MIAMI·DADE COUNTY

iWASD

GIS VIEWERS HELP MANUAL

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Overview

Introduction

The iWASD GIS (Geographic Information System) Viewers are a series of web-based GIS maps provided to Miami-Dade County employees for the purpose of providing information for the planning, maintenance and execution of projects. Miami-Dade County provides this website as a public service. The county is continually editing and updating the GIS data to improve positional accuracy and information. This information may not reflect the data currently on file at Miami-Dade County and the County assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any decision made, action taken or not taken by the user in the reliance upon any information provided herein.

This manual was designed as a reference document for the tools available within the different iWASD GIS Viewers. Some tools are application specific, and may not be available in all GIS Viewers.

Main Screen Interface

The following is an introduction to the GIS viewer's **MAIN SCREEN** (*figure 2*). Most of the viewers have the same tools, but there may be some small differences between viewers.
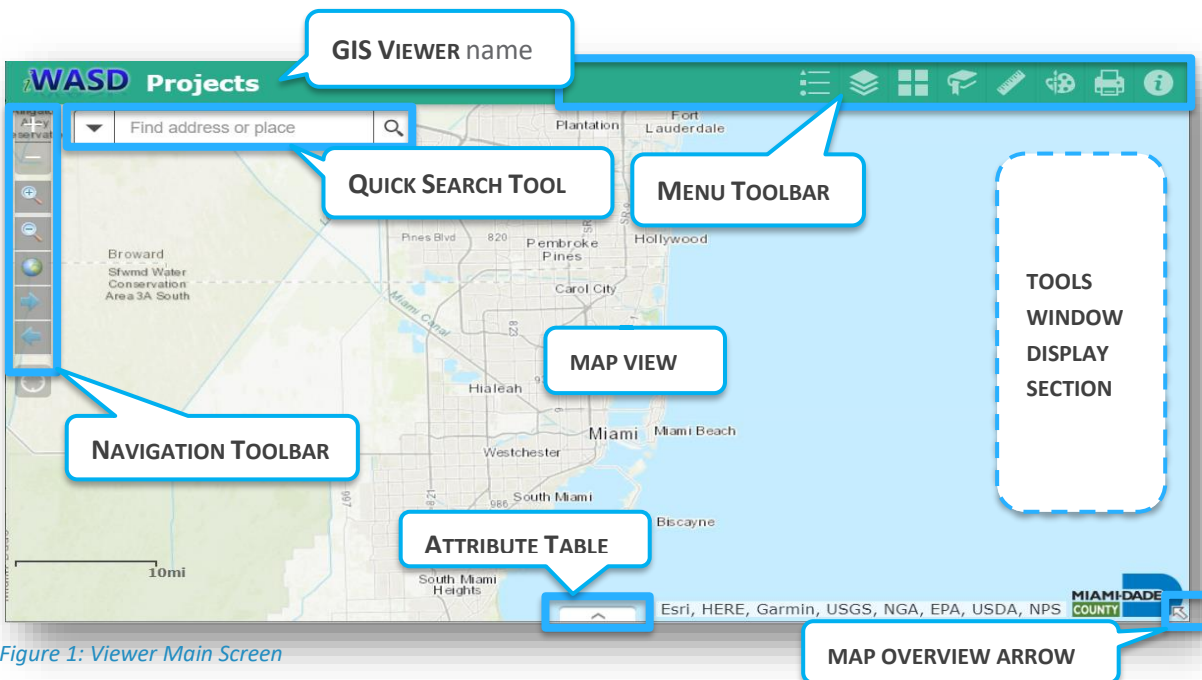

Figure 1: Viewer Main Screen

MAIN SCREEN:
1. **GIS VIEWER** name**:** The tools available are dependent on the **GIS VIEWER** chosen. The **GIS VIEWER** name is displayed on the top left area of the **MAIN SCREEN**. The sample above is from the Planning **GIS VIEWER**.

2. *MAP VIEW:* The section of the **MAIN SCREEN** which displays the map features, also known as the map display canvas.

3. **NAVIGATION TOOLS:** Tools used to zoom, and move the **MAP VIEW**. Also includes tools for searching addresses and data.

4. **MENU TOOLBAR:** Consists of the major application tools, including custom select tools.

5. **TOOLS WINDOW DISPLAY AREA:** This is the area of the **MAIN SCREEN** which displays the **MENU TOOLS** windows.

6. **ATTRIBUTE TABLE:** Section of the screen which displays the **ATTRIBUTE TABLE**, a table containing tabular data about feature(s)**,** such as pipe size and diameter. Click on the arrow at the bottom of the screen to display the **ATTRIBUTE TABLE**.

7. **MAP OVERVIEW:** The **MAP OVERVIEW** provides a window display of the **MAP VIEW** at a smaller scale (larger area) relative to the **MAP VIEW**.

Navigation Tools

Navigation Toolbar

To use GIS viewer navigation:

1. **Fixed Zoom in and out buttons:** Used to zoom in and out at a fixed scale on the center of the current view.
   - Click to zoom in.
   - Click to zoom out.

2. **Zoom magnifying glass (in & out):** Used to zoom in and out by selecting the magnifying glass and then clicking in the view and dragging a box to zoom in or out relative to the size of the box drawn.

3. **Full Extent button:** Used to zoom to the full extent of the map.

4. **Next Extent and previous Extent buttons:** Used to toggle between previous zoom views.

Zoom in & out Magnifying glass

Full Extent

Previous & Next Extent

FIGURE 2: Navigation Toolbar

5. **More zoom options:** You can also double click to zoom in, or use your mouse wheel to zoom in and out.

6. **Pan:** To move the map, simply click and hold your mouse, then drag the map. While still holding the mouse button, you can also use the arrow keys on your keyboard to move the map.

7. **Visibility scale:** Some layers have a visibility scale range. This means the layer will only display when you zoom in or out to the scale at which the layer was designed to be visible.
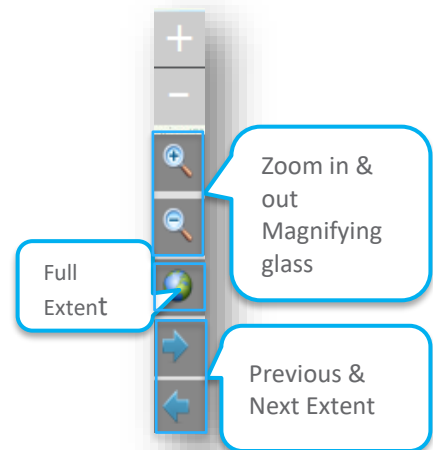
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Information Popup

Properties of the popup and how to use:

1. By default, a single left click on the **MAP VIEW** will open the **INFORMATION POPUP** window.

2. The **INFORMATION POPUP** window displays the **feature layer** and the **feature name** at the top of the window, and the attribute information of the selected feature.

3. When more than one feature is captured the **feature popup number** will display which item is selected and how many were captured in total. *Figure 4* displays (2 of 2) on the top left corner of the **INFORMATION POPUP**.

4. Use the **popup arrows** to scroll through the **feature popups**.

5. Some features have additional data attached to them. If there is a **More Data** link at the bottom of the **INFORMATION POPUP** window, click it to access more information about the selected feature.

6. When the **More Data** link is clicked, a new browser window or tab will open with the available source data.

7. The **Zoom to** link is similar to the "Fixed Zoom In" button on the navigation tool. The **Zoom to** link is found at the bottom of the **INFORMATION POPUP** window. Click on the **Zoom to** link to zoom into the selected feature.
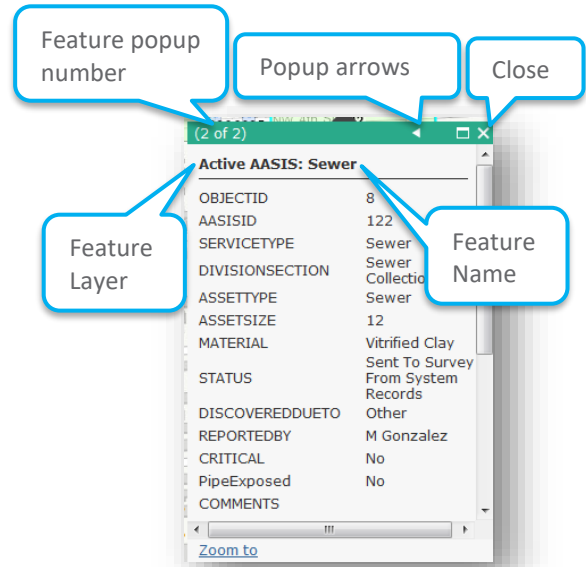

Figure 3: Information Popup Window

Figure 4: Not all popups have a more data link

Quick Search

The **QUICK SEARCH** tool is used to find locations by address or by specific feature IDs. The tool relies on a **GEOCODER SERVICE** to provide the search results. This tool is also known as the **Find Address Search.**

Figure 5: Quick Search Tool

To use the **QUICK SEARCH** tool:

1. Start typing in an address into the **Quick Search field** and the tool will start providing addresses that match the value typed.

2. Select an address from the list or click on the magnifying glass to execute the search.

3. The map view will zoom in to the address or feature and the **search result window** will open (shown in *figure 8*).

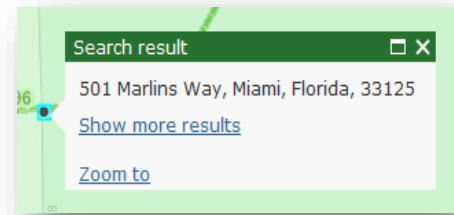   a. The link **Show more results** provides additional results which are adjacent to the search result.
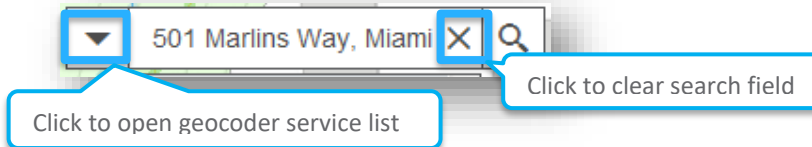

Figure 6: Search result

Click to open geocoder service list

Click to clear search field

Figure 7: Geocoder service pull down arrow

Click WASD Sewer Pump Station Basin to search against the Basins ID values in the Basins database
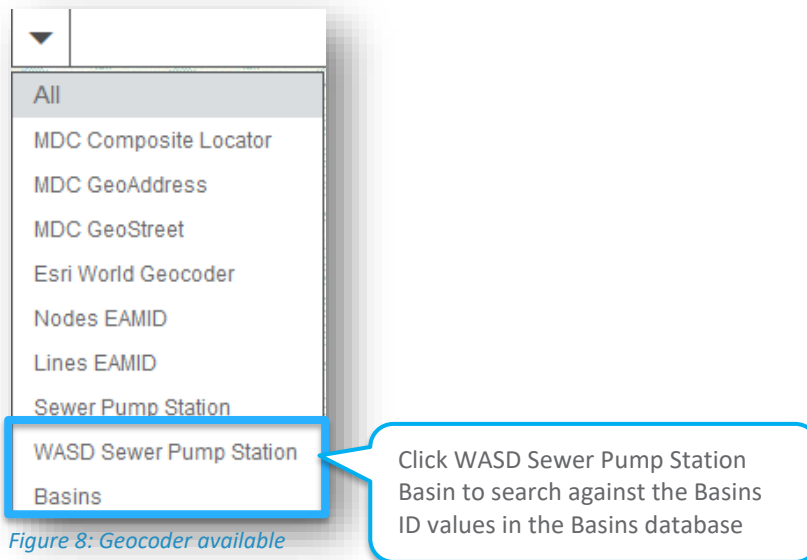
Figure 8: Geocoder available services

The **QUICK SEARCH TOOL** can also be used to find other values other than addresses.

To search for specific features other than addresses:

1. Click on the down arrow to open the Geocoder service pick list (shown in *figure 9*).

2. Select a geocoder service.

   a. For example, the **WASD Sewer Pump Station Basin** service was selected in *figure 10*.
   b. Note that the available **GEOCODER SERVICES** may vary based on the **GIS VIEWER** selected.

3. Type in the entity primary key for service selected.

   a. The primary key for the **Basin** example was the BASINID.
   b. The primary key is usually provided information, but the primary key can be found in the attribute table (see **ATTRIBUTE TABLE** on page 24 for more information).

4. Click on the magnifying glass to execute the search (see *figure 11*).

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a. If the value typed in is contained in any portion of the target value, then a list of the values containing the entered text will display under the **Quick Search field**.

5. The INFORMATION POPUP will open (see *figure 11*).

6. The selected feature will be highlighted in cyan. Notice that in *figure 11* the selected pump station is highlighted in cyan (symbolized as a node in a cyan square) in the MAP VIEW to the left of the INFORMATION POPUP.

Map Overview

The **Map Overview arrow** is located at the bottom left corner of the screen (see *figure 2*). It is small and may be difficult to find at first.

To use the tool:

1. Click on the arrow icon to open the MAP OVERVIEW window.

2. When the MAP OVERVIEW window is open, drag the **overview polygon** to pan to another area on your map view (see *figure 15)*.

3. Click the **maximize arrows** to expand the MAP OVERVIEW to fit the screen.

4. Click the **restore arrows** (the icon arrows will be pointing inwards) to return the MAP OVERVIEW to its default size.

Overview polygon

Maximize arrows
Restore arrows

Figure 9: Map Overview
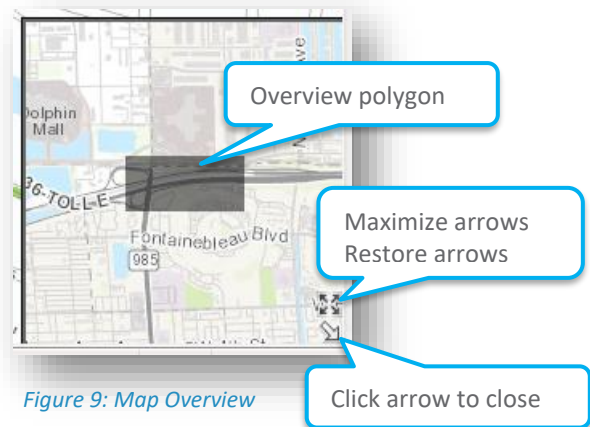
Click arrow to close

5. Click on the down arrow to close the MAP OVERVIEW.

Find My Location Button

The **FIND MY LOCATION BUTTON** is usually under the **NAVIGATION TOOLBAR**, but it will not be available if the GIS VIEWER selected does not include it.

The **FIND MY LOCATION BUTTON** uses your browser's geolocation capabilities to zoom the MAP VIEW to the detected location of your device. To use tool:

1. Click on the tool icon to zoom to your location.
2. This feature is designed for mobile devices, such as smartphones or tablets, and may not work properly on desktop computers connected by wire to the Internet.

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Time Slider Tool

The **TIME SLIDER TOOL** enables you to view temporal layers in a map, and play the map to see how the data changes over time. Using this tool, you can control the animation of the data with buttons to play/pause, go to previous time period, and go to next time period. For example: The **TIME SLIDER TOOL** found in the **UTILITY COORDINATION VIEWER** allows us to turn projects and projects conflicts layers on or off based on the project's or project conflict's time.

To use the tool:

1. Click on the tool icon to open the slider window.
2. Use the slider grip to adjust the date range.
3. Use the next or previous buttons to jump 3 months forward or back.
4. Use the play button to move forward 3 months at the playback speed.
5. Click on the tool icon again to close it.

Date range

Previous and next

July 1, 2016 to October 1, 2019

Play & Pause

Slider grip

Playback speed
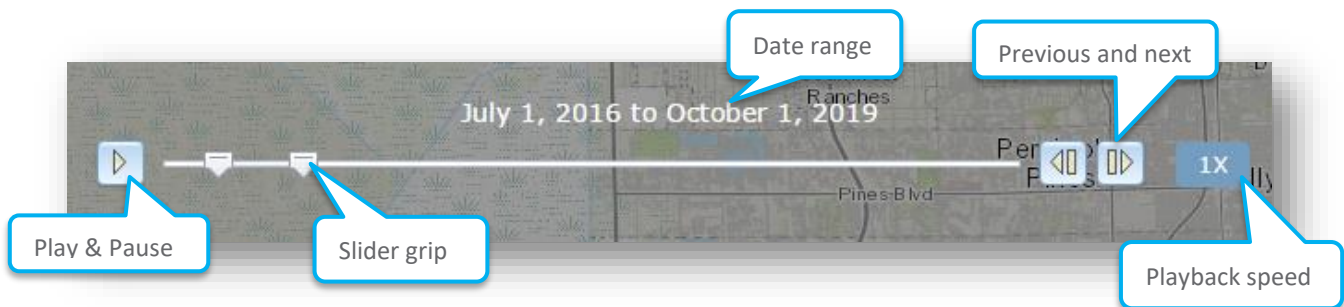
Menu Toolbar (Standard)

Legend

The **LEGEND** displays the layers that are displayed in the **MAP VIEW**. The available layers and the order of the layers could be different based on the **GIS VIEWER** that was selected.

1. Click the Legend tool to display the **Legend Window**.

2. Notice that an expected layer may not display at the current **MAP VIEW** scale (see **navigation toolbar** number 7, **visibility scale**).

3. A layer may not be displaying if the layer is turned off. The next section explains how to use the **LAYER LIST** tool to turn layers on and off.
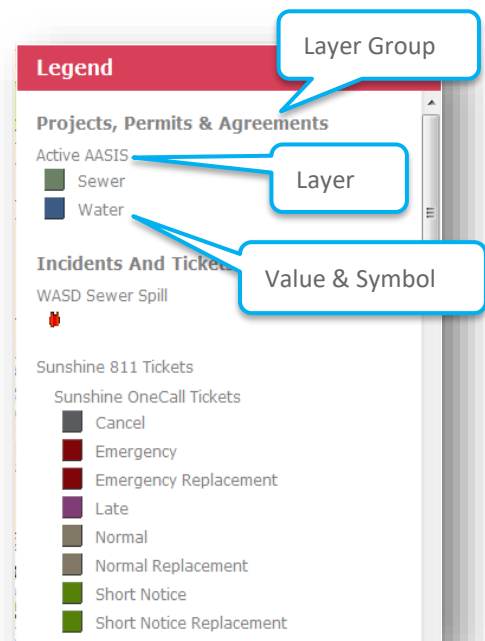
Layer Group

Layer

Value & Symbol

Figure 10: Legend Window

Layer List

The **LAYER LIST** controls the display of the features in the map view.

The **LAYER LIST** can be used to:

- Turn layers on or off.
- Change the transparency property.
- Zoom to a layer extent.
- Change the order of the layers in the list.
- Open the attribute table of a layer.

To use the tool:
1. Click the tool icon to open the **layer list window** shown on *figure 17*.
   a. The available layers will be different based on the **GIS VIEWER** selected.
2. Click the down arrow on the left side of the layer to expand the layer group (parent node).
   a. Further clicks on the down arrow on the left side of the layer, will end at the layer name and symbol representing the layer (child node).
3. The layers on/off property is controlled by the check box on the left side on the layer name.
   a. If the layer group (parent node) is turned off all child nodes below it will not be displayed even if the child nodes check box are turned on.
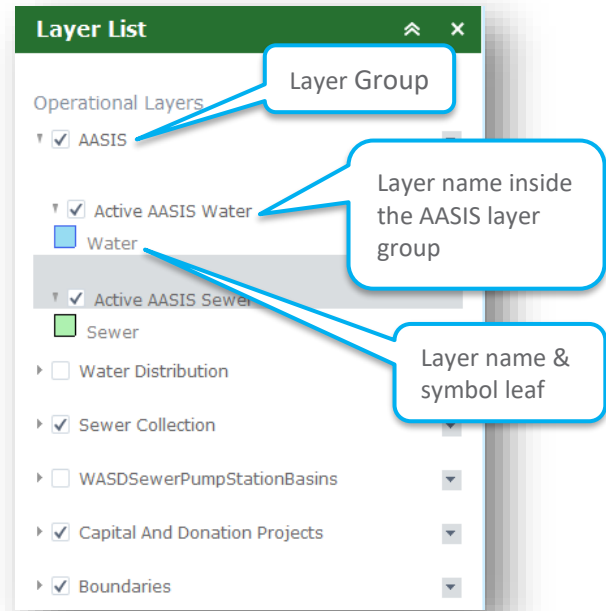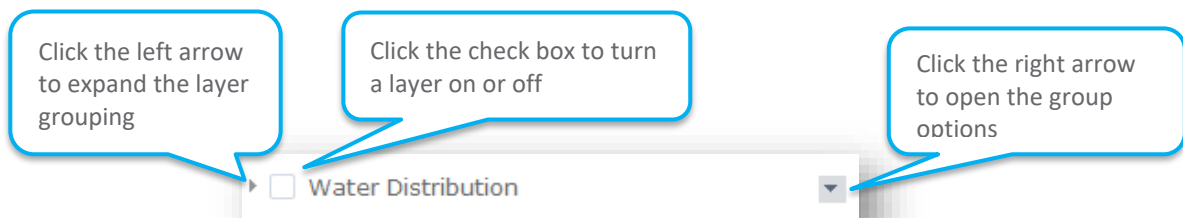

Figure 11: Layer List Window

Figure 12: Close-up of a Layer buttons

4. Click the arrow on the right of the **layer group** to open the **group options**. The **group options** (see *figure 19*) are:
   a. **Zoom to:** zoom to the full extent of the layer.
   b. **Transparency:** change the visibility of the layer symbol from 100% (full visibility) to 0% (not visible) or X% (where X=level of transparency).
   c. **Move up & Move down:** move the layer up or down in the layer list (this affects whether a layer is in front (above) or behind (below) another layer in the **MAP VIEW**)
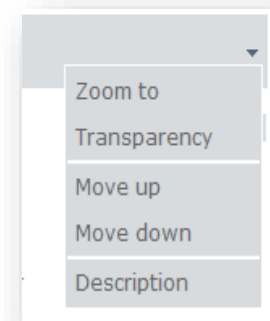

Figure 13: Group Options

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d. **Description:** Opens a new browser window or tab with information about the layer group.

Click the left arrow to expand the layer name & symbol leaf

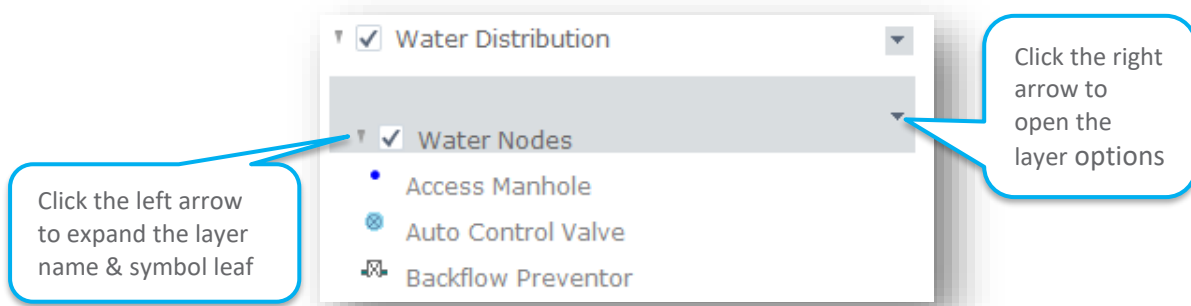Click the right arrow to open the layer options

Figure 14: Expanded Layer Group

5. Click the arrow on the right of the **layer name** to open the **layer options** (*figure 21*). The options are:
    a. **Disable Pop-up:** Disables the INFORMATION POPUP window. If the popup is already disabled, the link will say "Enable Pop-up".
    b. **Open Attribute Table:** Opens the attribute table with the tab for the subject layer selected (see ATTRIBUTE TABLE for more information).
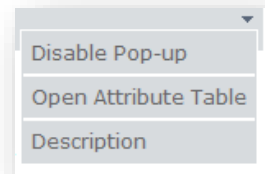   c. **Description:** Opens a new browser with information about the layer.

Figure 15: Layer Options

Basemap Gallery

The **BASEMAP** gallery provides various reference maps which are displayed behind the features in the **MAP VIEW**, such as roads, corporate boundaries, aerial photography, etc.

To use a **BASEMAP** (see figure 22):
1. Click the tool icon to open the window
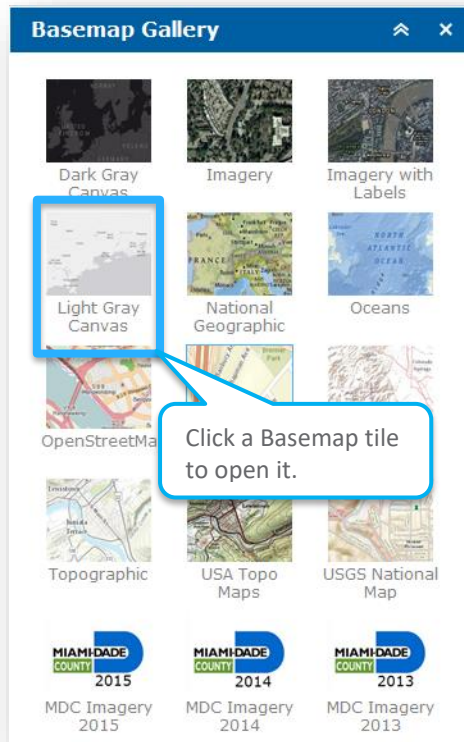2. Click on the desired **BASEMAP**, and it will render in the **MAP VIEW**.

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Figure 16: Basemap Gallery

Bookmark

The **BOOKMARK** tool is used to save a location at a particular scale in the **MAP VIEW**. After a bookmarks is created it can be accessed from different **GIS VIEWERS**.

To use the tool:
1. Click on the tool icon to open the **bookmark window**.
2. Navigate to a desired view you would like to save.
3. Type in a name for the identified location.

4. Click on the **add bookmark button** on the right of the name input field to save the view.

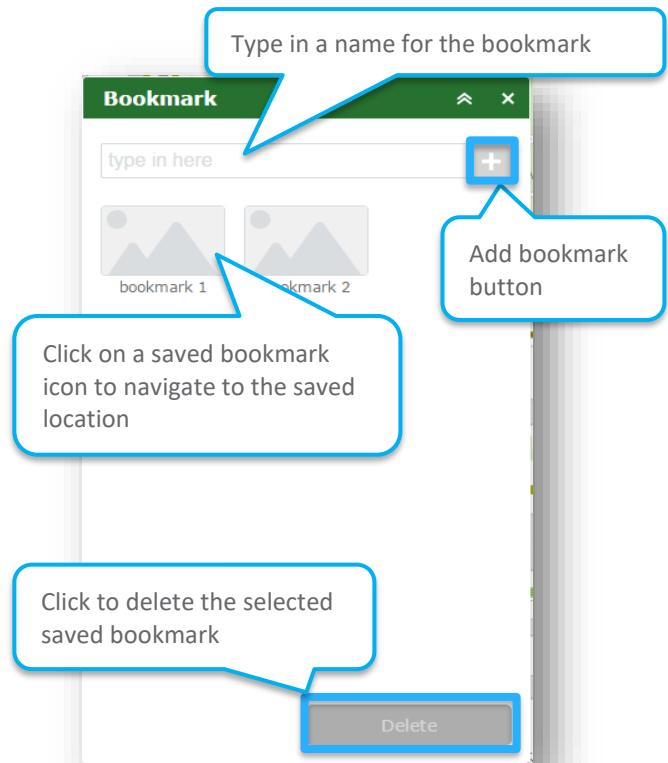5. To navigate to a saved view click on the **saved bookmark** icon.

Type in a name for the bookmark

Add bookmark button

Click on a saved bookmark icon to navigate to the saved location

Click to delete the selected saved bookmark

Figure 17: Bookmark Window

6. To delete a bookmark, click on it to select it and then click the **delete button**.

After you close and log out, the bookmark will remain saved and will be there when you return to any iWASD **GIS VIEWER**.

Measurement Tool

The Measurement tool is used to acquire:
- The area of a polygon.
- The linear distance between two points.
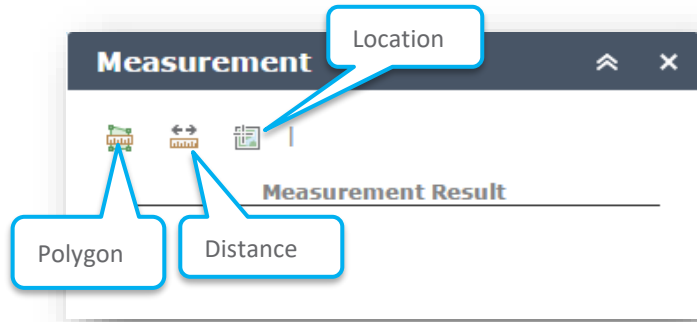- The coordinate of a point.

Figure 18: Measurement Tool Window

To use the tool:
1. Click on the tool icon to open the measurement tool window.
2. Click on one of the measurement types, and follow the steps shown for each measurement type.

3. Area Measurement: Shown on *figure 28.*
   a. Click the polygon icon.
   b. Click the units pull down arrow to select the units.
   c. Draw a polyline on the map view by clicking three or more points.
   d. Double-click to finish drawing the polyline.
   e. The tool displays the total length of the polyline under the measurement results.
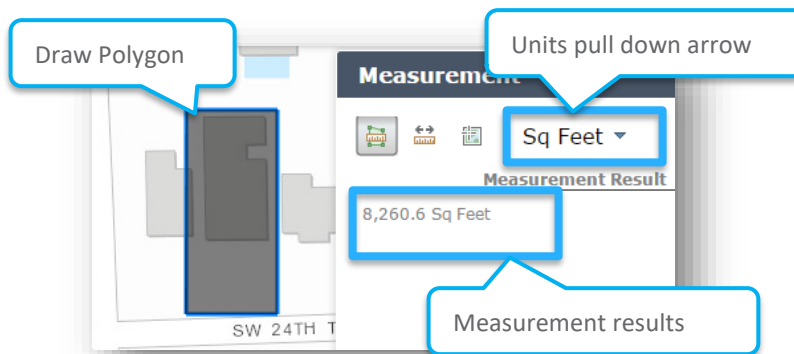
Figure 19: Sample of the Polygon Measurement

4. Distance Measurement: Shown on *figure29.*
   a. Click on the Distance icon.
   b. Click the units pull down arrow to select the units.
   c. Click the start point of the measurement in the map view, and
   d. Double click on the second point to finish the measurement.

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e. The tool displays the total length under the measurement results.

Click to start
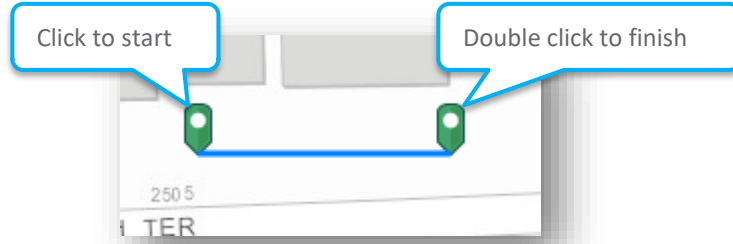
Double click to finish

250 5

TER

Figure 20: Sample of the Distance Measurement

5. Location Measurement: Shown on *figure 30*.
  a. Click the coordinate icon,
  b. Click the units pull down arrow to change the units.
  c. Click in the **MAP VIEW** and a location icon will appear.
  d. The Measurement tool displays the coordinates under the measurement results.
  e. The cursor icon value is dynamic and will continue to update as the cursor moves.
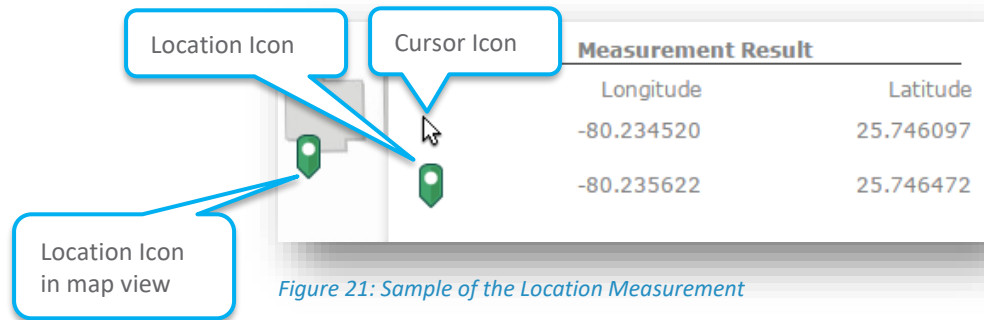 f. The Location icon is fixed and will only change when you click again in the **MAP VIEW**.

Location Icon

Cursor Icon

Measurement Result

Longitude	Latitude
-80.234520	25.746097
-80.235622	25.746472

Location Icon in map view

Figure 21: Sample of the Location Measurement

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Draw Tool

The **DRAW TOOL** enables end users to draw basic graphics and text onto the map. It provides basic sketching and redlining functionality. It also displays some measurements for drawn features, such as lengths for lines, and areas and perimeters for polygons.

Figure 22: Draw Tool Window

To use the tool:
1. Click on the tool icon to open the **DRAW TOOL** window.
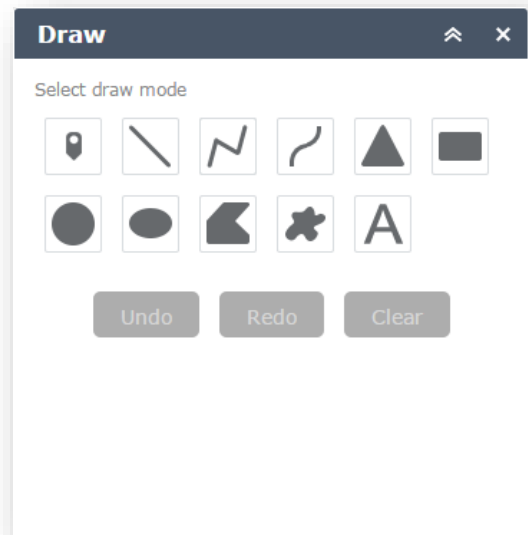2. Click on the desired draw mode and follow the instructions for each tool below.

Point: Click to set a point marker in the map view.

Line: Click and hold down to draw line. Release to finish.

Polyline: Click to start line, and continue clicking to create each vertex. Double click to finish polyline.

Freehand polyline: Click and hold down to draw line. Release to finish.

Triangle: Click to add the shape at a fixed size, or click and hold to adjust the size. Release to finish.

Extent: Click, hold, and drag to draw extent. Release to finish

Circle: Click, hold, and drag to draw circle. Release to finish

Ellipse: Click to add the shape at a fixed size, or click and hold to adjust the size. Release to finish.

Polygon: Click to start shape, and continue clicking to create each vertex. Double click to finish the polygon.

Freehand Polygon: Click and hold down to draw polygon. Release to finish.

Text: Click on the "A" icon to open the text input dialog box. Type in the desired label into the text field, and then click in the map view to insert the label.

3. When complete, click the **PRINT** icon to save. To start a new markup, click the **clear button**.
4. See the **draw tool window** event button descriptions below:

UNDO BUTTON: Click to clear the last action done.
REDO BUTTON: Click to restore the last UNDO.
CLEAR BUTTON: Click to erase all markup from the map view.

Note that the markup done in a session is not saved and is lost after the GIS viewer is closed. To save the markup you must use the **PRINT** tool.

Print

The print tool allows users to generate a printable map of the contents displayed on the main map. Various templates and output image formats are available.

To use the tool:
1. Click on the tool icon.
2. Navigate to the map view and markups, and position to fit the screen as desired.
3. Select the layout by clicking on the layout pull down arrow.
4. Select the format by clicking on the format pull down.
5. Click on the advance button to edit settings.
6. If the Map title is available, type in the desired map title.
7. Click on the print button to print current map view.
8. The resulting file will be listed below. Click on the file to view the print preview in a new browser window or tab and save it to your local machine.
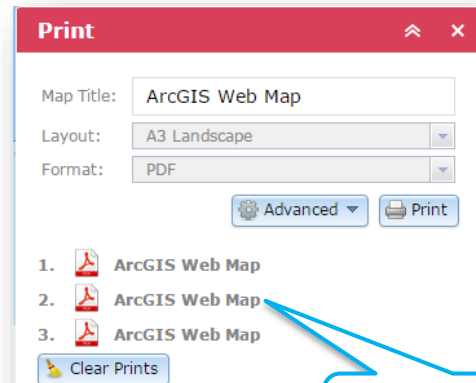9. Click the clear button to clear result files.

Figure 23: Print Window

Result print file will display here

Help

This icon is used to access information about the iWASD GIS viewer.

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Attribute Table

The attribute table provides a tabular list of the available layers for the GIS Viewer selected. Various tools use the attribute table to display data, but the attribute table can be opened from the main screen by clicking on the pull up arrow at the bottom of the screen (shown above).

To help describe the attribute table it was broken down into three parts, the Menu, Tabs, and Table.

Menu

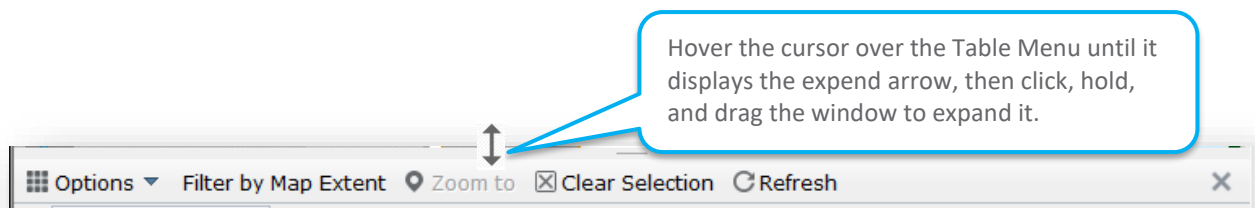The Menu provides the following functionality associated with the attribute table:

Hover the cursor over the Table Menu until it displays the expend arrow, then click, hold, and drag the window to expand it.

Figure 24: Attribute Table: Menu

1. **Options** (*figure 39*):
   a. **Show Selected Records:** Only displays selected records.
   b. **Show Related Records:** Displays related records if a selected record has related table.
   c. **Filter:** Allows to filter records in the table.
   d. **Show/Hide Columns:** Opens the show/hide column panel, used to set columns visible or invisible (see *figure 40*).
   e. **Export all to CSV:** Exports the attributes to a CSV file. If records are selected, only the selected records are exported. If no records are selected, all the records are exported.
2. **Filter by Map Extent:** Limits the records to the visible features in the current map view display.
3. **Zoom to:** Zooms to the selected record or row.
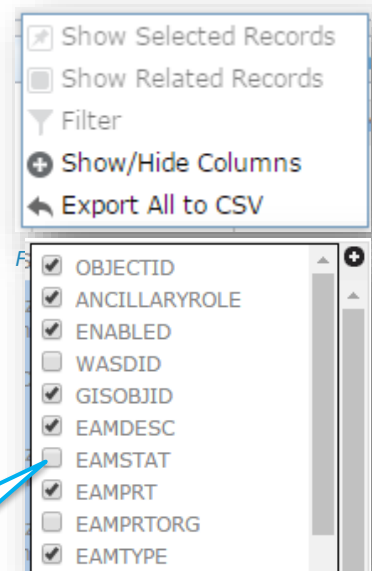4. **Refresh:** Regenerate the table data.

Check mark to show or hide a column
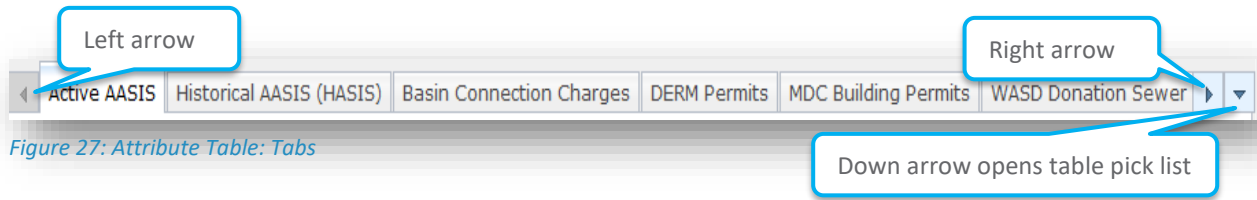
Figure 26: Show/hide column panel

Tabs

Figure 27: Attribute Table: Tabs

Each tab represents a feature layer (a table) of the GIS Viewer selected. To use:

1. Click on a tab to open its associated data.
2. Use the left and right arrows to scroll through the list of tables.
3. Use the down arrow to open a pick list of the tables. Shown in *figure 42*.
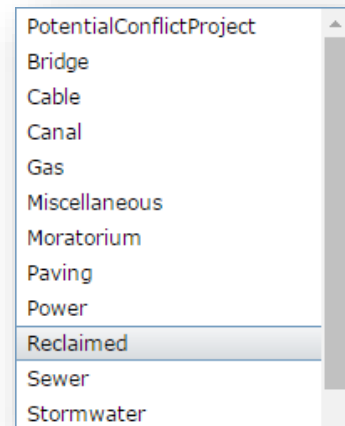4. Click the table you wish to open. Shown in *figure 43*.
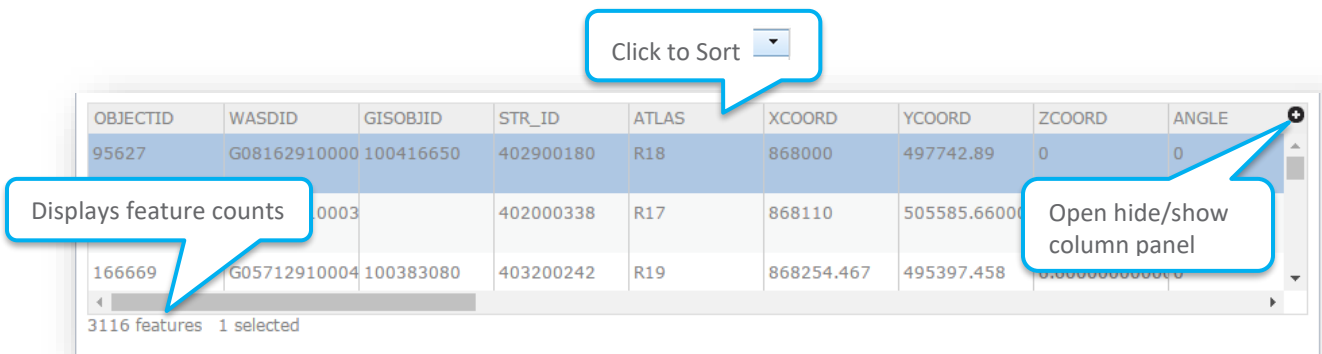

Figure 28: Table pick list

Table

Figure 29: Attribute Table: Table

The table displays the data, in rows and columns, for the layer tab selected. To use:

1. Once opened, click on a record to select it.
2. Double click a record to zoom in and open to information popup
3. Click on the plus sign on the top right corner to open the Show/hide column panel (*figure 43*).
4. You can sort a column by clicking the header. An arrow should appear to show if it is ascending or descending (some tables do not sort).
5. You can arrange columns by clicking and holding a column header, and then dragging it over another column header.
6. Notice that the feature count and features selected are shown in the bottom left corner.