are in the About page or select the **About** tab on the toolbar to return to the About page.

> **Option 1** – About Page Drop-Down Menu
>
> Place your cursor over the **About** tab on the toolbar. A drop-down menu will appear. Click the topic of interest, and the information will be displayed within the PHZM window.

Option 2 – About Page Topics

Click a page of interest in the About **Topics** box on the left side of the PHZM window. The page of interest will display in the PHZM window.

2.5 USDA PHZM Map & Data Downloads Page

The USDA PHZM Map & Data Downloads Page consists of access to the following:

- *Map Downloads:* Downloadable maps for specialty purposes such as Print Quality Maps, Simplified Map Components, and Previous Edition of the Map.
- *Geography (GIS) Downloads:* Downloadable plant hardiness zone GIS data.
- *Multi-ZIP Code Finder:* This selection provides an external link to Climate Source, Inc., which provides a multiple or "batch-mode" ZIP Code finder that may be purchased by the

user. This application allows the user to match hundreds or thousands of 5-digit ZIP Codes with the appropriate USDA Plant Hardiness Zone.

Each of these is described in the sections below.

2.5.1   Map Downloads

The Map Downloads page provides access to additional downloadable maps including Print Quality Maps, Simplified Map Components, and Previous Edition of the Map. Follow the steps below to access these resources.

Step 1: Accessing the Map Downloads page
There are two ways to access the Map Downloads page; each option is described below. First, make sure you are in the Map & Data Downloads page or select the **Map & Data Downloads** tab on the toolbar to return to the Map & Data Downloads page.

Option 1 – Map & Data Downloads Drop-Down Menu

Place your cursor over the **Map & Data Downloads** tab on the toolbar. A drop-down menu will appear. Click Map Downloads. The Map Downloads page will appear in the PHZM window.
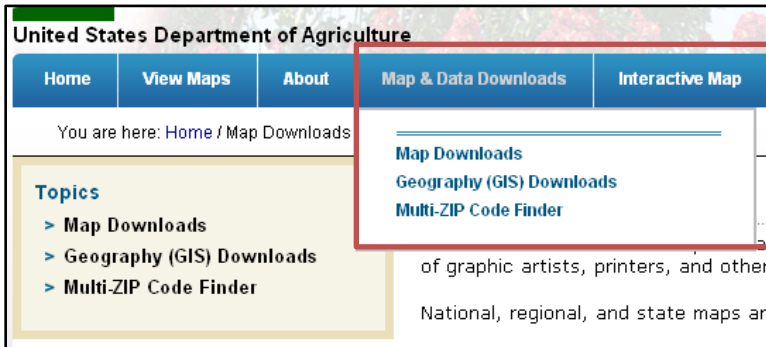
Option 2 – Map & Data Downloads Topics

Click the **Map Downloads** link in the Map & Data Downloads **Topics** box on the left side of the PHZM.

Step 2: Selecting Desired Map
Once you have opened the Map Downloads page, you can scroll down the page to select from a choice of Print Quality Maps, Simplified Map Components, and Previous Edition of the Map. Each is described below.

- **Print Quality Maps** are very large files and may take a long time to download. Most of the file formats are intended for graphic artists using specialized software. Very high-resolution posters of the PHZM can also be printed from these files. To open your choice, click the title.

- Adobe Illustrator Files - Prompts the Internet Browser Save As window to download an .ai file.
- Adobe PDF - Opens an Adobe PDF in an Internet Browser window.
- Graphic – Opens the graphic in an Internet Browser window.
- Adobe Photoshop - Prompts the Internet Browser Save As window to download a .ps file.

Print Quality Maps*

File Link	Type	File Ext	File Size
US Map 150 dpi (RGB)	Adobe Illustrator	AI	82 MB
US Map 300 dpi (RGB)	Adobe Illustrator	AI	240 MB
US Map 300 dpi (RGB)	Adobe PDF	PDF	305 MB
US Map 300 dpi (CMYK)	Adobe Illustrator	AI	318 MB
US Map 300 dpi (CMYK)	Adobe PDF	PDF	395 MB
US Map 300 dpi	Graphic	JPG	26 MB
US Map 300 dpi	Graphic	TIF	222 MB
US Map 300 dpi	Adobe Photoshop	PS	25 MB

*Print quality maps are very large files and may take a long time to download.

- **Simplified Map Components** are individual pieces of the map (title, legend, etc.) and several versions of the PHZM which can be utilized when displaying less detail is preferred. To open these files, scroll to the appropriate selection and click on the desired file. The file will open in a new Internet Browser window.

Simplified Map Components**

File Link	Type	File Ext	File Size
PHZM Logo and Title – 300 dpi	Graphic	PNG	7 KB
Lower 48 States – map – 300 dpi	Graphic	JPG	1.7 MB
Lower 48 States – legend – 300 dpi	Graphic	JPG	871 KB
All states – map – 300 dpi	Graphic	JPG	2.2 MB
All states – legend – 300 dpi	Graphic	JPG	871 KB
Alaska – map – 300 dpi	Graphic	JPG	721 KB
Alaska – legend – 300 dpi	Graphic	JPG	675 KB
Hawaii – map – 300 dpi	Graphic	JPG	351 KB
Hawaii – legend – 300 dpi	Graphic	JPG	526 KB
Puerto Rico – map – 300 dpi	Graphic	JPG	391 KB
Puerto Rico – legend – 300 dpi	Graphic	JPG	451 KB

**Simplified map components are available as separate maps and legends, without titles, and without a&b zone divisions. The titles and logos are available in a single file (listed first in the above table).

- **Previous Edition of the Map** gives you access to the previous edition of the USDA PHZM. To open either the United States version or the complete map (all of North America), click the title of the file. The corresponding Previous Edition PHZM map will open in a new Internet Browser window.

| Previous Edition of the Map			
File Link	**Type**	**File Ext**	**File Size**
1990 US Map	Graphic	JPG	2 MB
1990 North America Map	Graphic	JPG	6 MB

2.5.2 Geography (GIS) Downloads

The Geography (GIS) Downloads page provides access to downloadable GIS data used for generating the maps. Follow the steps below to access the data.

Step 1: Access the Geography (GIS) Downloads page

There are two ways to access the Geography (GIS) Downloads page; each option is described below. First, make sure you are in the Map & Data Downloads Page or select the **Map & Data Downloads** tab on the toolbar to return to the Map & Data Downloads page.

> **Option 1** – Geography (GIS) Downloads Drop-Down Menu
> Place your cursor over the **Map & Data Downloads** tab on the toolbar. A drop-down menu will appear. Click Geography (GIS) Downloads. The 'GIS Data Downloads' page will appear in the PHZM window.
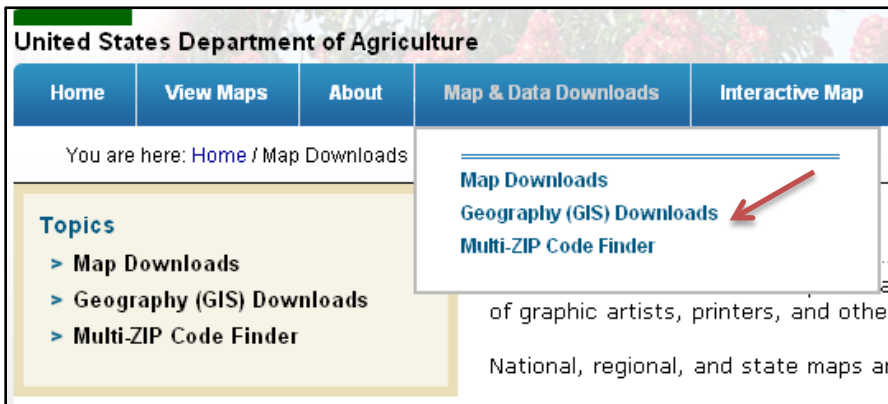
> **Option 2** – Geography (GIS) Downloads Topics
> Click the **Geography (GIS) Downloads** link in the Map & Data Data Downloads **Topics** box on the left side of the PHZM.

Step 2: Access Climate Source Data Download page

Step 3: Click the **Continue** button at the bottom of the GIS Data Downloads page.

A new Internet Browser window will open to the Climate Source website.

- GIS data download website (http://www.climatesource.com/PHZM/gis_data.html).
- Support for the Climate Source website (http://www.climatesource.com/support.htm).
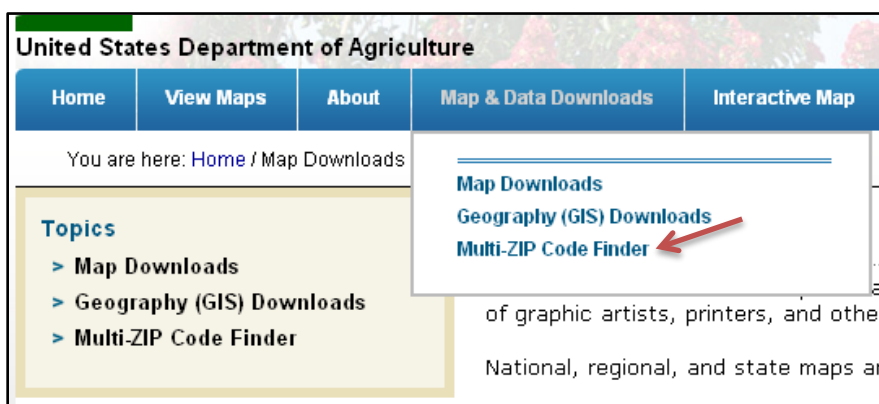
2.5.3 Multi-ZIP Code Finder

This selection provides an external link to Climate Source, Inc., which provides a multiple or "batch-mode" ZIP Code finder that may be purchased. This application allows the user to match hundreds or thousands of 5-digit ZIP Codes with the appropriate USDA Plant Hardiness Zone. To access, follow the steps below.

Step 1: Access the Multi-ZIP Code Finder page
There are two ways to access the Multi-Zip Code Finder page; each option is described below. First, make sure you are in the Map & Data Downloads Page or select the **Map & Data Downloads** tab on the toolbar to return to the Map & Data Downloads page.

> **Option 1** – Multi-ZIP Code Finder Drop-Down Menu
> Place your cursor over the **Map & Data Downloads** tab on the toolbar. A drop-down menu will appear. Click **Multi-ZIP Code Finder**. The Multi-ZIP Code Finder page will appear in the PHZM window.

> **Option 2** – Multi-ZIP Code Finder Topics
> Click the **Multi-ZIP Code Finder** link in the Map & Data Downloads **Topics** box on the left side of the PHZM. The Multi-ZIP Code Finder page will appear in the PHZM window.

Step 2: Access the Multi-ZIP Code Finder
Click the **Climate Source Web Site** button at the bottom of the Multi-ZIP Code Finder page. A new Internet Browser window will open to the Climate Source website.

- ZIP Code Finder website (http://www.climatesource.com/PHZM/zip.html).
- Support for the Climate Source website (http://www.climatesource.com/support.htm).

2.6 USDA PHZM Interactive Map Page

The USDA PHZM Interactive Map page is a dynamic viewer of plant hardiness zones for the continental United States, Alaska, Hawaii, and Puerto Rico.
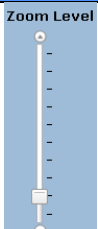
2.6.1 Access the Interactive Map Viewer

To open the interactive map viewer, select the **Interactive Map** tab on the blue toolbar.

When the Interactive Map Viewer first loads, a CAPTCHA challenge will be displayed. Enter the displayed CAPTCHA phrase in the Enter Code field and click Validate. CAPTCHA challenges are case sensitive. If you need audible assistance to fill in the CAPTCHA challenge, click the Audio button. Click the **Reload** button to refresh (change) the CAPTCHA image.
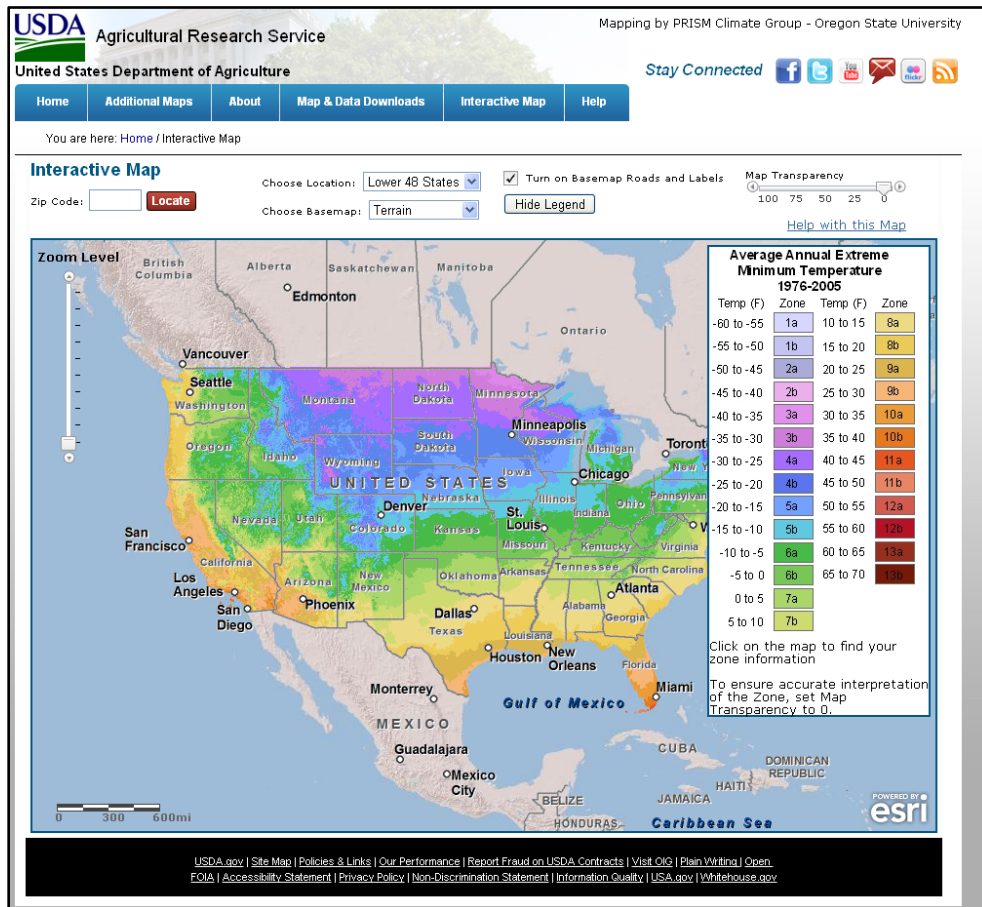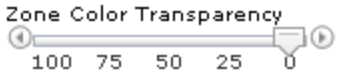

2.6.2 Interactive Map Viewer Tools

In the Interactive Map Viewer, there are map tools that serve various basic map functions. The table below shows each of those tools and how to use them.

| Tool	Actions
	To pan and zoom, use your mouse and scroll wheel, the arrow keys on your keyboard, or the zoom slider on the left side of your map. To zoom in, you can also hold down the SHIFT key and drag a box on the map.

Tool	Actions
Zone Color Transparency 100 75 50 25 0	The interactive map is a multilayered map with the zone colors overlaying the selected basemap option (Terrain, Road Map, and Satellite Image). This feature adjusts the transparency of the zone colors, enabling the underlying attributes of the selected base map to be more or less apparent. Sliding the scale to the left makes the zone colors more transparent. Sliding the scale to the right makes the zone colors more opaque.
✓ Turn on Basemap Roads and Labels	Check the 'Turn on Basemap Roads and Labels' box to display roads and labels on the displayed basemap. This option is available only for Terrain and Satellite Image basemap choices.
Hide Legend	Click the Hide Legend box to display the map legend.
Choose Location: Lower 48 States	Choose Location displays Lower 48 States as the default location. You can change the location by clicking the Choose Location drop-down menu to switch between Lower 48 States, Alaska, Hawaii, and Puerto Rico.
Choose Basemap: Terrain	Choose Basemap displays Terrain as the default basemap. You can change basemaps by clicking the Choose Basemap drop-down menu to switch between Terrain, Road Map, and Satellite Image.
Help with this Map	Click Help with this map to get Interactive Map instructions and definitions of terms.
ZIP Code: [ ] Locate	Enter a five-digit ZIP Code into the ZIP Code search field and click the Locate button. The location will be displayed on the map, and the map will zoom to that location.

2.6.3 Viewing Plant Hardiness Zone Data

You can access plant hardiness zone data for any location on the Interactive Map by clicking once on the location of interest. When you click on that location, the data for that location is displayed in a pop-up box. The pop-up box displays the Plant Hardiness Zone, Average Temperature (Fahrenheit), Temperature Range (Fahrenheit) and the Longitude and Latitude.

Note: After every 25 clicks, you will be presented with another CAPTCHA Challenge. This challenge is to prevent automated robots from unauthorized access to map information and overloading system access.
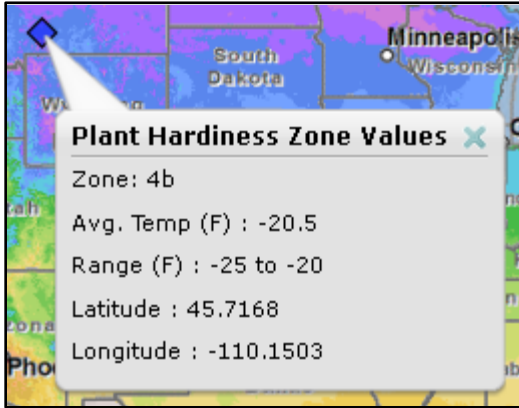
2.7 USDA PHZM Help Page

The USDA PHZM Help page consists of information on how to use this website and the ability to send an e-mail directly to the USDA. Both options are available from the "Help" tab.
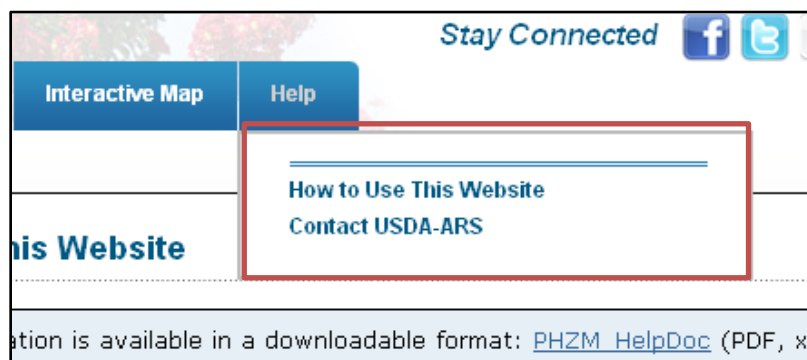
2.7.1 How to Use This Website

Step 1: Access the How to Use This Website page
There are two ways to access the How to Use This Website page; each option is described below. First, make sure you are in the Help page or select the **Help** tab on the toolbar to return to the Help page.

> **Option 1** – Help Drop-Down Menu
> Place your cursor over the **Help** tab on the toolbar. A drop-down menu will appear. Click How to Use This Website. The How to Use This Website page will appear in the PHZM window.

> **Option 2** – Help Topics
> Click the **How to Use This Website** link in the Help **Topics** box on the left side of the PHZM.

Step 2: Access PHZM HelpDoc
You can read the PHZM HelpDoc on the How to Use This Website page, and you can also obtain a downloadable copy from this page. To download a copy of the PHZM HelpDoc in PDF or xxMB form, click the link in the dialog box at the top of the How to Use This Website page.

This help information is available in a downloadable format: PHZM_HelpDoc (PDF, xxMB)

The PHZM HelpDoc will open in Adobe PDF in a new Internet Browser window.

2.7.2   Contact USDA-ARS

Step 1: Access the Contact USDA-ARS Link
This feature allows the user to send e-mail inquiries relating to the PHZM to the USDA–ARS (Agricultural Research Service). There are two ways to access the Contact USDA-ARS link; each option is described below. First, make sure you are in the Help page or select the **Help** tab on the toolbar to return to the Help page.

> **Option 1** – Help Drop-Down Menu
> Place your cursor over the **Help** tab on the toolbar. A drop-down menu will appear. Click Contact USDA-ARS. The **USDA Agricultural Research Service (USDA-ARS)** page will appear in the main window.

> **Option 2** – Help Topics
> Click the **Contact USDA-ARS** link in the Help **Topics** box on the left side of the PHZM window. The **Contact USDA Agricultural Research Service (USDA-ARS)** page will appear in the main window.

Step 2: Send an e-mail to the USDA Agricultural Research Service
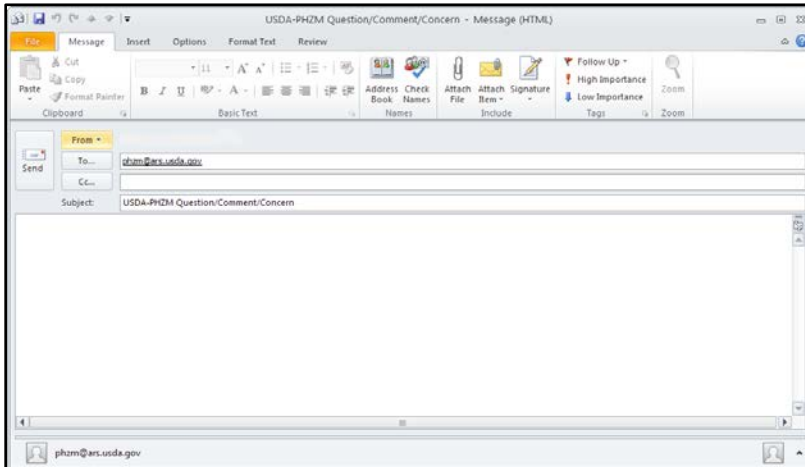Once the Contact USDA Agricultural Research Service (USDA-ARS) page appears, click the phzm@ars.usda.gov link at the top of the page.

Contact USDA Agricultural Research Service (USDA-ARS)

If you have any questions about this website or about Plant Hardiness Zone Mapping, please contact the USDA Agricultural Research Service by sending an e-mail to phzm@ars.usda.gov.

For all other questions, please go to USDA Ask The Expert.

Your default computer mail client will appear. For example, if you have Microsoft Outlook installed on your computer, the following will appear.

If you do not have a default e-mail client on your computer, you can copy the e-mail address and paste it into a different e-mail client (e.g., Google Gmail, Yahoo).

Step 3: Access the USDA Ask the Expert forum

This link is used to send inquiries which are more general in nature and not related to the PHZM. To access the USDA Ask the Expert forum, click the Ask The Expert link that appears on the **Contact USDA Agricultural Research Service (USDA-ARS)** page.

A new Internet Browser window will appear with the USDA Ask an Expert website (http://www.usda.gov/wps/portal/usda/usdahome?navid=ASK_EXPERT2).

3.0 USDA Plant Hardiness Zone Map Application (JavaScript Disabled Internet Browser)

3.1 Introduction

When you access the USDA Plant Hardiness Zone Map application web in a JavaScript *disabled* Internet Browser, the website's home page will look similar to the graphic below.

However, the PHZM website will perform differently in several sections in a JavaScript *disabled* Internet Browser as compared to the JavaScript *enabled* Internet Browser.
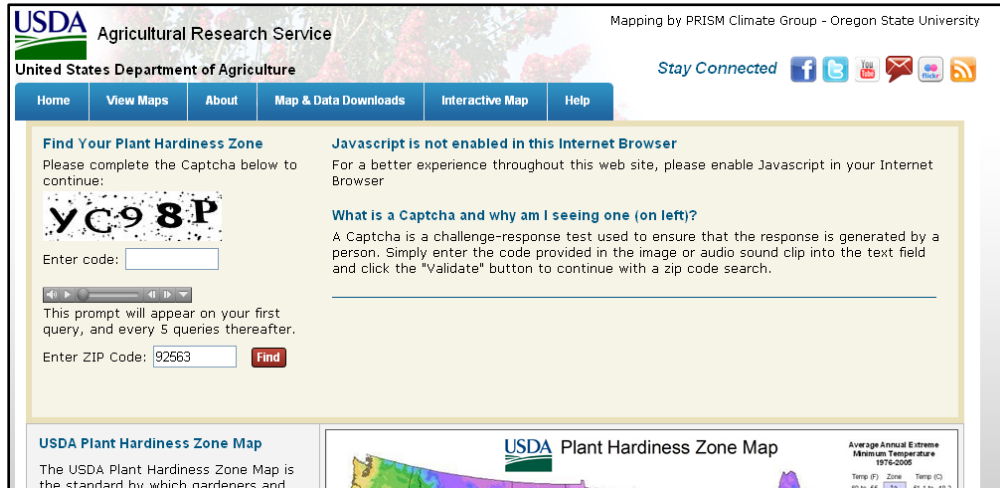
If you have a JavaScript *enabled* Internet Browser, click here.

The PHZM website in a JavaScript *disabled* Internet Browser will perform differently in several sections compared to the JavaScript *enabled* Internet Browser.

Below are the main differences.

3.2   USDA PHZM Home Page

The USDA PHZM Home Page includes a Plant Hardiness ZIP Code Finder.

3.2.1 Plant Hardiness ZIP Code Finder

The Plant Hardiness ZIP Code Finder allows you to search a plant hardiness zone and temperature range for a ZIP Code using the following steps. First, make sure you are in the Home Page or select the **Home** tab on the toolbar to return to the Home page.

Step 1: Answer CAPTCHA Challenge
Enter the displayed CAPTCHA phrase in the **Enter Code** field and click **Validate**. Click the **Audio** button to activate the CAPTCHA audio. Click the **Reload** button to refresh (change) the CAPTCHA image.
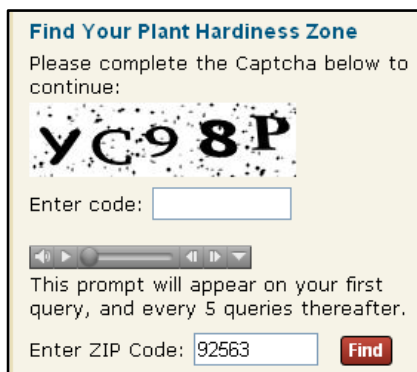

Step 2: Access the ZIP Code Finder
Enter a five-digit ZIP Code in the **Enter ZIP Code** search field and click the **Find** button. The plant hardiness zone and temperature range will be displayed below the search field (the CAPTCHA challenge will disappear).
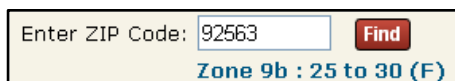
3.3 USDA PHZM View Maps Page

The USDA PHZM View Maps Page consists of access to state, regional and national plant hardiness zone maps in three different resolutions.
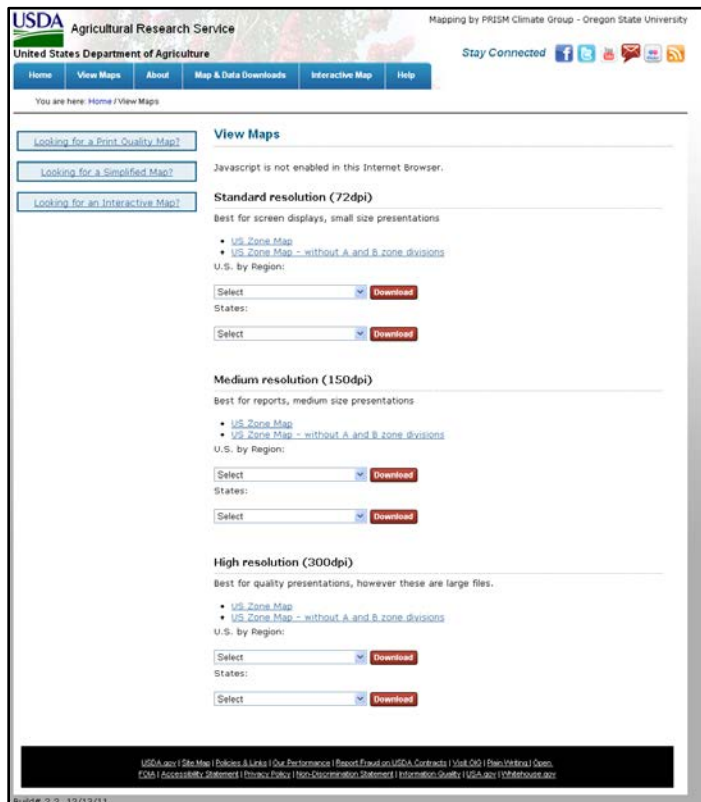
3.3.1 View Maps

The View Maps page allows you to access state, regional and national plant hardiness zone maps in three different resolutions (72, 150, and 300 dpi). First, make sure you are in the View Maps page or select the **View Maps** tab on the toolbar to return to the View Maps page.

Step 1: Access Standard 72 dpi Resolution National Maps
For standard resolution (72 dpi) national maps, click either US Zone Map or US Zone Map – without A and B zone divisions.

Step 2: Download Standard 72 dpi Resolution National Maps
Your default browser download window will appear, prompting you to open the file or save the file to your computer. Select "Save File" to save it locally.
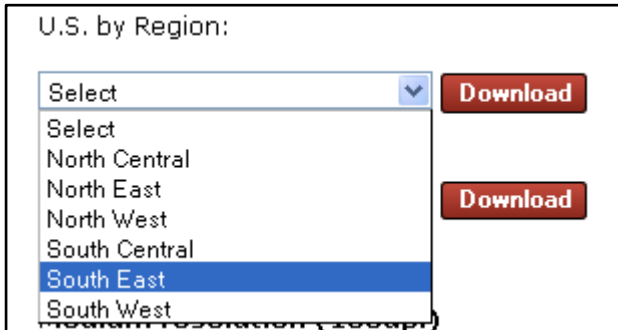
Step 3: Access Standard 72 dpi Resolution Regional Maps
For standard resolution (72 dpi) regional maps, click the U.S. by Region drop-down menu.
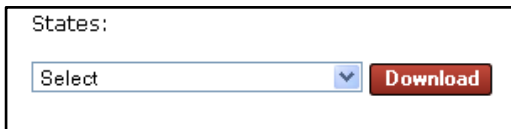

Step 4: Download Standard 72 dpi Resolution Regional Maps
Select a region and click the **Download** button. Your default browser download window will appear and will allow you to save the file to your computer.
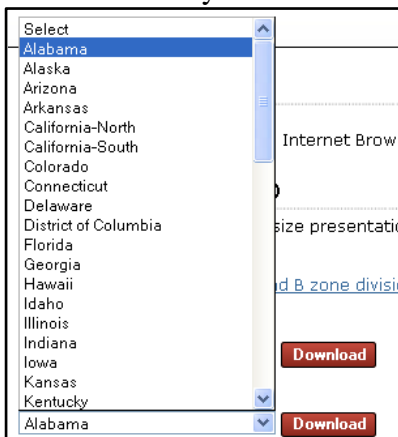

Step 5: Access Standard 72 dpi Resolution State Maps
For standard resolution (72 dpi) state maps, click the States drop-down menu.

Step 6: Download Standard 72 dpi Resolution State Maps
Select a state and click the **Download** button. Your default browser download window will appear and will allow you to save the file to your computer.

Step 7: Medium (150 dpi) and High (300 dpi) Resolution national, regional and state Maps

To access medium resolution (150 dpi) and high resolution (300 dpi) national, regional and state maps, follow the above directions.

Medium resolution (150dpi)

Best for reports, medium size presentations

- US Zone Map
- US Zone Map - without A and B zone divisions

U.S. by Region:

[Select ▾] [Download]

States:

[Select ▾] [Download]

High resolution (300dpi)

Best for quality presentations, however these are large files.

- US Zone Map
- US Zone Map - without A and B zone divisions

U.S. by Region:

[Select ▾] [Download]

States:

[Select ▾] [Download]

3.4   USDA PHZM Interactive Map Page

The Interactive Map viewer is not available in the JavaScript disabled Internet Browser.