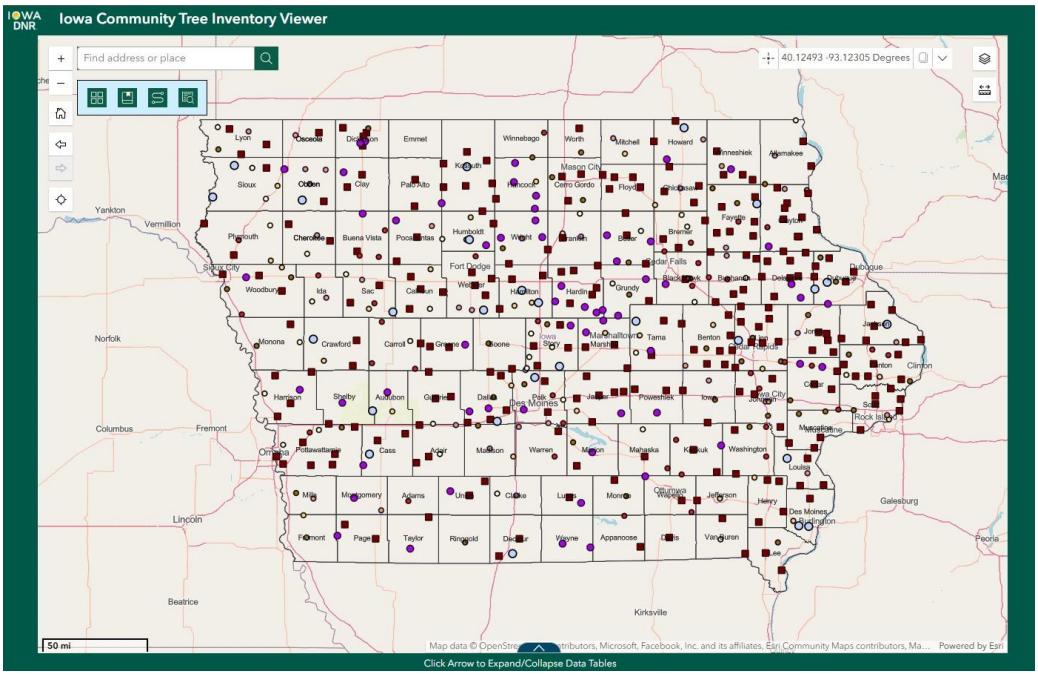
User Guide for the Iowa Community Tree Inventory Viewer



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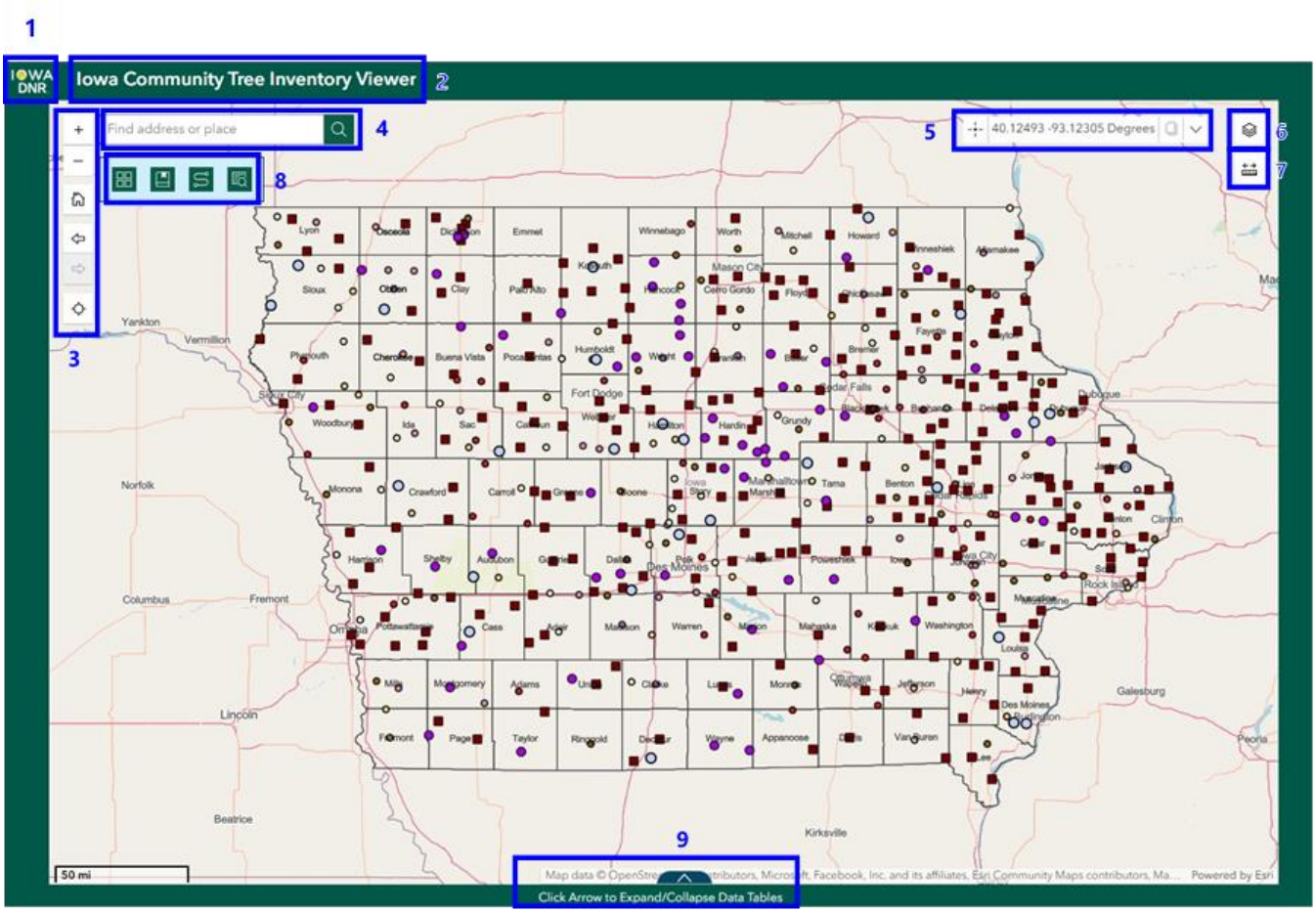
Interface for the Iowa Community Tree Inventory Viewer



Tool Layout

1 Iowa DNR Logo. Embedded hyperlink takes you to Iowa DNR homepage

2 Iowa Community Tree Inventory Viewer Title. Hyperlink is embedded and will take you to the Iowa DNR Urban Forestry home webpage

3 Navigation Tools

Zoom In/Out

Return to Default (statewide) Extent

Zoom to the Previous/Next Map Extents you have visited during your user session

Show your current location (requires enabling locational settings on computer)

4 Search an address or place name, then zoom to that location

5 Coordinate Tools. Activate the Crosshairs button to Place/Remove a pin on the map and determine lat/longs

6 Layers & Legend. Displays currently visible layers and legend symbology. Both are scale dependent

7 Measurement Tool. Measure length between or areas of features

8 Mapping Tools

Basemap Gallery

Create your own map bookmark

Find directions to and from desired locations (requires enabling locational settings on computer)

Locating Trees Tool. Predefined Query Tools used to generate exportable lists and locations of recommended priority tasks (pruning, tree removal, staking, etc.)

9 **Table**. Users can leverage the table of inventoried trees to compile user-defined queries and exportable lists.

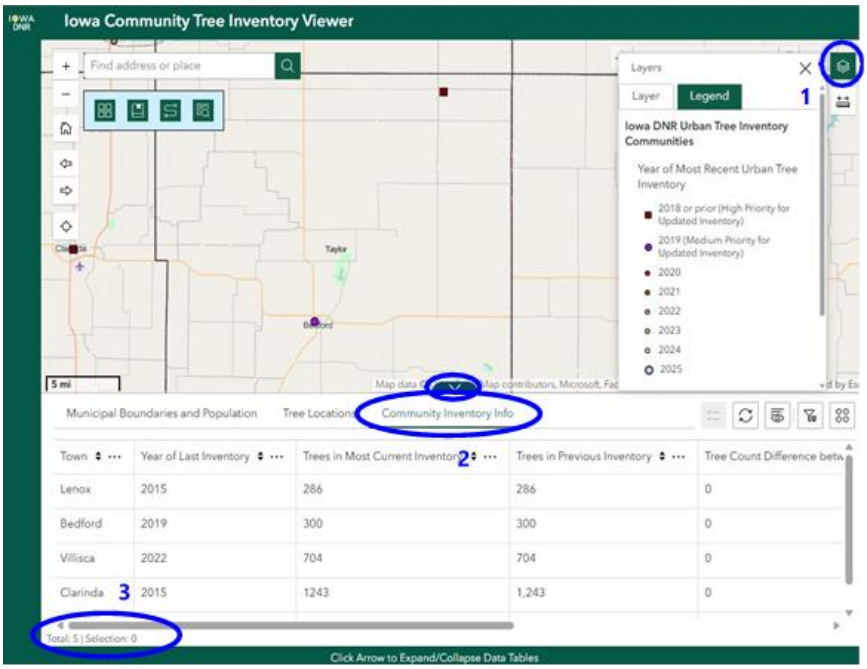
Data Layers and Visibility

As you zoom in or zoom out within the map, you will quickly notice that the visibility of which data layers you can and cannot see will change. Layer visibility within the map will also affect which records are displayed in a data layer's table and whether or not the data layer appears in the "Layers/Legend" display in the upper right-hand corner of the map.

State to County-Wide Scale

Upon starting the application, the map defaults to the extent of Iowa. At this scale and down to approximately county scale, points representing communities where past tree inventories have occurred will be the most prominent data layer visible.

1. "Iowa DNR Urban Tree Inventory Community" and "Counties" will be the only data layers visible in the Layers/Legend display
2. Open the "Communities" table (its alias is Community Inventory Info)
3. As you zoom into the map, note that the table displays records for only communities visible in the current map extent.

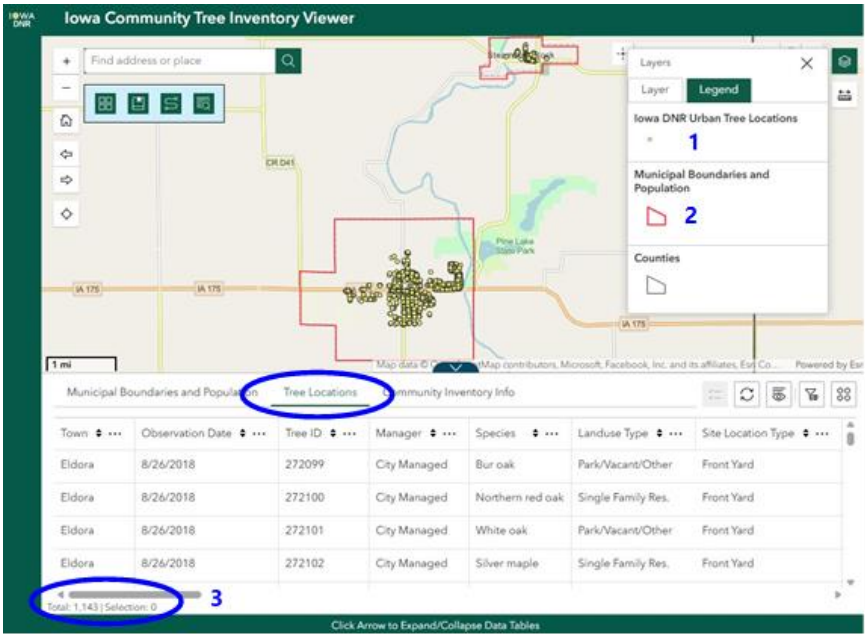


Sub-County Scale

Zooming in past the county level, the dis- played data layers change within the map as well as in the "Layers/Legend" display.

At this point, the "Iowa DNR Urban Tree Inventory Community" data layer disappears, and you begin to see 2 new data layers:

1. "Iowa DNR Urban Tree Locations" and
2. Municipal Boundaries and Population
3. With the data table for Tree Locations activated, note how the number of tree records in the lower left-hand corner correlates to the number of trees visible in the viewer's extent.

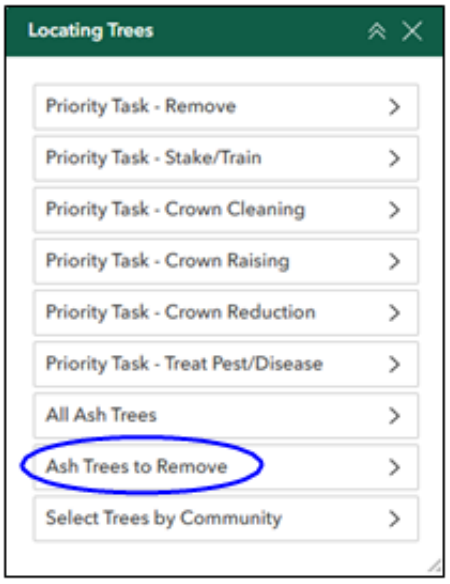


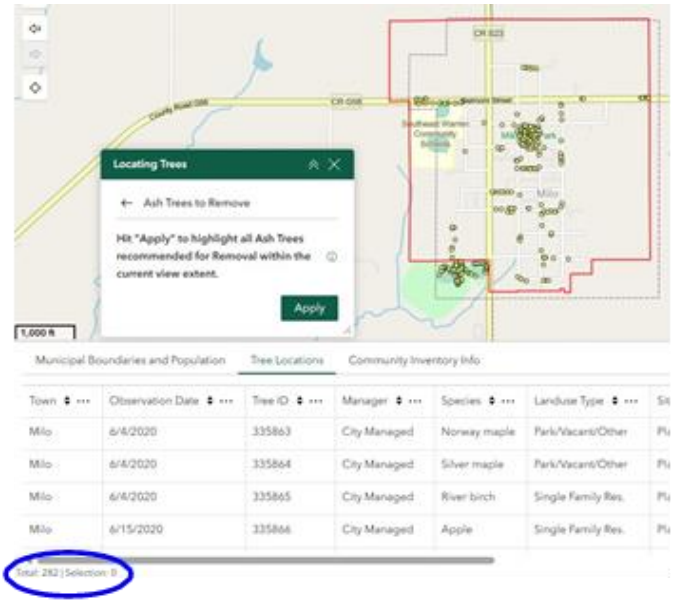
Querying Your Communities Trees with the “Locating Trees Tool”

The “Finding Trees” Tool Button

If you zoom to your community to where you can see only trees associated with your inventory, the “Finding Trees” Tool can be used to follow up on management recommendations given during the inventory such as removal or pruning. Furthermore, the data can be used for future planning, including locating ash trees, and viewing tree health and pest symptoms to ascertain trees afflicted with emerald ash borer.

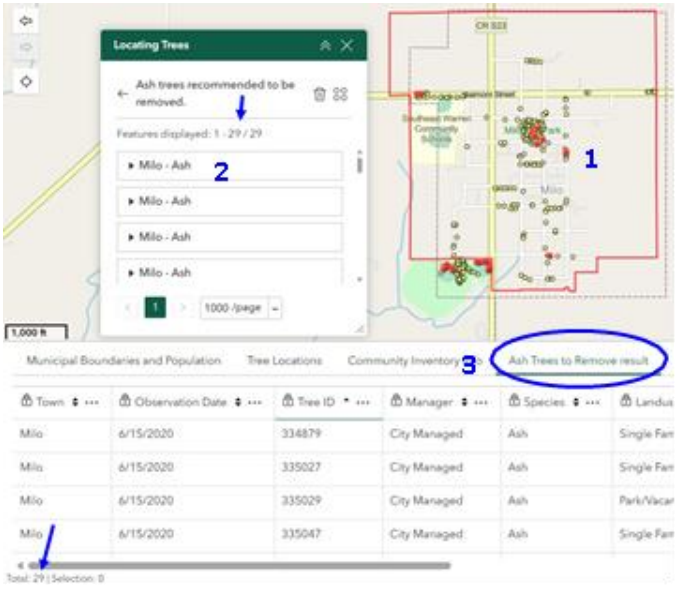
Below is an example using the “Ash Trees to Remove” query to first select trees within the viewer, then export a task list.





The trees inventoried for the community of Milo are shown above. Take note of the data table; you will see there are 282 trees currently in this community’s tree inventory. Also, no other communities are visible in the map’s extent.

It is important to realize there are many instances where tree inventories have occurred for multiple towns in close proximity to one another. Therefore, it may be impossible to manipulate the map so that the Locating Trees Tool selects only the trees that are exclusive to your community’s inventory. But work-arounds for navigating such cases by leveraging other query/filter tools will be given shortly.



Assuming only your community’s trees are visible, and having activated the “Ash Trees to Remove” query, first hit the “Apply” button. Several actions will occur within the map, the query dialog box, and within the tables view.

1. Within the map, all ash trees that have been recommended for removal will be highlighted with a red point.
2. Within the query dialog box, a list and count of the selected trees will appear.
3. Within the tables view, a new table called “Ash Trees to Remove Result” will appear. Note that the number of trees (29) selected are given in the results of the query dialog box as well as in the “Ash Trees to Remove Result” table.

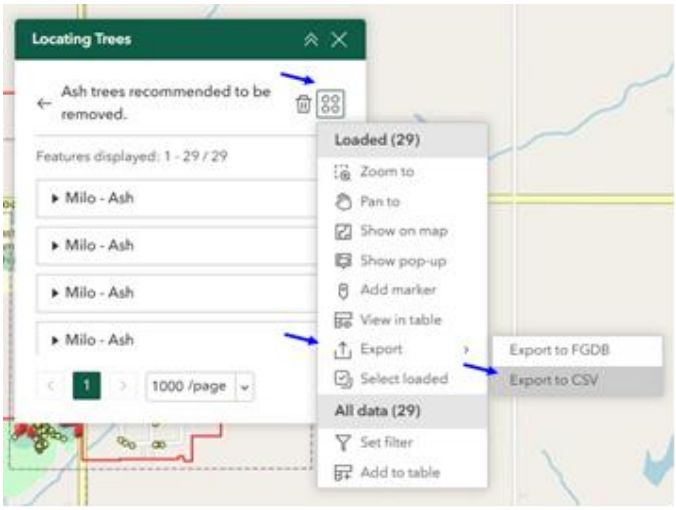
Exporting and Managing the Results of the "Locating Trees Tool"

Exporting Tree Lists

There are 2 methods in which you can export the results of a query.

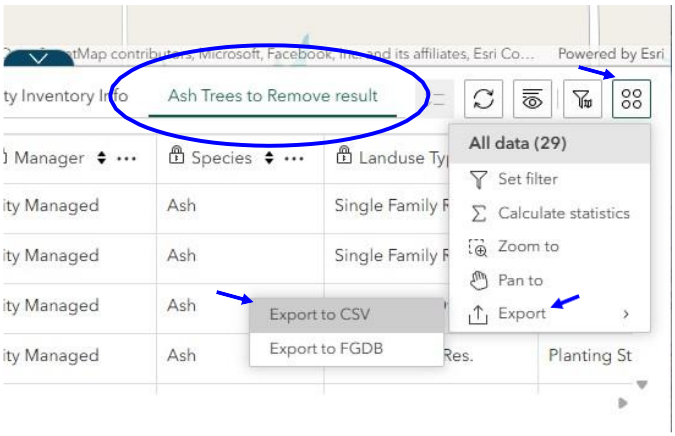
Option 1, Export using the "Actions" button within the Query Results dialog box.

1. If you hit the "Action" button with 4 circles,
2. Select "Export".
3. You will have 2 file output format options:
   a. Export to a GIS file format called a File Geodatabase (FGDB), if you have staff with GIS capabilities.
   b. Export to a CSV, if you prefer to review the results in Excel.



Option 2, Export using the "Actions" button using the "Ash Trees to Remove Results" table.

1. Verify that the "Ash Trees to Remove Results" table is activated. It's title in the table view will appear to be green. There will also be a heavy green line below the table's title.
2. Hit the "Action" button with 4 circles,
3. Select "Export".
4. You will have 2 file output format options:
   a. Export to a GIS file format called a File Geodata- base (FGDB), if you have staff with GIS capabilities.
   b. Export to a CSV, if you prefer to review the results in Excel.

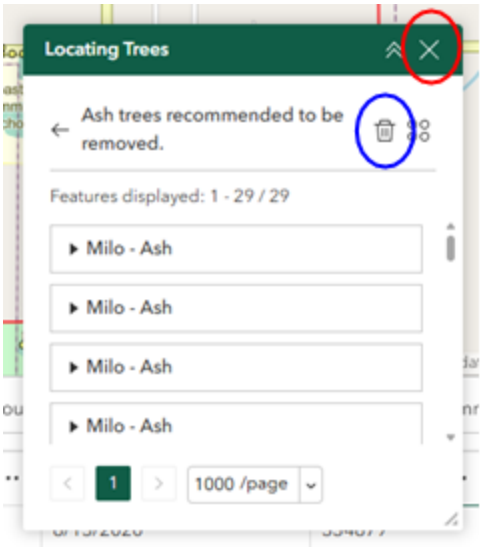


After Exporting, Clear Your Query

Once you have completed your export, it is important to clear your query. To do so, hit the "Clear Results" (trash bin) icon in your query dialog box. This will also remove the "Ash Trees to Remove Result" table from the table view.

Tips and Tricks. If you happen to hit the Close button (the ubiquitous "X" button) in the upper right-hand corner of the Locating Trees Tool, instead of clearing your results, you will see that the previous "Ash Trees to Remove Results" table will not be removed. To remove this table,

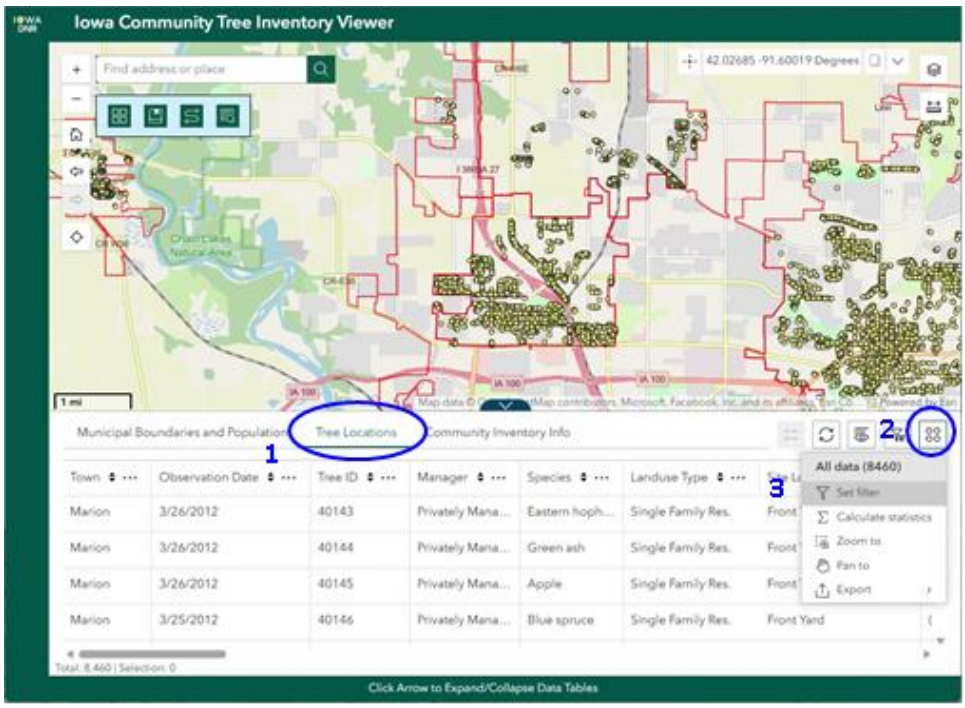
1. Reopen the Locating Trees Tool,
2. Rerun the same query (in this case, "Remove all Ash Trees"), then hit the Clear Results icon. This will remove the Results table from the table view. You will be ready to run any other queries you desire without confusing extra tables still active.



Using the Tree Locations Table to Filter and Export a Tree List (Simple)

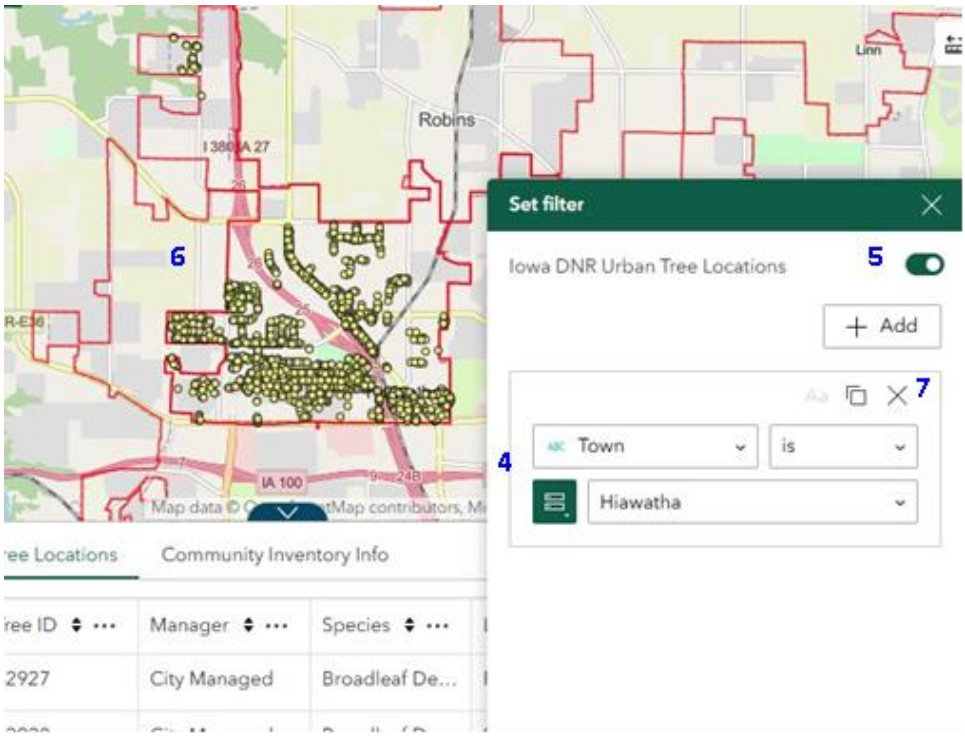
As alluded to on page 4 (Querying Your Communities Trees with the "Locating Trees Tool"), there may be situations where tree inventories have occurred for communities in close proximity to each other. Particularly in the suburbs of metropolitan areas. You may find it impossible to manipulate the extent of the map to single out all of the trees for just one community. In cases such as this, you can leverage table filters to accomplish what the "Find Trees" tool can't accomplish.

To the right is a screenshot of suburbs of the Cedar Rapids area. Visible are tree inventories for Palo, Hiawatha, Robbins, and Marion.



Suppose the City of Hiawatha wants to generate a comprehensive list of all the trees in their inventory. This can be accomplished rather cleanly by applying a filter to the "Tree Locations" table. To do so:

1. First activate the Tree Locations table,
2. then hit the furthest right but- ton called "Actions".
3. Select "Set Filter.



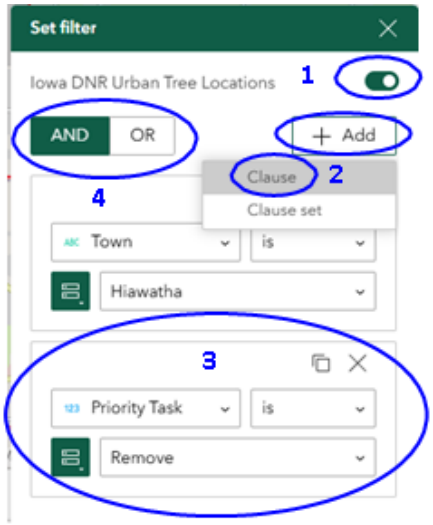
4. With the Set Filter dialog box now open, one would simply build a clause using the dropdown boxes where "Town is Hiawatha".
5. The filter is applied by activating the toggle button in the upper right-hand corner of the Set Filter dialog box.
6. With the filter applied, only trees pertaining to Hiawatha's inventory will be displayed in the viewer. All other cities' trees will no longer be displayed.
7. The filter can be deactivated by either turning off the toggle button, or deleting the filter by hitting the "Delete Clause". For now, leave the filter on.

The displayed "Tree Locations" list can now be exported using the steps in Option 2 from the previous page.

Using the Tree Locations Table to Filter and Export a Tree List (Complex)

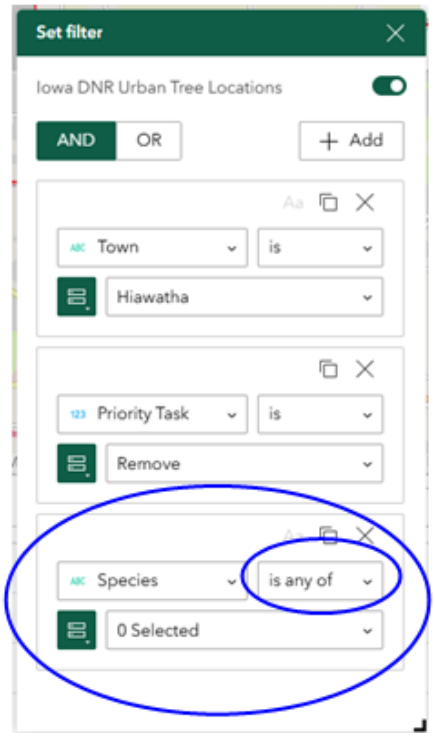
Now suppose what the City of Hiawatha really needs is a list of all Ash Trees that were recommended for removal because of Emerald Ash Borer (EAB) infestation. The Set Filter tool can be used to build more elaborate clauses. In this case, 3 separate expressions must be built:

1. The town must be Hiawatha, AND
2. The trees' recommended Priority Task must be equal to "Remove", AND
3. The tree species must be a species of Ash (Fraxinus genus), susceptible to EAB. There are 3 such Ash species in Iowa: Green, White, and Black. However, sometimes the person conducting the inventory did not designate a specific Ash species, and simply denoted the tree generically as "Ash". So 4 tree species options must be included in the species clause: Ash, Green Ash, White Ash, and Black Ash. (Note: Mountain Ash is of a different genus and not susceptible to EAB).

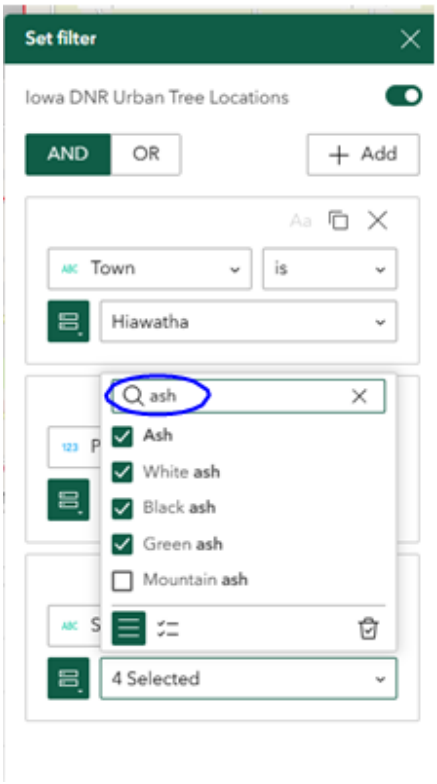


We'll build upon the previous example where the 'Set Filter" was constructed so only trees within Hiawatha were selected.

1. Verify the filter toggle button is still activated. To further refine the search criteria so that only trees in Hiawatha AND trees recommended for removal will be selected,
2. add the second clause by hitting the "Add" button. Then select "Clause" from the subsequent dropdown list.
3. Structure the newly added clause so that "Priority Task is Remove".
4. Also verify that the "And" Boolean operator is selected in the upper left-hand corner of the dialog box, and not the "Or" operator.



To add the Ash species clause to the filter, again hit the "Add" button and select "Clause" in the dropdown list. Structure the newly added clause so that Species ***is any of***, then hit the dropdown box that displays "0 Selected"



To quickly truncate the list to any tree species containing "Ash" in its name, you can start by typing "Ash" in the search box. Then you can apply checkmarks next to the 4 appropriate Ash values that are susceptible to EAB.

Now, only Ash tree species recommended for removal within Hiawatha will be displayed in the map and the "Tree Locations" table. The data can now be exported using the Option 2 instructions on page 5.