United States Department of Agriculture

Animal and Plant Health Inspection Service

Veterinary Services

Centers for Epidemiology And Animal Health

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Emergency Management Response System's Mapping Module

Incident Analyzer

User Manual

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Scope of This Manual

The Veterinary Services' Emergency Management Response System's Mapping Module consists of three tools:

- Site Planner – helps you to quickly locate premises on maps, using a variety of search criteria.
- Field Responder – lets you import premises data into third-party software applications in order to customize/generate/view/print detailed maps for use by animal disease investigation personnel.
- Incident Analyzer – assists you in performing geographic visualization and analysis work for use in animal disease investigations.

This User Manual documents the procedures for using the Incident Analyzer tool.

Audience for This Manual

Users of the Veterinary Services' Emergency Management Response System's Mapping Module will generally fall into one of the following groups:

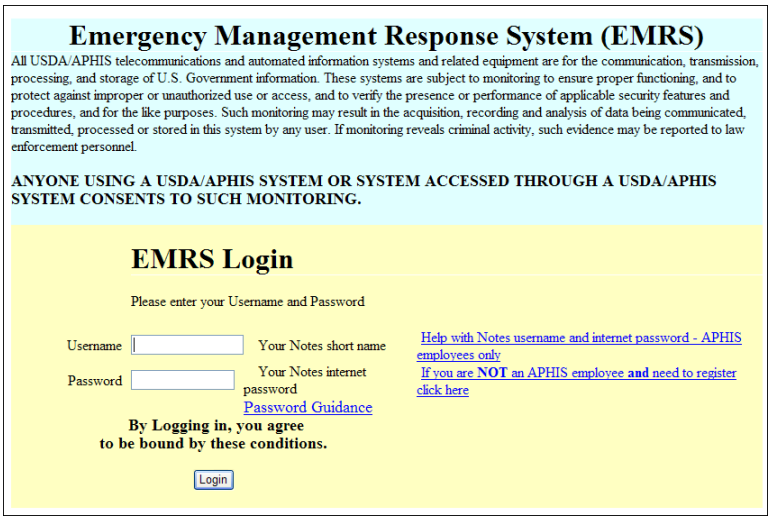
- Management – These are decision-making personnel (such as chiefs and leaders for emergency outbreak incidents and disease investigations) who are in charge of assigning resources and tasks for data-collection and field work. Management staff also generate reports for analysis and end-of-year reporting purposes.
- Data Collectors – These individuals are tasked to collect premises data (both spatial and non-spatial). Such personnel are usually equipped with mobile devices and navigation software to help them in locating premises for field visits.
- Analysts – These individuals perform data exploration/visualization work, generate web-based maps, and conduct spatial analysis/modeling, as needed.

Section 1:
Logging into the EMRS Mapping Module

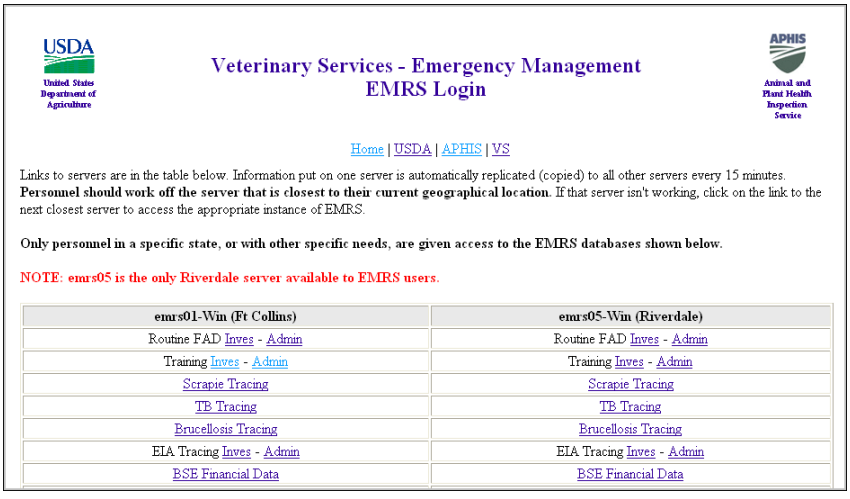
1. Access the EMRS Mapping Module via the following URL:

   https://emrs01.aphis.usda.gov/emrs/training/emrsinves.nsf/mm_webframeset?open

   The EMRS Login Screen appears (shown below).

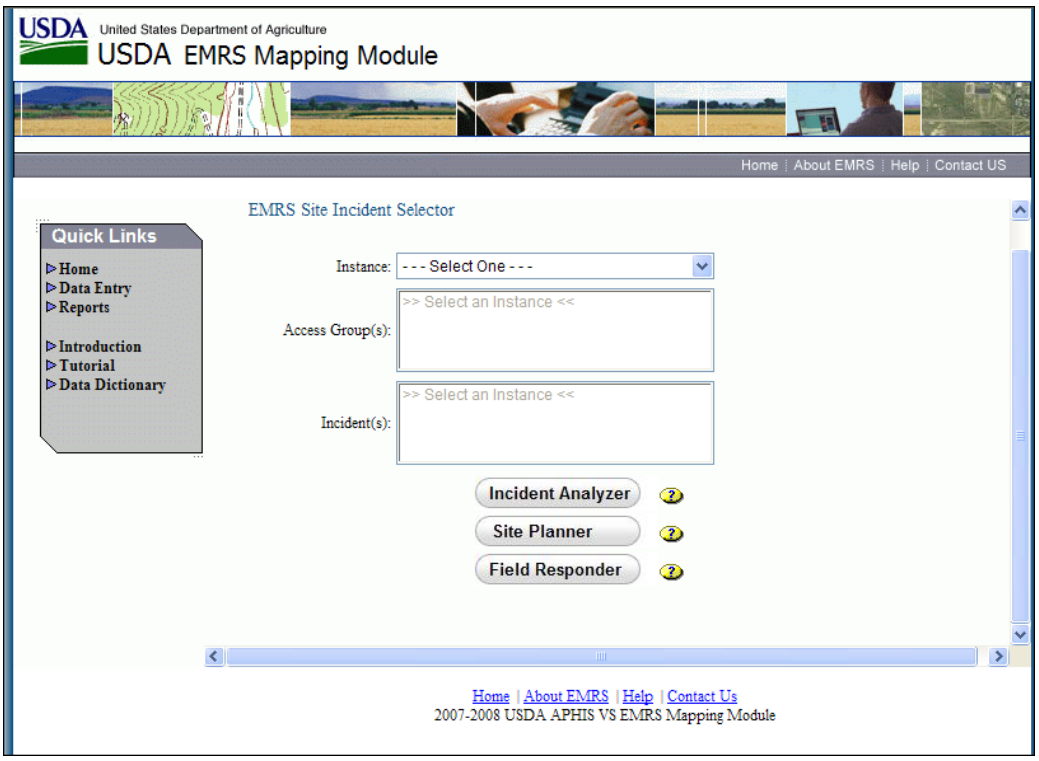


2. On the Emergency Management Response System, do the following:
   a. Enter your username and Internet password.
   b. Click the **Login** button.
   c. The **Veterinary Services – Emergency Management - EMRS Login** Screen appears (see below).



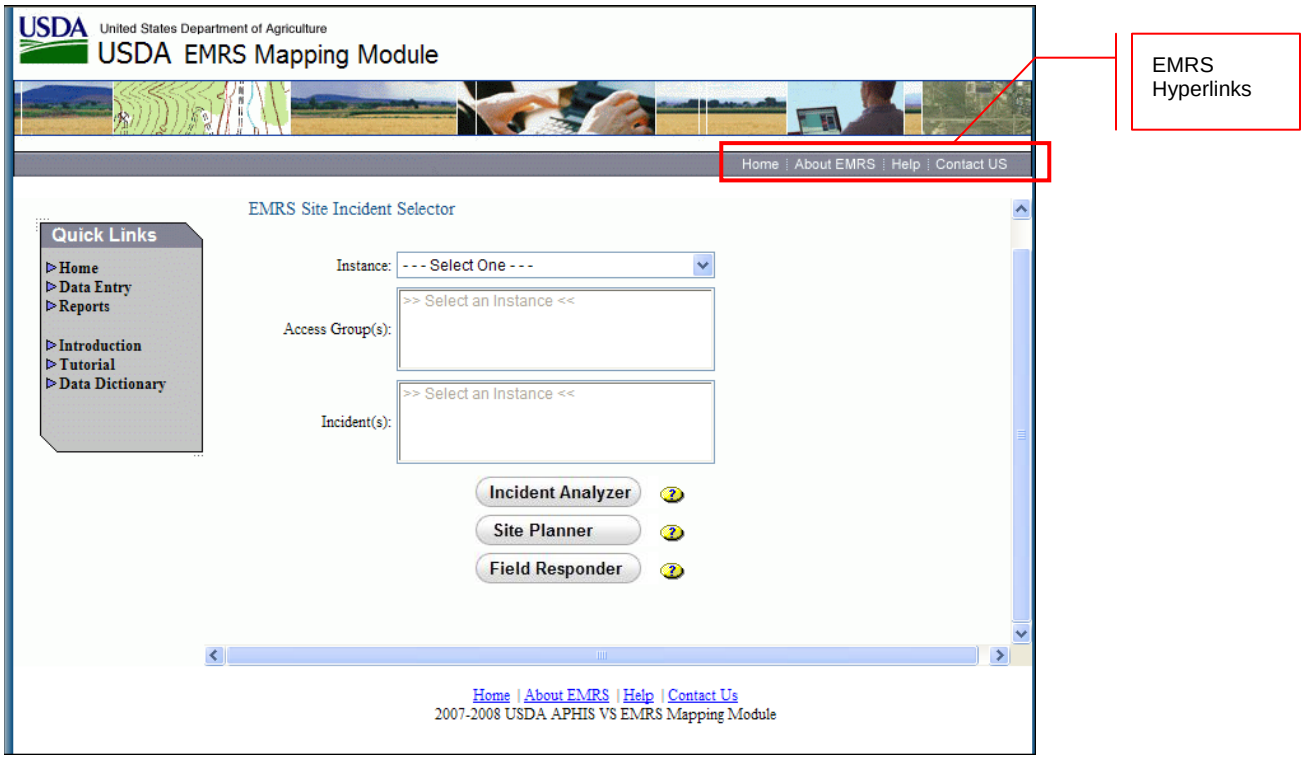
3. Click on the link for the appropriate instance (the database that is being used by your investigation/emergency outbreak). This opens the **EMRS-Investigation Database Main Menu** Screen.

4. On this Main Menu, in the toolbar at the top, click on the GIS MAPPING button. This opens the **USDA EMRS Mapping Module Home Page** (see below).



Section 2:
The EMRS Mapping Module Home Page

Shown below is the **EMRS Mapping Module Home Page**:



Take note of several features on this page:

- A **Quick Links** navigation pane, with the following options in it:
  - Home
  - Data Entry
  - Reports
  - Introduction
  - Tutorial
  - Data Dictionary

- An EMRS Site Incident Selector Form

- An EMRS hyperlinks bar with these links on it:
  - Home
  - About EMRS
  - Help
  - Contact Us

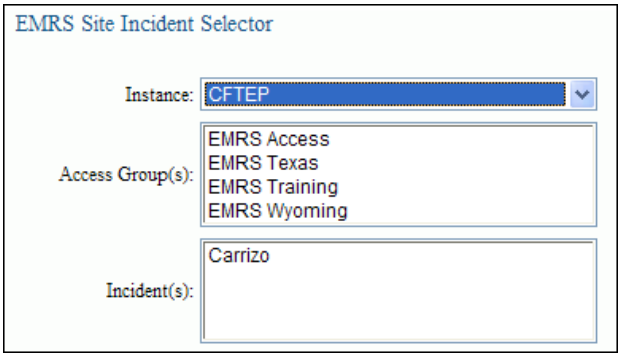
Section 3:
Using the EMRS Site Incident Selector Tool

In the middle of the **EMRS Mapping Module Home Page** is the EMRS Site Incident Selector Form. You will use this form to configure the EMRS Mapping Module so that it can generate and manage data that is specific to the investigation or incident command you are working for.

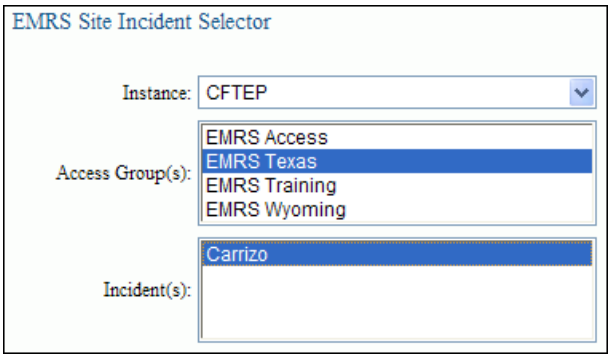
Complete the EMRS Site Incident Selector Form as instructed below:

1. **Instance -** Name of the database that is being used by your incident for collecting, managing, and reporting its data. Use the pull-down menu to make your selection.

2. **Access Group(s)** –Group of user roles which all have the same set of data-entry and data-generation privileges when using the EMRS Mapping Module tools. Specify the group(s) to which your User Role has been assigned.
   - To select one group, open the pull-down menu and click once on the appropriate group name.
   - To select multiple groups, open the pull-down menu, press and hold the **Ctrl** key, then click on each group's name.



3. **Incident(s)** –Name(s) of the emergency outbreak or FAD investigation that you are working for. Use the pull-down menu to make your selection(s).



Section 4:
The EMRS Mapping Module Tools

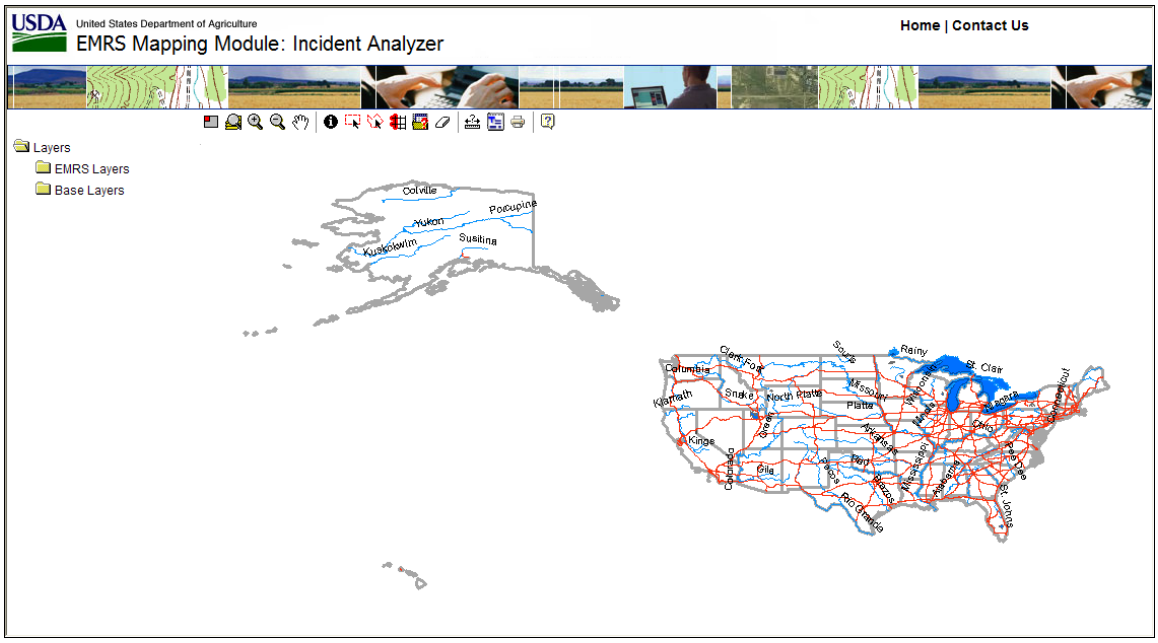
The EMRS Mapping Module consists of three components, or tools, that you can use to generate and manage your incident or investigation's mapping data in different ways:

- Incident Analyzer – Provides a strategic view of an incident using a traditional web-based mapping interface.
- Site Planner –Assists in tactical planning by allowing an analyst to quickly find premises using various search criteria (such as a Prem ID and radius, an address and radius, or a VS Grid identifier).
- Field Responder –Allows a user to quickly generate routing directions to one or more premises as well as display detailed satellite imagery as a backdrop to these locations and routes.

1. For details about each tool, click on the yellow question mark icon next to it.
2. When ready, click on the **Incident Analyzer** button.

Section 5:
Using the Incident Analyzer Tool

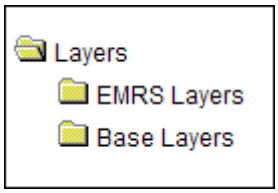
1. On the EMRS Site Incident Selector Screen, click the **Incident Analyzer** button. The **Incident Analyzer Home Page** appears (see below).



2. This screen contains a number of features, all of which are described in the rest of this section.

5A Layers Pane – Table of Contents

Incident Analyzer presents a pre-defined set of map layers for display and analysis. This set includes an **EMRS Layers folder** and a **Base Layers folder**. When you open the Incident Analyzer Home Page, both of these folders appear as closed folders underneath the **Layers** folder.

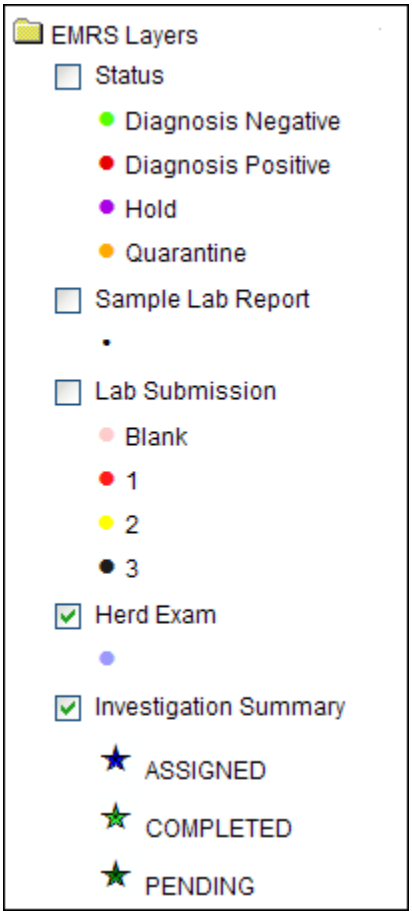


1. To open a folder and see its associated layers, click on the folder's icon.

2. To close a folder and hide its layers, click on that folder's icon again.

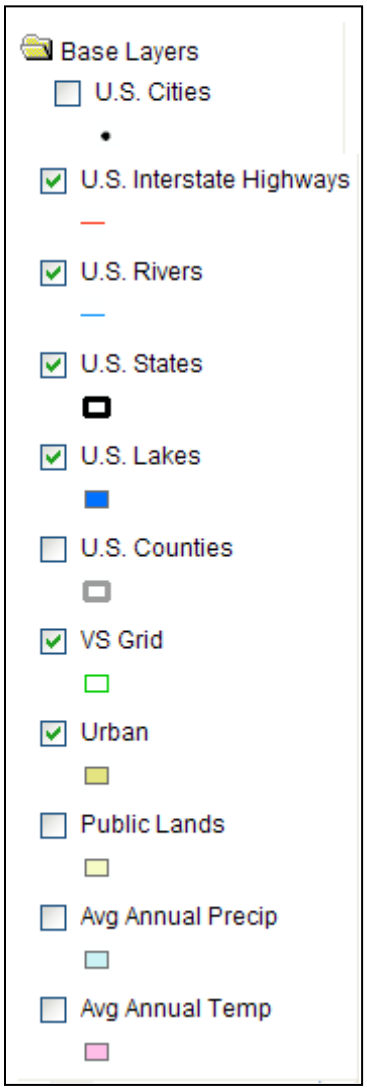
5B EMRS Layers Folder

Shown below is the Table of Contents pane for the **EMRS Layers folder**. The checked layers (such as **Herd Exam** and **Investigation Summary**) are the default layers that Incident Analyzer automatically displays on its maps (until you uncheck them). Each layer can be turned on and off by left-mouse clicking on the box next to that layer's name.



5C Base Layers Folder

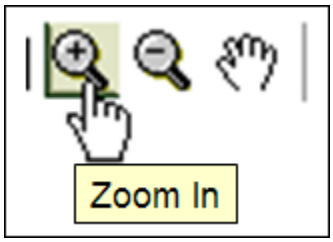
Shown below is the Table of Contents pane for the Base Layers folder. The checked layers (such as **U.S. Interstate Highways** and **U.S. Lakes**) are the default layers that Incident Analyzer automatically displays on its maps (until you uncheck them). . Each layer can be turned on and off by left-mouse clicking on the box next to that layer's name.



5D Button Toolbar

The main functionality of Incident Analyzer is found in its button toolbar (shown below). You can find this toolbar on the Incident Analyzer Home Page, positioned directly above the Map View Area.

Note: To see the name of a button, rest your cursor over it. A yellow label then appears that identifies that button. The example below shows the yellow help label for the **Zoom In** button.



The rest of this section explains the function of each button and how to use it.

 **Overview** – turns on and off the smaller North American map that shows the current map display area as a red rectangle. Activate by left-clicking this button.

 **Zoom Full Extent** – zooms the map display out to its fullest geographic extent, which is the lower 48 United States, plus Alaska and Hawaii. Activate by left-clicking on this button.

 **Zoom In** – zooms to selected location or area on map.

To Zoom In to a selected location, do the following:

1. Click on the **Zoom In** button.
2. With your mouse, left-click on a point on the map. The map zooms into the selected point.

To Zoom In to an area, do the following:

1. Click on the **Zoom In** button.
2. With your mouse, left-click, hold, and drag a polygon to cover an area on the map.
3. Release the hold. The map zooms into the area.

 **Zoom Out** – zooms out from a selected location or area on the map.

To Zoom Out from a selected location, do the following:

1. Click on the **Zoom Out** button.
2. With your mouse, left-click on a point on the map. The map zooms out from the selected point.

To Zoom Out from an area, do the following:

1. Click on the **Zoom Out** button.
2. With your mouse, left-click, hold, and drag a polygon to cover an area on the map.
3. Release the hold. The map zooms out from the area.

 **Pan** – allows the map to be moved (panned) in any direction. This action does not change the map's display scale.

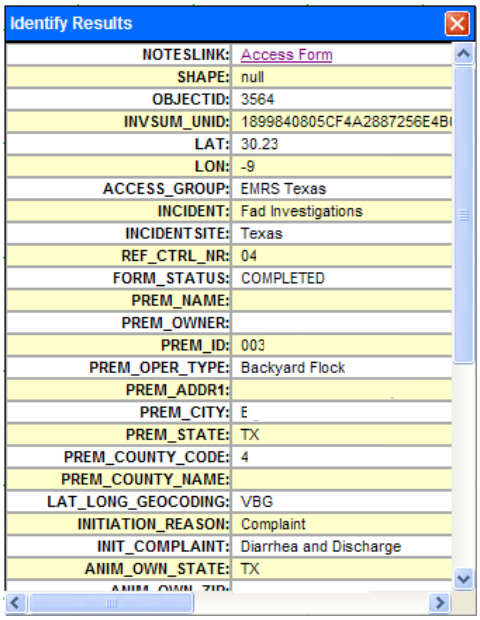
To Pan the map, do the following:

1. Left-click on the **Pan** button. Your cursor will change to a four-pointed arrow  .
2. Left-click, hold, and drag the map in any direction.
3. Release the hold when the desired map area is displayed. You can do this panning action an unlimited number of times within the map area.

Identify – shows the tabular information associated with the selected feature in the active layer.

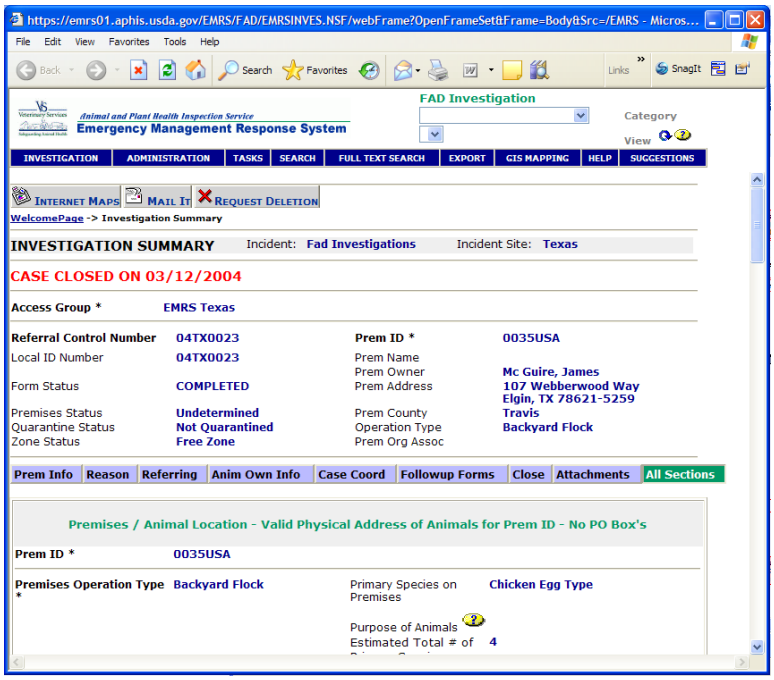
To Identify features, do the following:

1. Left-click on the **Identify** button.
2. Left-click on the feature of interest. A new window opens with tabular data about the feature (shown at right).



3. Left-click the **Access Form** hyperlink to view the detailed report in another window.

   Note: Multiple features may also be selected by left-clicking, holding, and dragging on the map.



4. Click **File > Save As** to save the report to disk.
5. Click **File > Print** to print a hardcopy version of the report.

 **Select by Rectangle** – selects multiple features in the active layer that reside within or that touch the defined rectangle.

To Select by Rectangle, do the following:

1. Left-click on the **Select by Rectangle** button.
2. Left-click on the map, hold, and drag the rectangle over the features to be selected.
3. Release the hold. The features are highlighted in yellow to show they are selected.

 **Select by Polygon** – selects multiple features in the active layer that reside within or that touch the defined polygon.

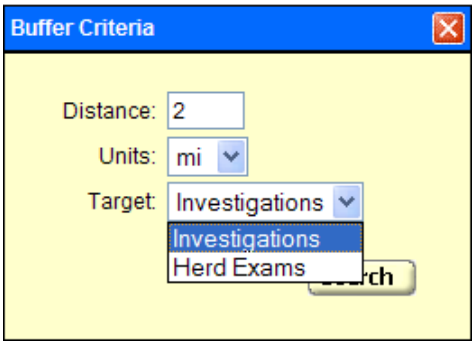
To Select by Polygon, do the following:

1. Left-click on the **Select by Polygon** button.
2. Left-click three or more times to define a polygon area.
3. Double left-click to complete the polygon. The features are highlighted in yellow to show they are selected.

 **Buffer –** creates a buffer from one or more selected features in the active layer.

To Buffer features, do the following:

1. Select one or more features by using the **Select by Polygon**, **Select by Rectangle** or **Identify** buttons.
2. Left-click on the **Buffer** button.
3. Enter the buffer distance as a number in the **Distance** field.
4. Select the **Units** of distance (miles or kilometers) from the pull-down menu.
5. Select the **Target** database from the pull-down menu (see below).



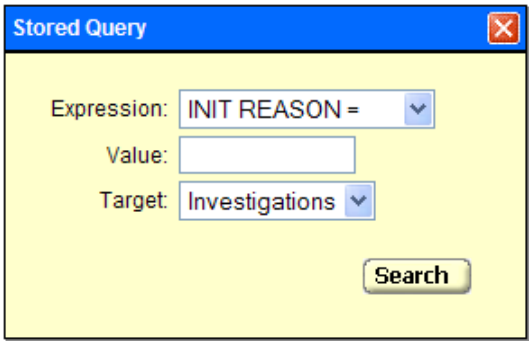
6. Click **Search.** The map refreshes with the buffer shown around your selected features.

 **Stored Query –** allows you to apply a standard query to a selected set of features on your map. Your query then generates a predefined report. Incident Analyzer provides two standard queries that you can use: INIT REASON and INIT COMPLAINT.

To use the **Stored Query** function, do the following:

1. Left-click the **Stored Query** button. The Stored Query window displays.
2. Select one of two query **EXPRESSIONS** from the pull-down menu:
   - **INIT REASON** means the reason for the incident such as a complaint, movement permit, or surveillance.
   - **INIT COMPLAINT** means the type of complaint such as High Death Rate, Positive Surveillance Sample, or Central Nervous System.
3. Enter the **VALUE** to be used in the query. This value consists of the words or numbers that Incident Analyzer will search on.

   Note: Numbers require no additional annotation; however, words or phrases need to be enclosed in quotations. Example: "High Death Rate"
4. Select from the drop-down menu the **TARGET** database upon which the query will act (shown below).



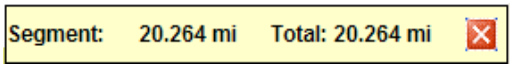
5. Click **Search**.

 **Clear Selected –** unselects the selected features in the active layer. Activate by left-clicking on this button.

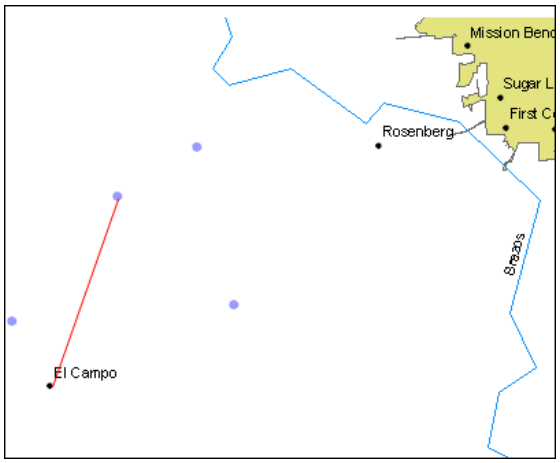
Measure – allows you to measure distances between geographic features on the map display. Measurements can be made using a single-segment line or multi-segment lines.

To measure a single segment line distance, do the following:

1. Left-click on the **Measure** button.
2. Single-click on the map. A Measure Display window (shown below) will pop up that shows both the segment length and total length of the distance you are measuring. (For a single-segment line, both values will be the same). *Note*: To close this window, left-click on the **Close** button (the red X).

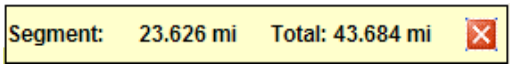


3. Double left-click to end the line and measurement.

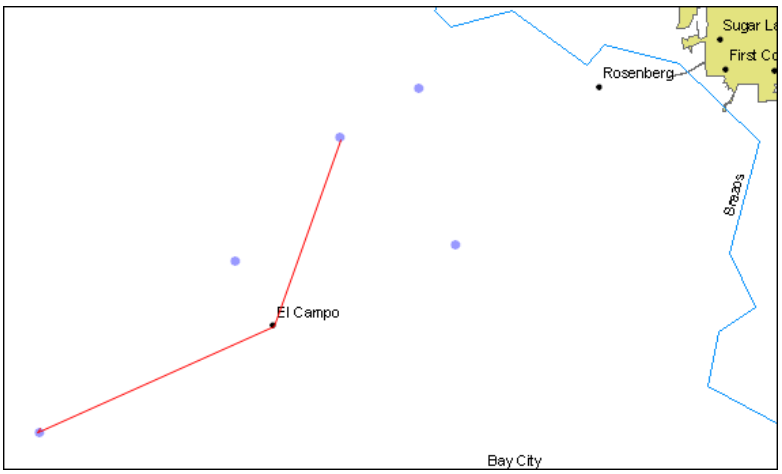


To measure a multi-segment line distance, do the following:

1. Left-click on the **Measure** button.
2. Single left-click in the map multiple times to make a multi-segment line. Each segment distance and the sum total of the segments are displayed in the Measure Display window.



3. Double left-click to end the last line segment.



 **Export Text** – exports the tabular data of selected features and displays this data in a new window.

Note: This process assumes you have already have selected map features with **Identify** or **Select by Rectangle**, for example.

To export text, do the following:

1. Left-click the **Export Text** button. A new window displays with the tabular data (in the tab-delimited text format).
2. In the Microsoft Windows menu bar, click **File**, then **Save As.** The standard Microsoft Windows **Save As** dialog box opens.
3. Navigate to the desired directory where you want to store the tabular data file.
4. Enter the desired filename for this data file.
5. Click **Save**.

 **Print Map** – generates a new window with a Adobe Acrobat .pdf map of the displayed map area.

After you have finished generating and customizing your map, *print a hardcopy* of it by doing the following:

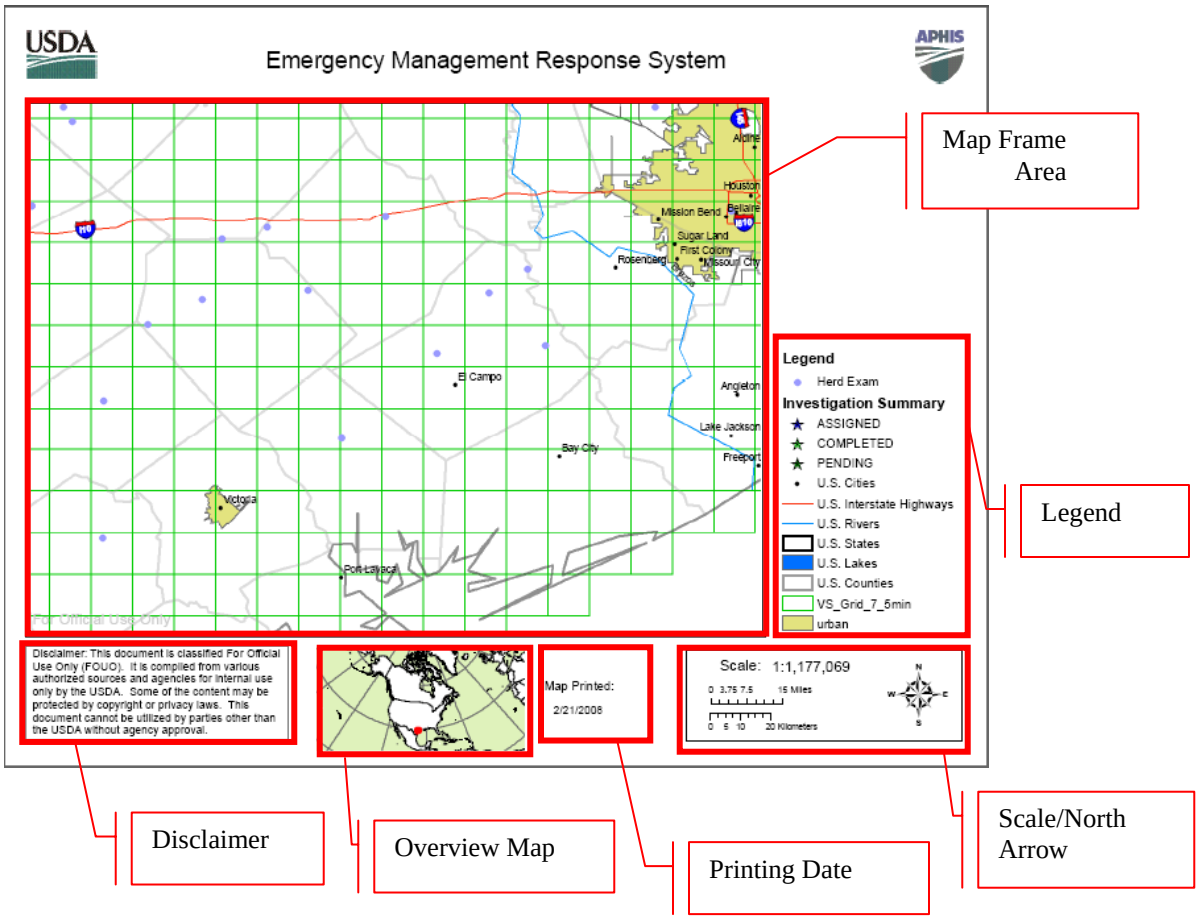
1. Left-click the **Print** button. A new window with the .pdf map opens.
2. To print the map, click the Adobe Acrobat **Print** button.

After you have finished generating and customizing your map, *save an electronic copy* of it by doing the following:

1. Left-click the **Print** button. A new window with the .pdf map opens.
2. Left-click the Adobe Acrobat **Save** button. The standard Microsoft Windows **Save** file dialog box opens.
3. Navigate to the desired directory where you want to store this map.
4. Enter the desired filename for the map.
5. Click **Save**.

Note: (See the figure on the next page for an example of what this pdf-formatted map looks like.)

 **Help** – opens a new window with an Adobe Acrobat .pdf file.



Map Layout Elements

- Legend – Displays each active layer in the map table of contents.
- Scale/North Arrow – Shows both a scale ratio is shown as well as a graphical scale in miles and kilometers. A north arrow is included and is always up.
- Printing date – Displays the current date is printed in MM/DD/YYYY format.
- Overview map – Shows a smaller map of North America with the map area shown on it as a red rectangle.
- Disclaimer – Describes map/data sources and usage restrictions. The disclaimer states the following:

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- Map Frame Area – Displays the map extent and active layers in the electronic map frame.