The Central Appalachians Critical Habitats Assessment - Help Documentation

October 16, 2014

Application Overview

The *Central Appalachians Critical Habitats Assessment* web map (http://s3.amazonaws.com/DevByDesign-Web/MappingApps/CentralApps/critical_habitat/CritHabitat.html) gives users the ability to display and access to a critical habitats layer created for the Central Appalachians.

Application Layout

The application is comprised of two main components; a tab panel (left section) and map canvas (right section). The tab panel has a *Display* and *Locate* tab. The *Display* tab gives users the ability to change the map display by turning on and off layers with the *Locate* tab helping users zoom to areas of interest within the map. The map canvas displays the spatial data associated with the application. A vertical slider bar on the left side of the map canvas allows the user to quickly zoom in or zoom out on the map. A set of map tools (described in more detail under the **Map Tools** section) provides the users with a number of tools to aid in setting the view extent of the map canvas and displaying additional information related to the features being displayed by each layer. All analysis data created by TNC can be accessed by clicking on the Data Request link found in the upper-right corner of the application, see **Data Access** section.

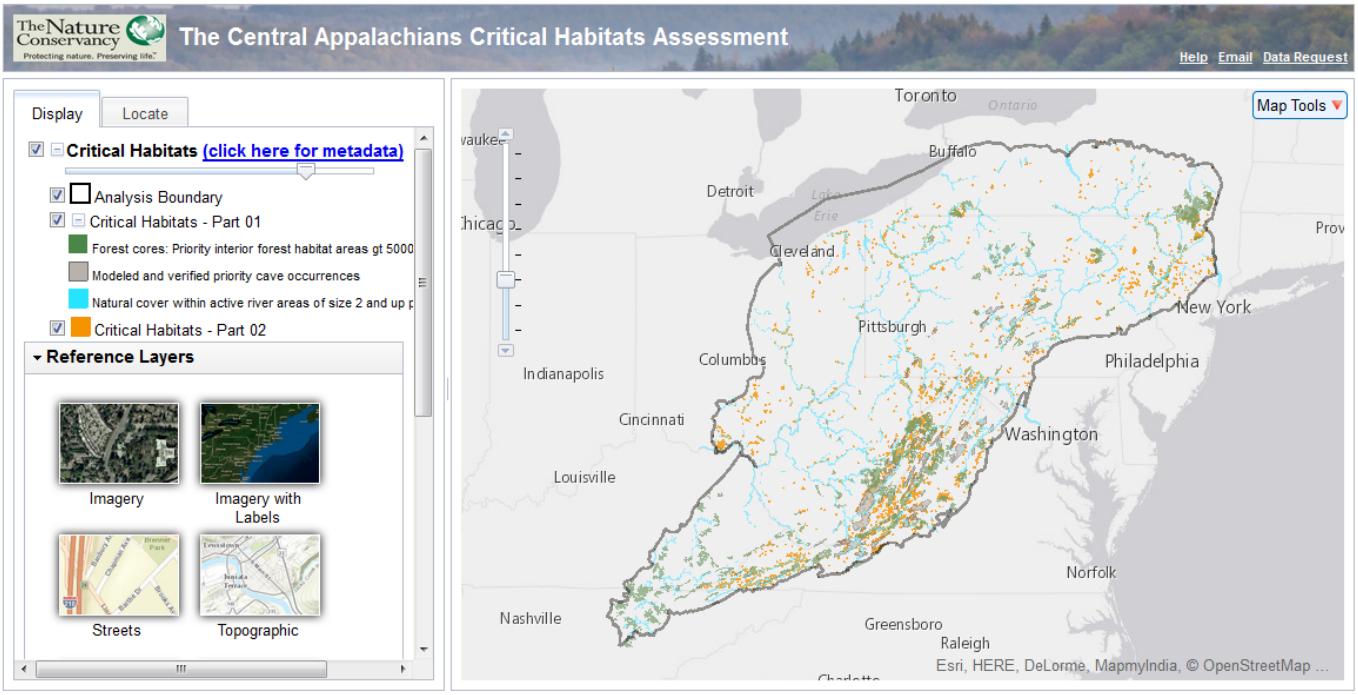

Figure 1. Opening page of Central Appalachians Critical Habitats Assessment

Map Tools

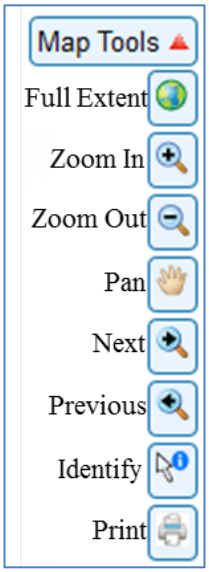

Figure 2. Map

The map tools can be displayed or hidden by clicking on the red arrow to the left of the Map Tools text. To select a tool the user clicks on the tool. Some of the tools will automatically change the display when the tool is clicked while others require the user to interact with the map canvas. Full Extent sets the map to display the entire Earth. Zoom In allows the users to zoom the map display into a specific area. The user does this by clicking on the tool and then maneuvering the mouse pointer to the area they would like to zoom into. By holding the left mouse button down and dragging the mouse across the map until they have drawn a rectangle encompassing their area of interest, sets the area the map will be zoomed to. Zoom Out interacts similarly but zooms the map display out based on the ratio of the box to the current display so the smaller the box the greater factor the map will be zoomed out. Pan allows the user to move the display of the map without changing the scale of the map. Again the user must select the tool but then holds down the left mouse button and drags the pointer to move the map. Next allows the user to return back to the display after clicking the Previous tool. The Previous tool allows the user to return to any pervious displays shown in the map.

The Identify tool allows the user to display information associated with a layer which is visible (i.e. checked in display tab) on the map (see Display Tab section). In order to use the tool it must first be selected and then the user needs to click on a feature displayed in the map. A window will be displayed listing all the information found for that location associated with any of the visible features (Figure 3). If multiple layers are visible and the user clicks on a location with features from these layers, the window will display an arrow with the layer name. The user can click on the arrow to see all attribute information for the feature clicked on. To close the window, click the X upper right-hand corner of the box.

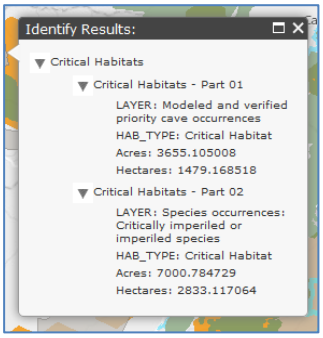

Figure 3. Identify Window

The Print tool provides users with the ability to create a map which can be saved or printed by the user. By clicking on this tool, the user is presented with a dialog of map properties (Figure 4). The user can type in text for both the title and author of the map. The units for the scale bar can be set to either Kilometers, Miles, Meters, or Feet. A legend for the map will automatically be created if the box is checked. The user can select a variety of page sizes (i.e. letter, tabloid, A3, A4) and orientation (i.e. portrait or landscape). Finally the map produced can be created in PDF, PNG, or JPG file formats. Once the user has set all the parameters, they can click on the Create Map button which will start the process of creating the defined map. Once the process has been completed a hyperlink displaying Click Here for Map will be produced which allows for the user to access the map. The user must close the dialog by clicking on the X in the upper right portion of the dialog to return to the interactive mapping application. **Note:** Due to limits with regards to map spacing, layers with long legends or lengthy item descriptions may not be produced even when the legend property is checked.

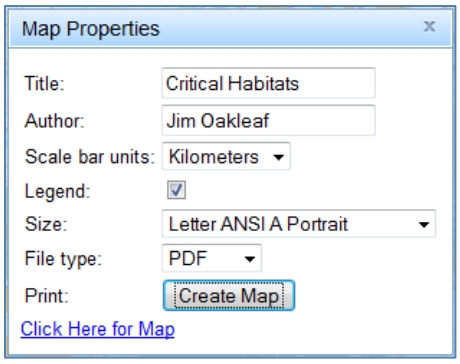

Figure 4. Map Properties Dialog

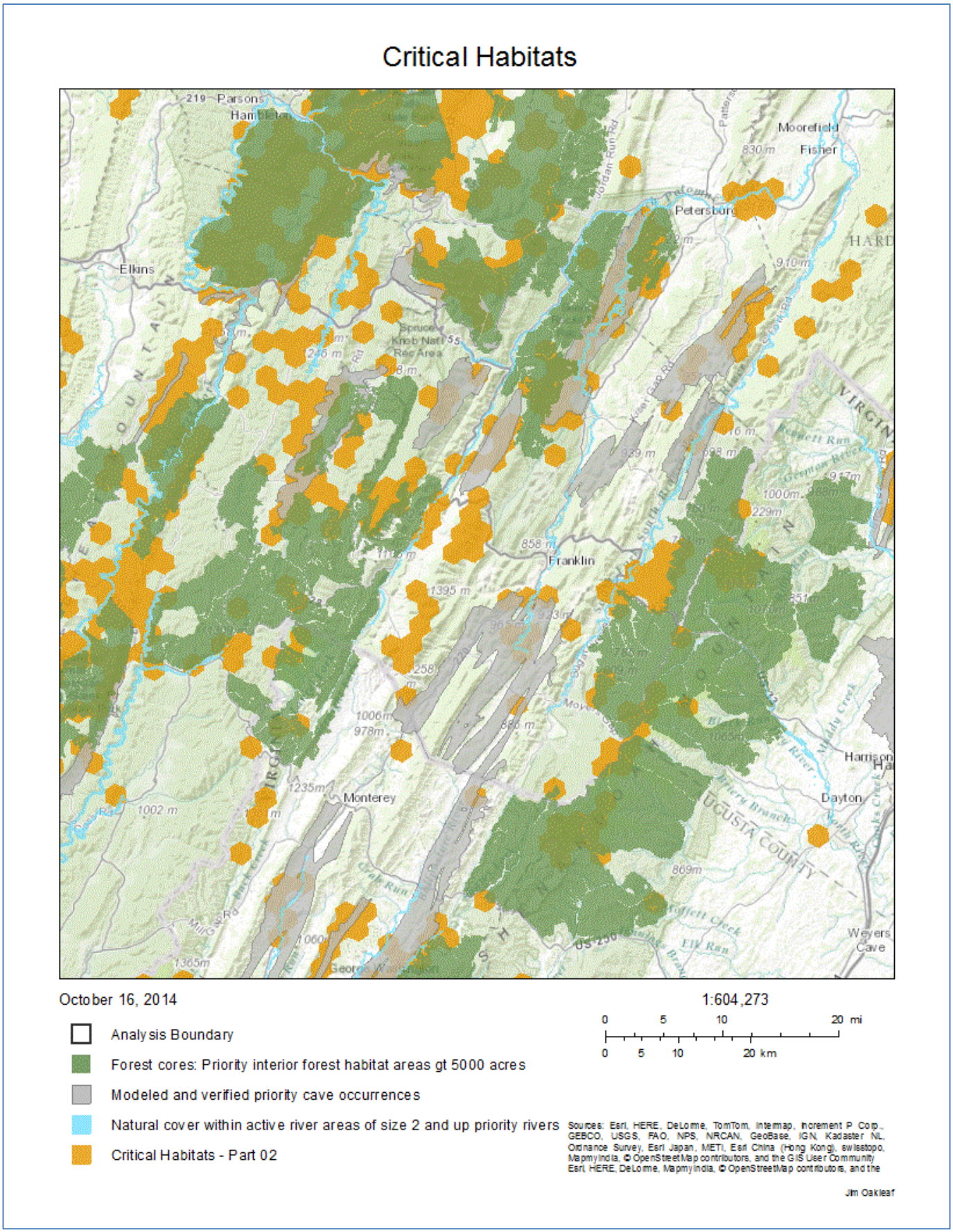

Figure 5. Map output example

Tab Panel

Display Tab

The Display Tab gives users the ability to turn on or off layers to display in the map. There are two major grouping of layers: (1) *Critcal Habitats and* (2) *Reference Layers*. To turn on a layer within *Critical Habitats* group, the user clicks the check box in front of the layer name (e.g. Critical Habitats – Part 01). This automatically checks the group name too which must be checked for any of the layers within the grouping to be displayed on the map. To turn off all layers within the group, the user clicks the checkbox in front of the group name. Changing the transparency of layers within the grouping is done by moving the slider bar located below the group heading. To see the legend associated with the layers having multiple legend items (e.g. Critical Habitats – Part 01), the user can click on the plus in front of the layer name. Users can access metadata for the Critical Habitats layers by clicking on the *click here for metadata* link. Finally the background of the map can be changed by clicking on one of the thumbnail images listed under the heading *Reference Layers*. The map automatically updates when the user clicks on an image with the light red box indicating which map is currently being displayed as a backdrop.

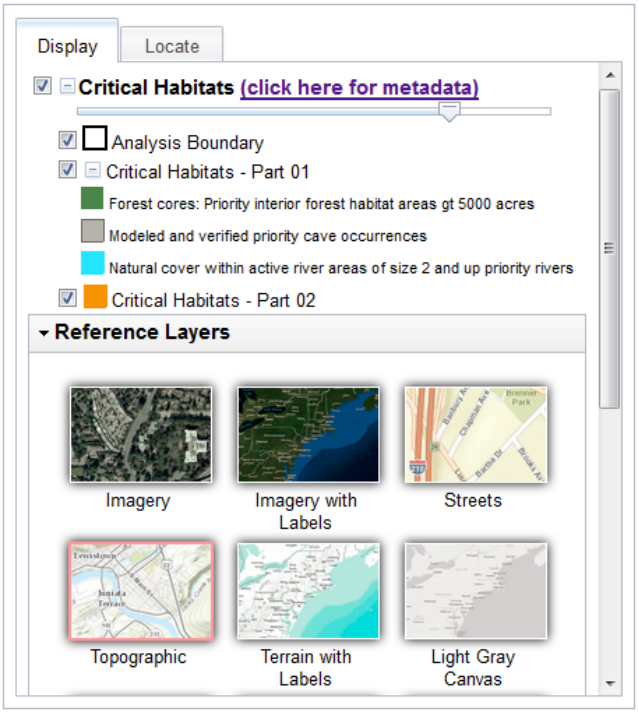

Figure 6. Display Tab

Locate Tab

The Locate Tab gives users the ability to easily zoom to areas of interest within the Central Appalachians region. There are five location tools with county and zipcode zooming to an area and city, geographic coordinates, and UTM coordinates zooming to a point location. For each tool the user inputs their locational information and clicks on the zoom to button to the right of the input box. For both the city and county tools, if the inputted name is found in multiple states a listing is produced for the user to select from otherwise the application automatically zooms to that location and draws either a polygon graphic for county and zip code or places an X on the point location inputted. To clear any graphic created the user can click on the Remove Locate Graphic button.

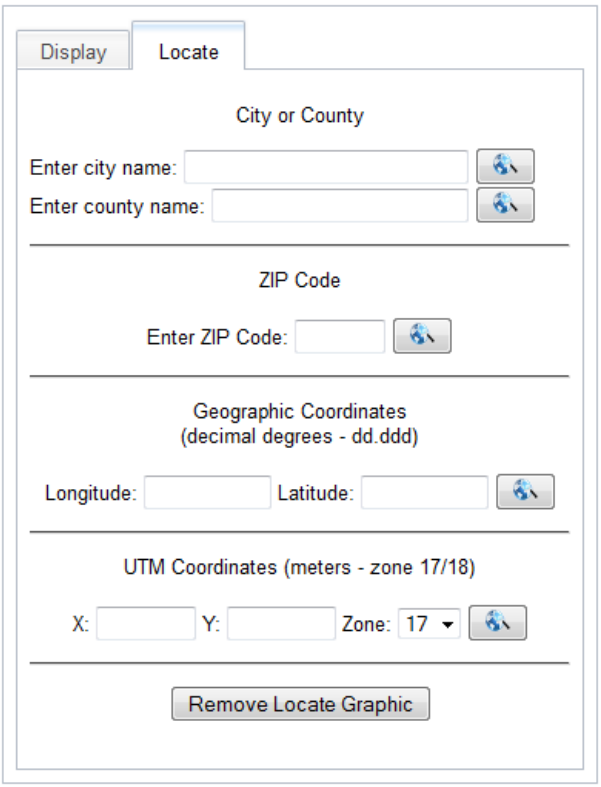

Figure 7. Locate Tab

Data Access

Data Request Dialog

To access the Critical Habitats data the user needs to click on the Data Request link found in the upper-right corner of the application and fill out the Data Request dialog (Figure 8). The user must fill out all information and accept the data use clause by clicking on the check box. To view the data use clause the user can click on the View Clause link. Then by clicking on the Submit Request button, a table listing available data to download will be produced within this dialog, e.g. Figure 9. The user can then access data by clicking on the File Access link provided for selected data to download. Within *CriticalHabitat_v20140930.zip* file are two PDF documents describing the development of these data (i.e. *METADATA Central Apps TNC Critical Habitats Data v201410.pdf* and *Central Apps TNC Critical Habitats Data v20141015.pdf*) and an ESRI file geodatabase *CAPPS_CriticalHabitats_v20140930.gdb* containing both critical habitat layers (i.e. *CriticalHabitats_Part01* and *CriticalHabitats_Part02_PriorityElementsGeneralized*).

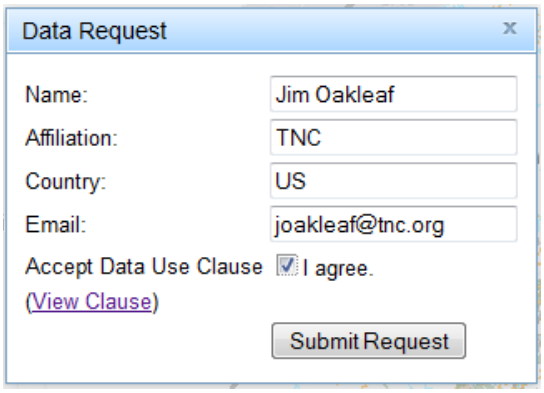

Figure 8. Initial data request dialog

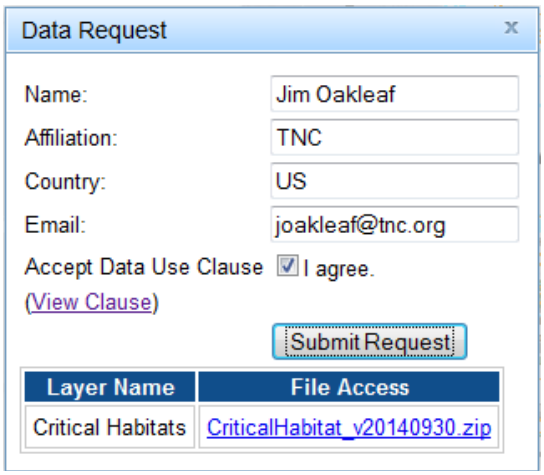

Figure 9. Data request dialog after submitting

Settings Necessary for Data Access with Internet Explorer

When using Internet Explorer (IE), most users using standard security settings will need to make minor changes to these settings in order to be presented with a list of downloadable data. To access these settings users will need to go under Tools>Internet Options and select the security tab (Figure 10). The users must add in http://184.72.33.222 and http://s3.amazonaws.com as a trusted site. It will be necessary to uncheck *Require server verification…* in order to add these two websites (Figure 11). The user must also *Enable* for *Access data sources across domains* within the Security Settings – Trusted Sites Zones dialog (Figure 12). To access this dialog, the user needs to click on the Custom level… button within the Internet Options> Security tab (Figure 10). Once these settings have been changed the user must reload the application with IE browser window, again click on the Data Request link, fill out the form and click on the Submit Request button. This time the user should obtain a list of downloadable data for the application.

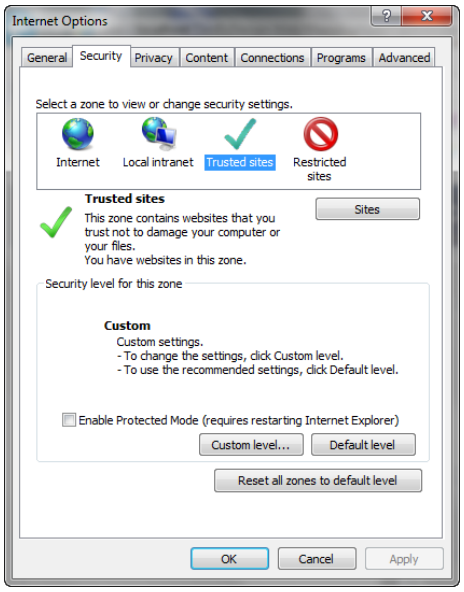

Figure 10. Internet Explorer Options dialog.

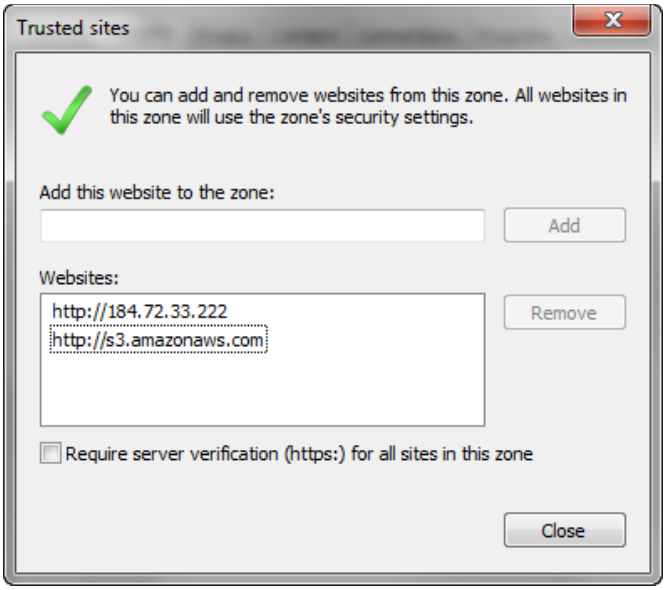

Figure 11. Trusted sites dialog

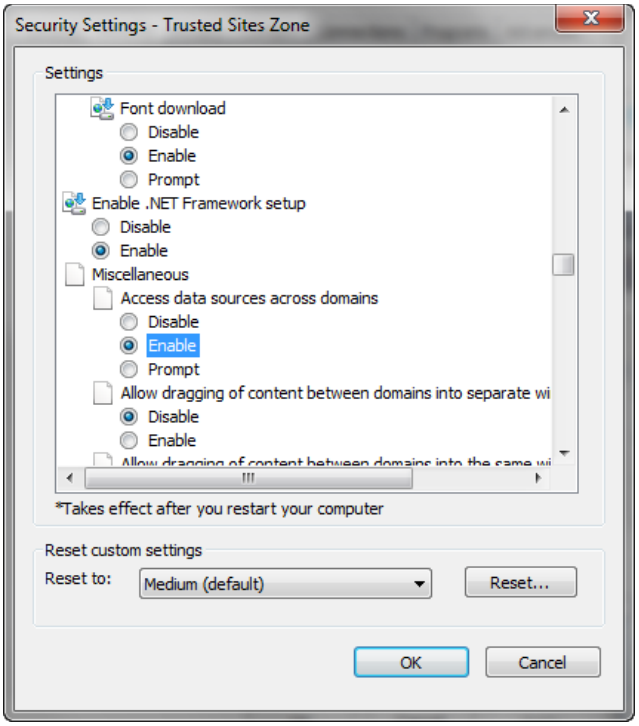

Figure 12. Security Settings dialog.

Technical Description of Application

The *Central Appalachians Critical Habitats Assessment* web map was developed using HTML, CSS and JavaScript with mapping functionality built using the ArcGIS API for JavaScript. Maps being displayed and all analysis routines are built using ESRI ArcGIS Server technology. This application has been developed and tested for use in the most recent versions of Firefox and Internet Explorer. It has also been tested successfully to run in Google Chrome and should run in other compatible Internet browsers.