



OKLAHOMA

Water Resources Board

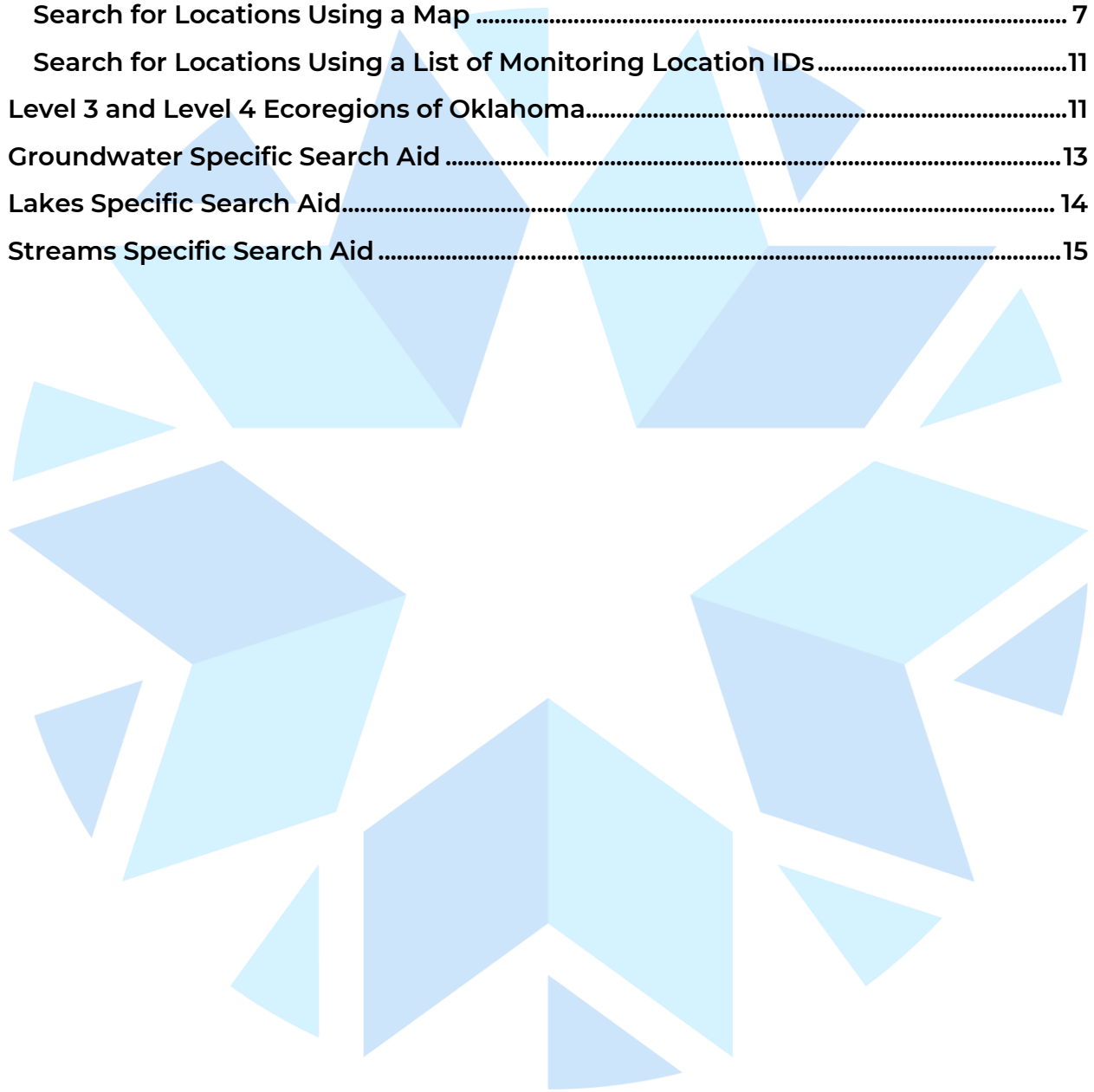
Water Data and Analysis Tools

*Search Criteria Options for Discrete
Data in AWQMS*

Oklahoma Water Resources Board, September 2023

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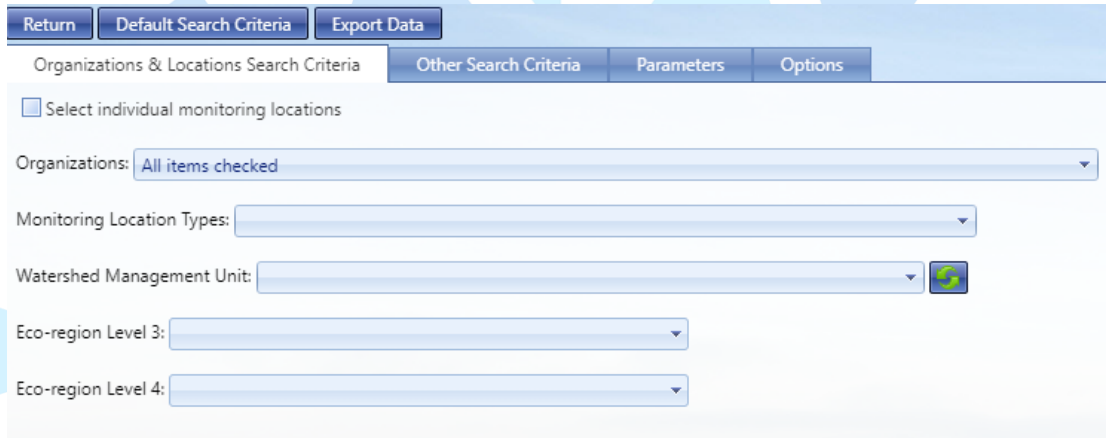
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AWQMS Organization and Location Search Criteria Options

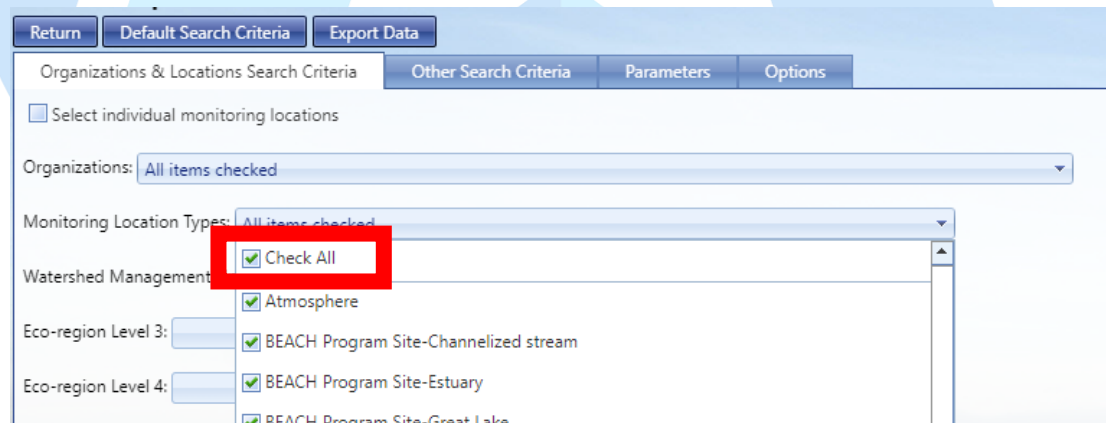
Searching and selecting a location in AWQMS is key in being able to use the graphs, maps, reports, and exports (data outputs) in AWQMS. There are several different options available, this guide will walk you through how to use each one.

- Aside from saved searches that have already selected locations for you, most data outputs will start on this screen:



All Locations

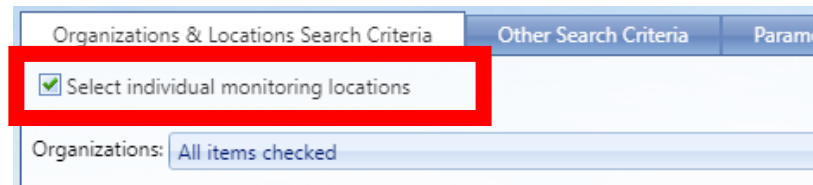
- If you are interested in all locations available, click the **Monitoring Location Types** dropdown box, and select the **Check All** check box. Then move onto the next tab **Other Search Criteria** to continue your search



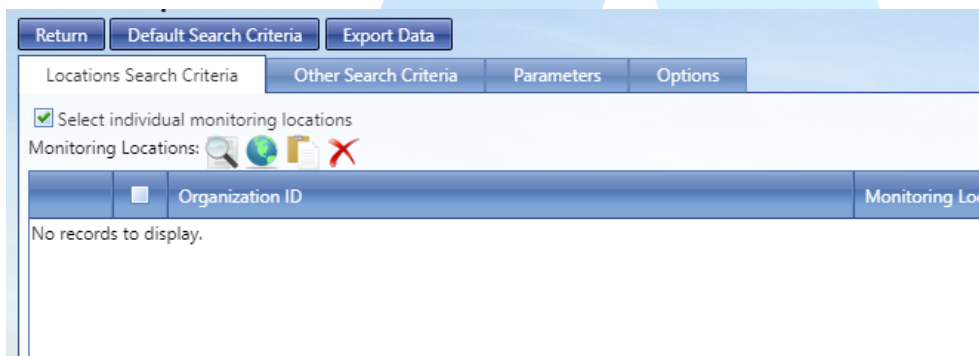
- You can search by Ecoregion from this page as well. Ecoregions are areas of similar ecosystems. There are 4 ecoregion levels maintained by the EPA, Level 1 is the most general and Level 4 the most specific. Searches are available for Levels 3 and 4. For a list of eco-regions in Oklahoma please [click here](#).

Individual Locations

- If you are interested in an individual location or locations, click the **Select individual monitoring locations** checkbox



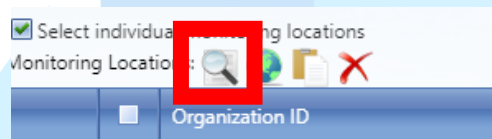
- A new window will appear
- From here you have several options in how you search for the locations you would like:



- [Magnifying glass](#)- this option allows you to search for locations using AWQMS's search tool
- [World](#)- this option allows you to search for locations using a map
- [Clipboard](#)- this option allows you to paste in a list of monitoring location IDs
- Red X- this option will remove all previous monitoring locations you have selected.

Search for Locations within AWQMS

- Click the magnifying glass icon



- This takes you to a new window

Search and Select Monitoring Locations for Data Analysis Page

Search Clear Search Criteria Cancel

Search Criteria Monitoring Locations

Organization ID: [Dropdown]

Monitoring Location Type: [Dropdown]

Monitoring Location ID: Contains [Text] Include Alternate IDs

Monitoring Location Name: Contains [Text]

Waterbody Name: Contains [Text]

Township Range: Contains [Text]

Land Owner Name: Contains [Text]

Aquifer Name: Contains [Text]

Project ID: [Dropdown]

Watershed Management Unit: [Dropdown]

- You will need to click the check box for the organization available in the **Organization ID** dropdown box

Search Criteria Monitoring Locations

Organization ID: OWRB-GMAP

Monitoring Location Type: Check All

Monitoring Location ID: OWRB-GMAP OWRB Groundwater Monitoring

Monitoring Location Name: [Text]

Waterbody Name: Contains [Text]

Township Range: Contains [Text]

- From here you have a wide variety of search tool options available for use, depending on the type of water you are searching in some search options may be more useful than others. Click the links below to jump to guides specific to water type:
 - [Groundwater](#)
 - [Lakes](#)
 - [Streams](#)
- One important distinction is the difference between **Monitoring Location ID** and **Monitoring Location Name**. Monitoring Location ID is the unique ID that OWRB has created to identify the location within AWQMS, whereas the Monitoring Location Name is more common name associated with the location.
- Within the Search Criteria page you can select different options for some of the search fields, these options can help with your search

Monitoring Location ID: Contains [Text] Ir

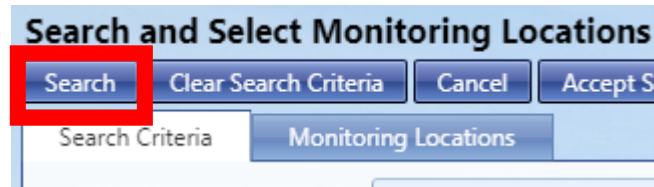
Monitoring Location Name: Equals [Text]

Waterbody Name: Starts With [Text]

Township Range: Ends With [Text]

Contains [Text]

- Once you have filled out the search criteria you would like to use, click the **Search** box at the top of the window



- This will pull up a list of locations matching your search criteria. You can either select all locations available by clicking the check box found here,

The image shows a page titled "Search and Select Monitoring Locations for Data Analysis Page". At the top, there are five buttons: "Search", "Clear Search Criteria", "Cancel", "Accept Selected Locations", and "Show Selected Locations Only". Below the buttons, there are two tabs: "Search Criteria" and "Monitoring Locations". The "Search Criteria" tab is active. Below the tabs is a table with three columns: "Search Criteria", "Organization ID", and "Monitoring Location ID". The first checkmark in the "Search Criteria" column is highlighted with a red box.

Search Criteria	Organization ID	Monitoring Location ID
<input checked="" type="checkbox"/>	OWRB-GMAP	102104
<input checked="" type="checkbox"/>	OWRB-GMAP	102299
<input checked="" type="checkbox"/>	OWRB-GMAP	102951
<input checked="" type="checkbox"/>	OWRB-GMAP	102967
<input checked="" type="checkbox"/>	OWRB-GMAP	104055

or you can select individual locations in list by clicking those individual check boxes

Search and Select Monitoring Locations for Data Analysis Page

<input type="checkbox"/>	Organization ID	Monitoring Location ID
<input checked="" type="checkbox"/>	OWRB-GMAP	102104
<input type="checkbox"/>	OWRB-GMAP	102299
<input checked="" type="checkbox"/>	OWRB-GMAP	102951
<input type="checkbox"/>	OWRB-GMAP	102967

- Once you have selected the locations you want, click the **Accept Selected Locations** box at the top

Search and Select Monitoring Locations for Data Analysis Page




<input type="checkbox"/>	Organization ID	Monitoring Location ID
<input checked="" type="checkbox"/>	OWRB-GMAP	102104
<input type="checkbox"/>	OWRB-GMAP	102299
<input checked="" type="checkbox"/>	OWRB-GMAP	102951
<input type="checkbox"/>	OWRB-GMAP	102967

- This will return you back to the Location Search Criteria page. The locations you selected will now be able for use in your data outputs.

Search for Locations Using a Map

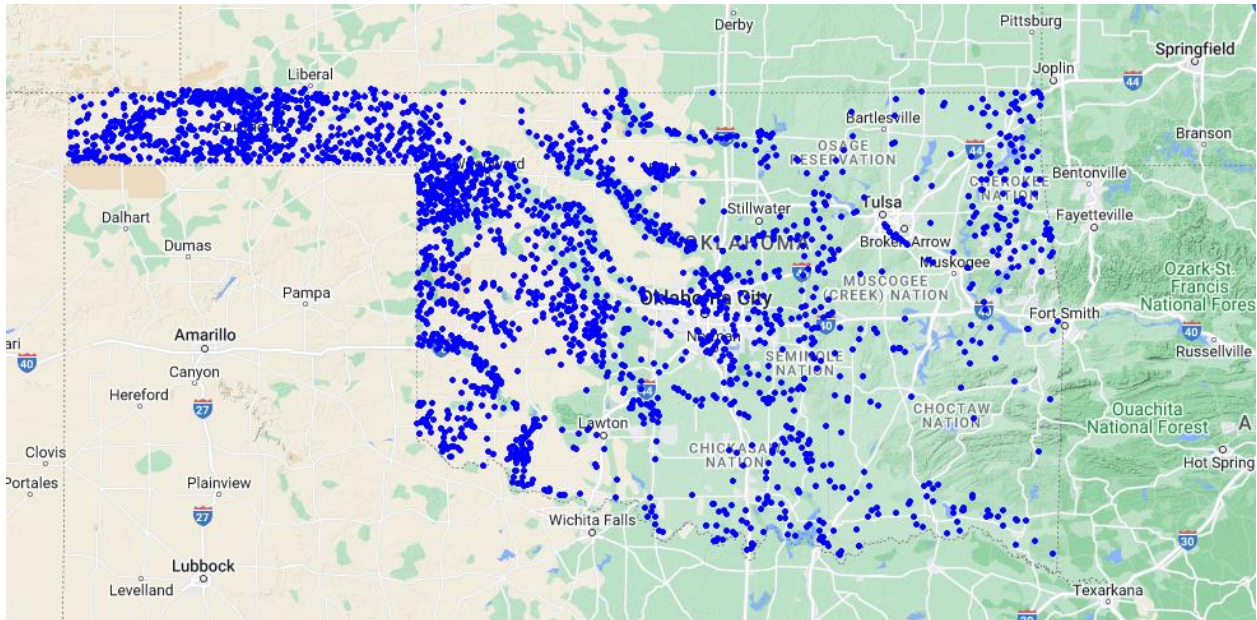
- Click the globe icon

Select individual monitoring locations

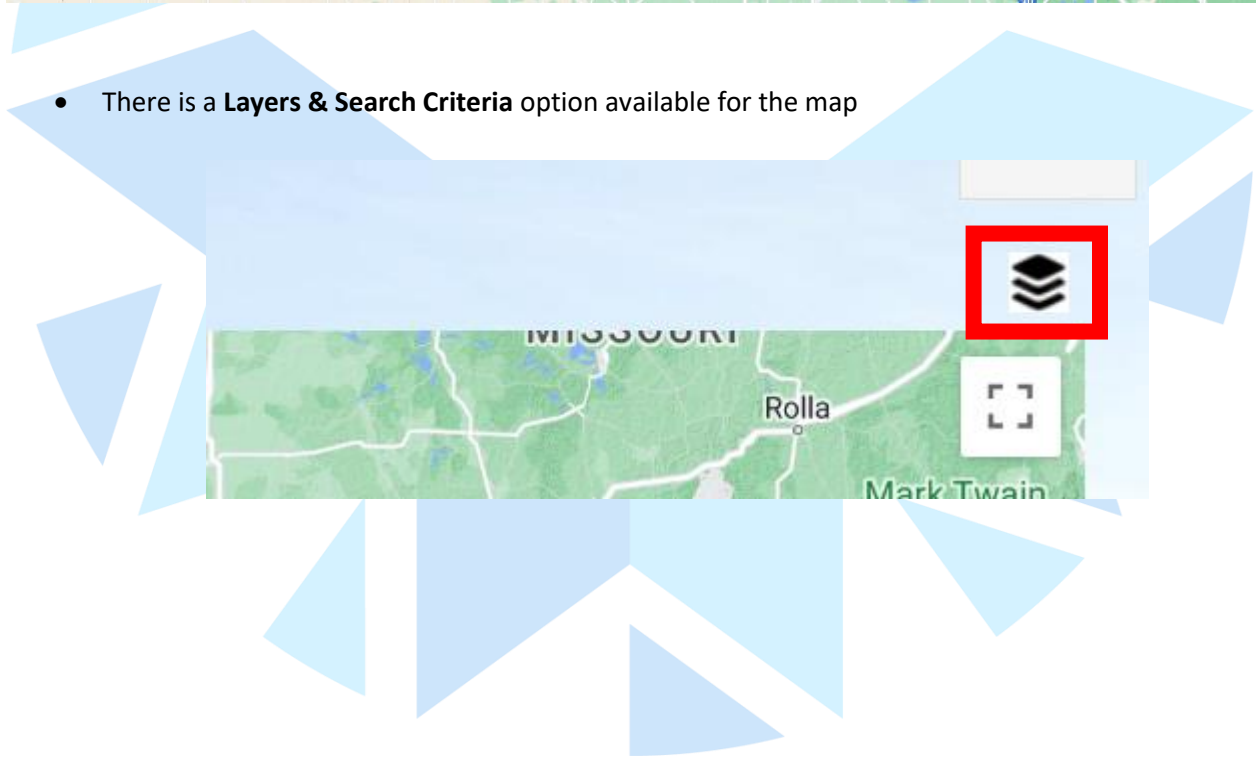
Monitoring Locations:   

Organization ID

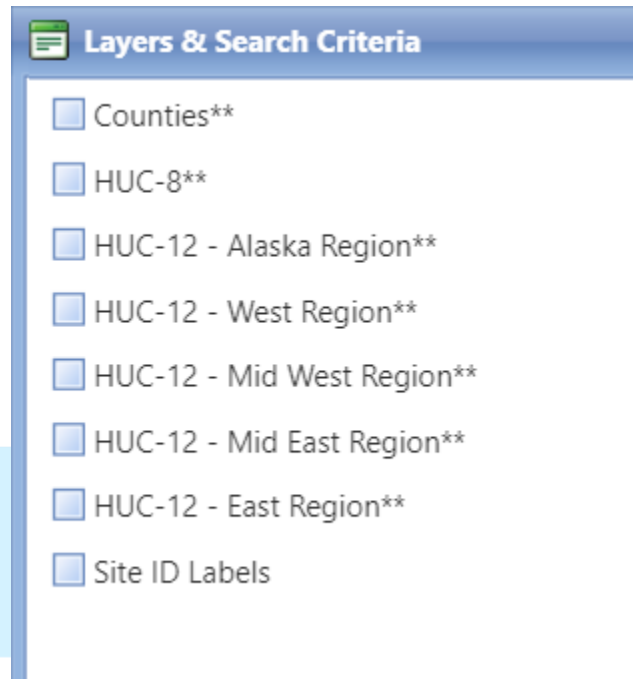
- A map of Oklahoma showing all available locations for that water type will appear



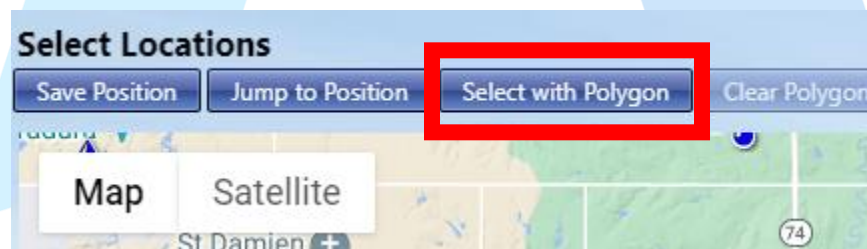
- There is a **Layers & Search Criteria** option available for the map



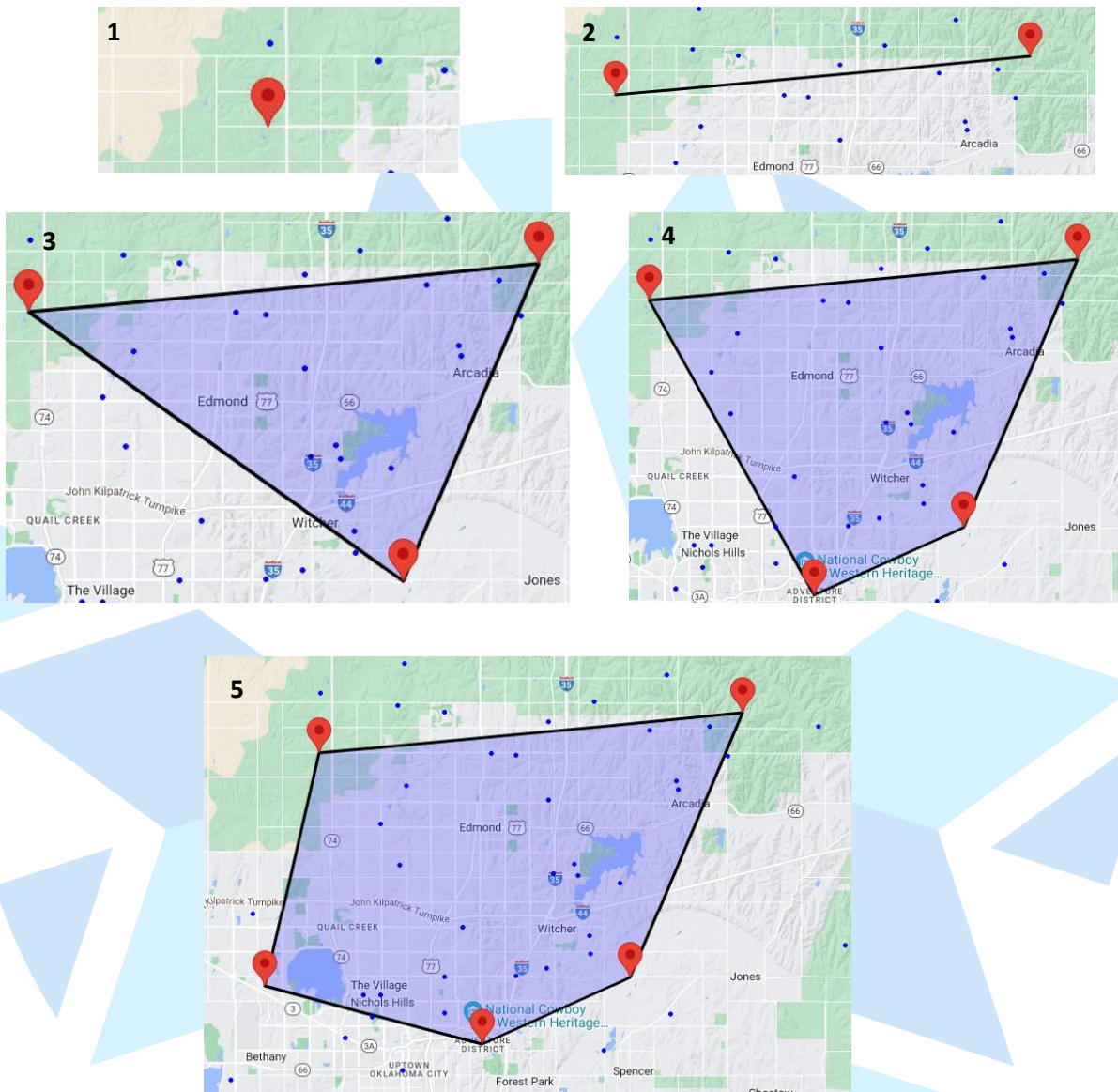
- It will give you these options to include on your map



- The layers may take some time to load, but they are available for use if they help you in selecting your locations of interest
- Zoom into your area of interest, and click the **Select with Polygon** box at the top to select the location, or locations, you are interested in



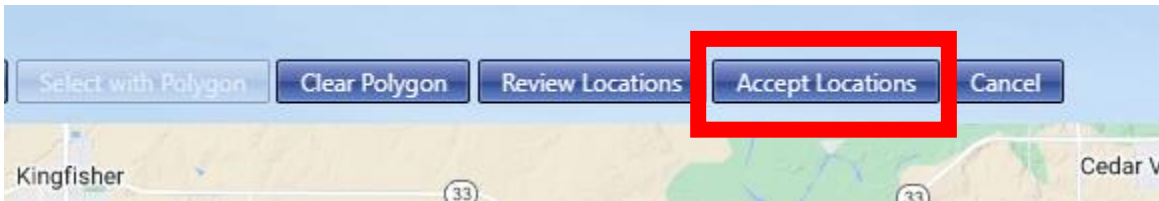
- Now you will click on the map to build a shape that will contain the locations you are interested in, your shape must have at least three points but can have more.



- If you need to start over at any point, click the **Clear Polygon** box at the top



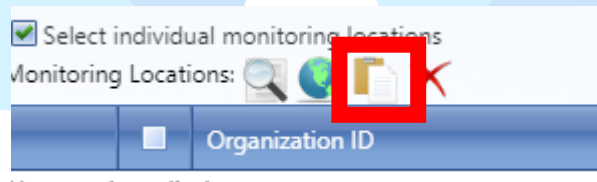
- Once you have completed the polygon click the **Accept Locations** box at the top



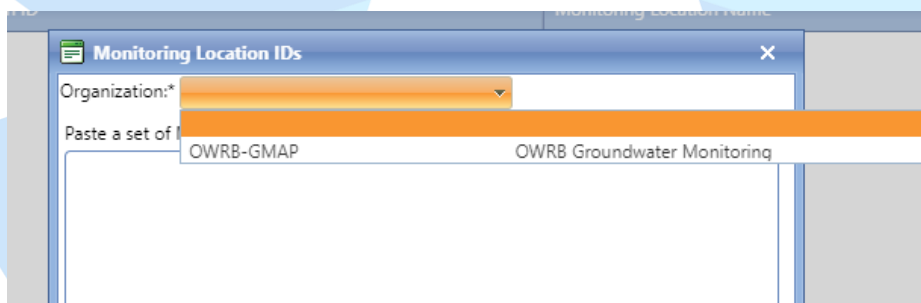
- This will return you back to the Location Search Criteria page. The locations you selected will now be able for use in your data outputs.

Search for Locations Using a List of Monitoring Location IDs

- Click the clipboard icon



- Select the organization that is available



- Paste in the list of Monitoring Location IDs you have and select OK down at the bottom
- Make sure the locations have their check box checked, otherwise they will not be pulled into the data output.

Level 3 and Level 4 Ecoregions of Oklahoma

- High Plains (25)
 - Rolling Sand Plains (25b)
 - Moderate Relief Plains (25c)
 - Canadian/Cimarron High Plains (25e)
- Southwestern Tablelands (26)

- Canadian/Cimarron Breaks (26a)
- Flat Tablelands and Valleys (26b)
- Caprock Canyons, Badlands, and Breaks (26c)
- Black Mesa (26f)
- Central Great Plains (27)
 - Prairie Tableland (27d)
 - Red Prairie (27h)
 - Broken Red Plains (27i)
 - Wichita Mountains (27k)
 - Pleistocene Sand Dunes (27l)
 - Red River Tablelands (27m)
 - Gypsum Hills (27n)
 - Cross Timbers Transition (27o)
 - Salt Plains (27p)
 - Rolling Red Hills (27q)
 - Limestone Hills (27r)
- Flint Hills (28)
 - Flint Hills (28a)
- Cross Timbers (29)
 - Northern Cross Timbers (29a)
 - Eastern Cross Timbers (29b)
 - Western Cross Timbers (29c)
 - Grand Prairie (29d)
 - Arbuckle Uplift (29g)
 - Northwestern Cross Timbers (29h)
 - Arbuckle Mountains (29i)
- East Central Texas Plains (33)
 - Northern Post Oak Savanna (33a)
- South Central Plains (35)
 - Floodplains and Low Terraces (35b)
 - Pleistocene Fluvial Terraces (35c)
 - Cretaceous Dissected Uplands (35d)
 - Red River Bottomlands (35g)
 - Blackland Prairie (35h)
- Ouachita Mountains (36)
 - Athens Plateau (36a)
 - Central Mountain Ranges (36b)
 - Fourche Mountains (36d)
 - Western Ouachitas (36e)
 - Western Ouachita Valleys (36f)
- Arkansas Valley (37)
 - Scattered High Ridges and Mountains (37a)
 - Arkansas River Floodplain (37b)
 - Arkansas Valley Plains (37d)

- Lower Canadian Hills (37e)
- Boston Mountains (38)
 - Lower Boston Mountains (38b)
- Ozark Highlands (39)
 - Springfield Plateau (39a)
 - Dissected Springfield Plateau—Elk River Hills (39b)
- Central Irregular Plains (40)
 - Osage Cuestas (40b)
 - Cherokee Plains (40d)

Groundwater Specific Search Aid

- Search by Well ID
 - Searches can be made using the Well ID in the Monitoring Location ID field
- The Monitoring Location Name field is not recommended as a preferred search for individual wells. The information used to generate the location name can greatly vary depending on the project and time period that collection started for that well.
- Search by Aquifer
 - Searches can be made using the local aquifer designation in several fields: Waterbody Name, Aquifer Name, and Watershed Management Unit.
 - The Watershed Management Unit will give a dropdown list of options available, after selecting an organization.
- Landowner Name is a searchable field; however, this information is not available for viewing on monitoring locations since it is private information. Also, most locations are not currently up to date with proper landowner information.
- Project ID
 - Searches can also be preformed using the Project ID, after selecting an organization ID. Currently, monitoring location project designations for groundwater are undergoing reorganization. The most accurate and up-to-date projects are:
 - GMAP Baseline WL
 - GMAP Baseline WQ
 - Water Levels Annual
 - Water Levels Seasonal
- Search by County
 - Searches can also be made using the county, after a state has been selected.
- Search by Township and Range
 - Monitoring stations can also be searched using Township and Range.
- Search by HUC
 - Hydrologic Unit Code – a USGS developed 2-to-12-digit numeric code representing a water region, subregion, basin, watershed, or subwatershed; these regions are relevant to surface water hydrology. Note that these do not account for aquifer designations.
 - Searches can be made using the HUC 8 subbasin code (after first choosing a state).

- HUC 12 designations are available within AWQMS but are only viewable as an optional layer within the mapping functions. You cannot search for a location using a HUC 12.

Lakes Specific Search Aid

- Monitoring locations were established in Oklahoma reservoirs to monitor limnological characteristic of the waterbody. These locations were put in place to represent each of the distinct zones making up a reservoir: lacustrine, transition, and riverine. In addition to the lacustrine station located at the dam, a reservoir may have more riverine and transition monitoring locations depending on the number of tributaries and the size of the lake. For example, the largest lake in Oklahoma, Lake Eufaula, has 17 monitoring locations while most others usually have 3 to 5 locations.
- Lakes sampled pre-2022 typically had all the monitoring locations sampled. However, lakes sampled starting in fall 2021 may have only one monitoring location sampled (the lacustrine location), with additional locations sampled within the reservoir if there were more than one management unit or if sections in the reservoir had historically shown different physical or limnological characteristics to the lacustrine location.
- Lakes' data collected from these monitoring locations can be searched for in AWQMS in the following ways:
 - Search by Lake Name
 - Searches can be performed by part or all the reservoir/waterbody name in the Monitoring Location Name and Waterbody Name fields.
 - Monitoring Location Names will include the lake name and the site number.
 - Waterbody Name will include the lake name only.
 - Search by Location ID
 - Searches can also be performed by part or all the Waterbody ID in the Monitoring Location ID field.
 - Search by County
 - Monitoring locations can be searched for by county (after first choosing organization ID and state).
 - Search by HUC
 - Hydrologic Unit Code – a USGS developed 2-to-12-digit numeric code representing a water region, subregion, basin, watershed, or subwatershed; these regions are relevant to surface water hydrology.
 - Searches can be made using the HUC 8 subbasin code (after first choosing a state).
 - HUC 12 designations are available within AWQMS, but are only viewable as an optional layer within the mapping functions. You cannot search for a location using a HUC 12.
 - Search by Township and Range
 - Monitoring stations can also be searched using Township and Range.

Streams Specific Search Aid

- Search by Stream Name
 - You may search for a location based on stream name (e.g., Arkansas River) using the Monitoring Location Name and Waterbody Name fields
 - Please note that not all locations are up to date with proper stream name; furthermore, some locations are located on streams without a defined stream name; finally, some streams, such as Little River, Beaver Creek, and Deer Creek, among others, may be different waterbodies with the same name.
- Search by Location ID
 - Searches can also be performed by part or all the Waterbody ID in the Monitoring Location ID field.
 - Note that some of those codes were created by OWRB and others may have been generated from other entities.
- Search by HUC
 - Hydrologic Unit Code – a USGS developed 2-to-12-digit numeric code representing a water region, subregion, basin, watershed, or subwatershed; these regions are relevant to surface water hydrology.
 - You may search for a location based on the HUC 8 subbasin codes (after choosing a state).
 - HUC 12 designations are available within AWQMS, but are only viewable as an optional layer within the mapping functions. You cannot search for a location using a HUC 12.
- Search by Project
 - Many locations are associated with certain monitoring projects, you can search for locations by project using the Project ID fields.
 - The list of options will show the project ID codes and the project name.