

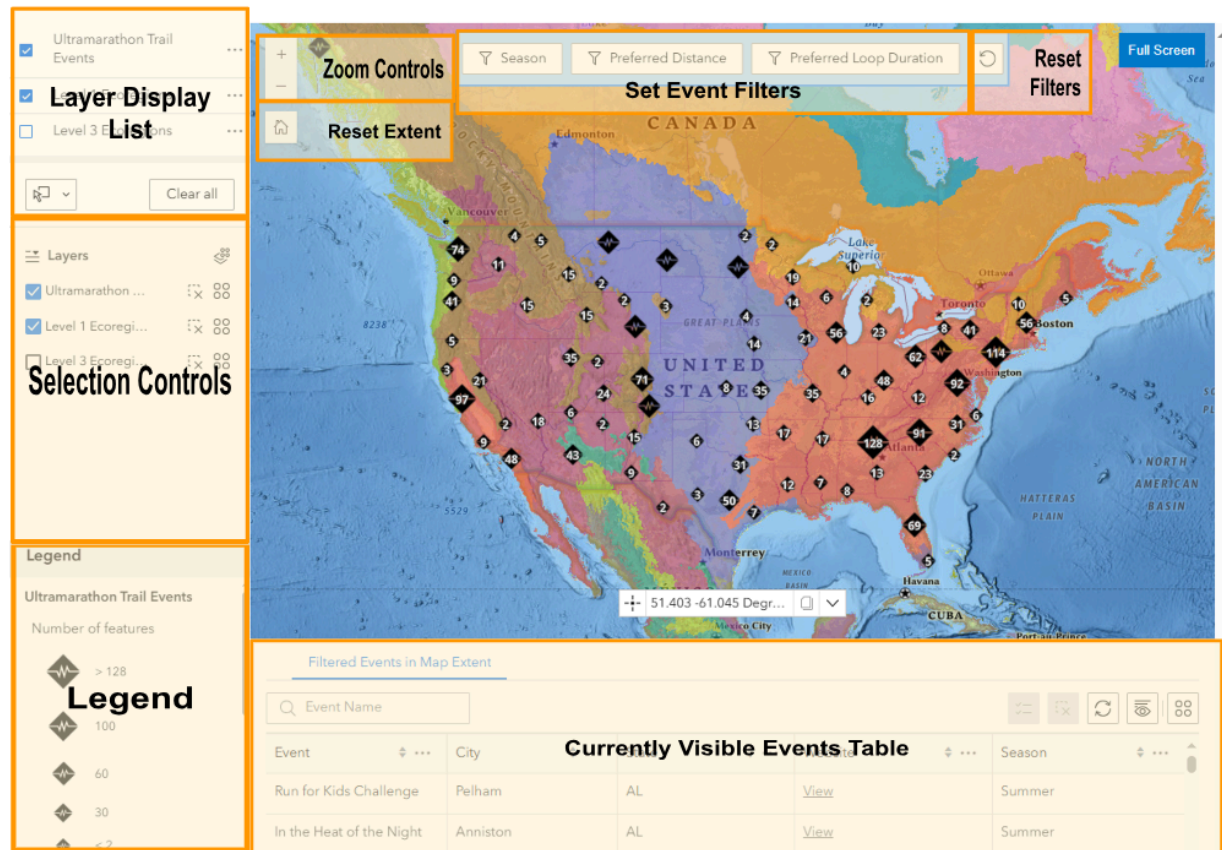


# The Big Ultra Map User Guide

## Introduction


The Trail Nomadic Big Ultra Map is a “one stop shop” for finding trail and ultramarathon events throughout the United States. The current map application was constructed for use with large screen devices - so it is highly recommended to use a desktop or notebook computer for searching. When using the map, the general premise for discovery is powered by the combination of map extent and user-selected filters and ecoregion layers for identifying events then clicking through the web URL links to the event webpage for further exploration or registration details. Let's start exploring!

# The Big Ultra Map User Interface



## Map Search

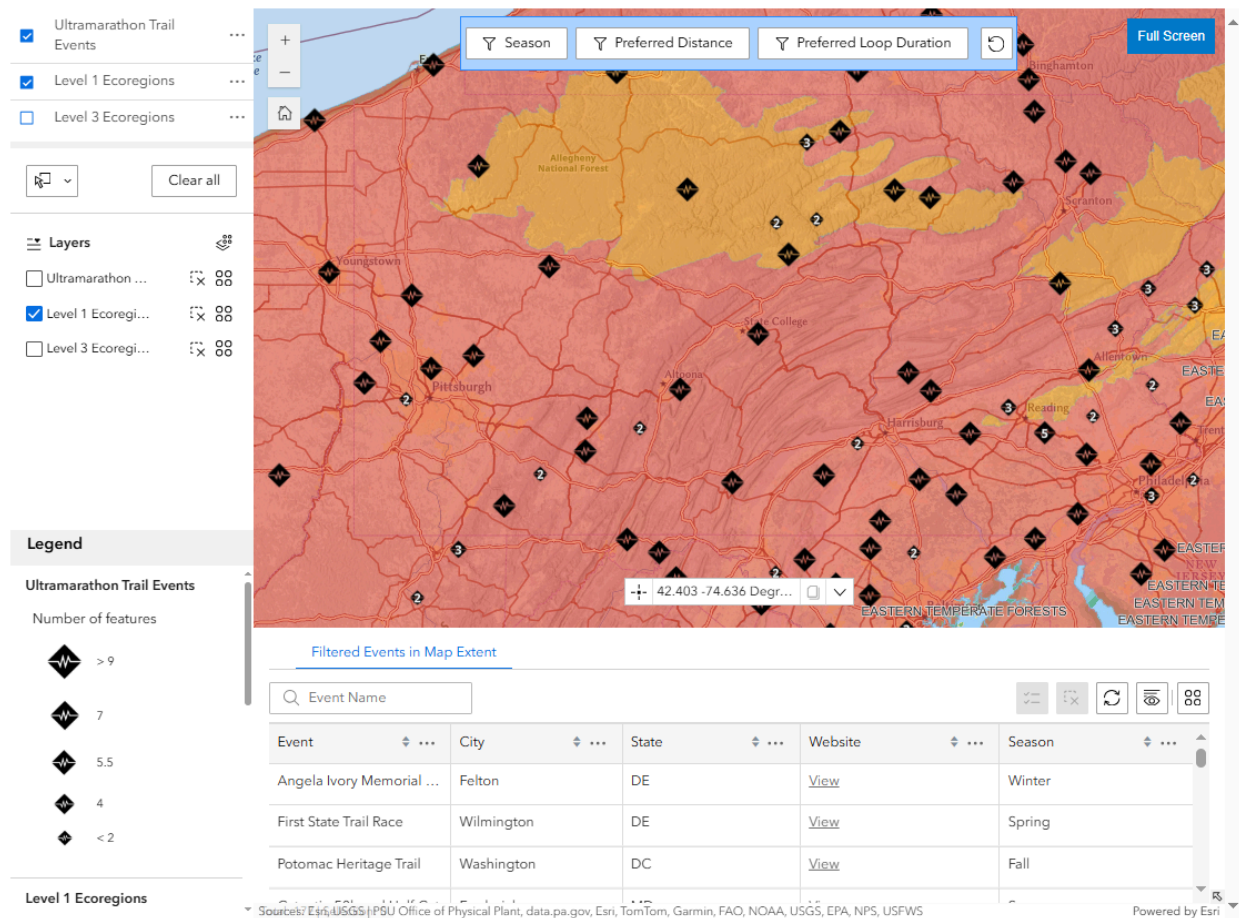
### Simple Search

The primary means of discovery is that map itself. As users zoom or pan within the map, the table at the bottom filters showing only events that are currently visible within the map extent. As the map extent changes the layer list dynamically updates to the current view. Selecting the Reset Extent  button at any time will restore the default view of the continental United States.

### Using Map Extent

**Use Case: A user wants to quickly evaluate all events in Pennsylvania.**

Drag the map so that Pennsylvania is at center, then use Zoom Controls or the mouse wheel to zoom so that the entire state of Pennsylvania can be seen within the map extent.



## Things to notice:

- The trail events point layer has changed with single events rendering out and clusters reduced to smaller numbers (2 to 5)
- Zooming in further eventually reveals labels showing the event name.
  - Users may prefer to turn off ecoregions layers by unchecking them in the Layer Display List (upper left) until wanting to explore that layer further.
  - The table now only shows the points visible within the map extent
    - Table Properties include:
      - Event: The name of the event
      - City: Nearest populated place or post-office
      - State: State of event
      - Website: Link to the event website or Facebook page
      - Season (determined by typical month of event):
        - Winter: December, January, February
        - Spring: March, April, May
        - Summer: June, July, August

- Fall: September, October, November

Filtered Events in Map Extent

Search: Event Name

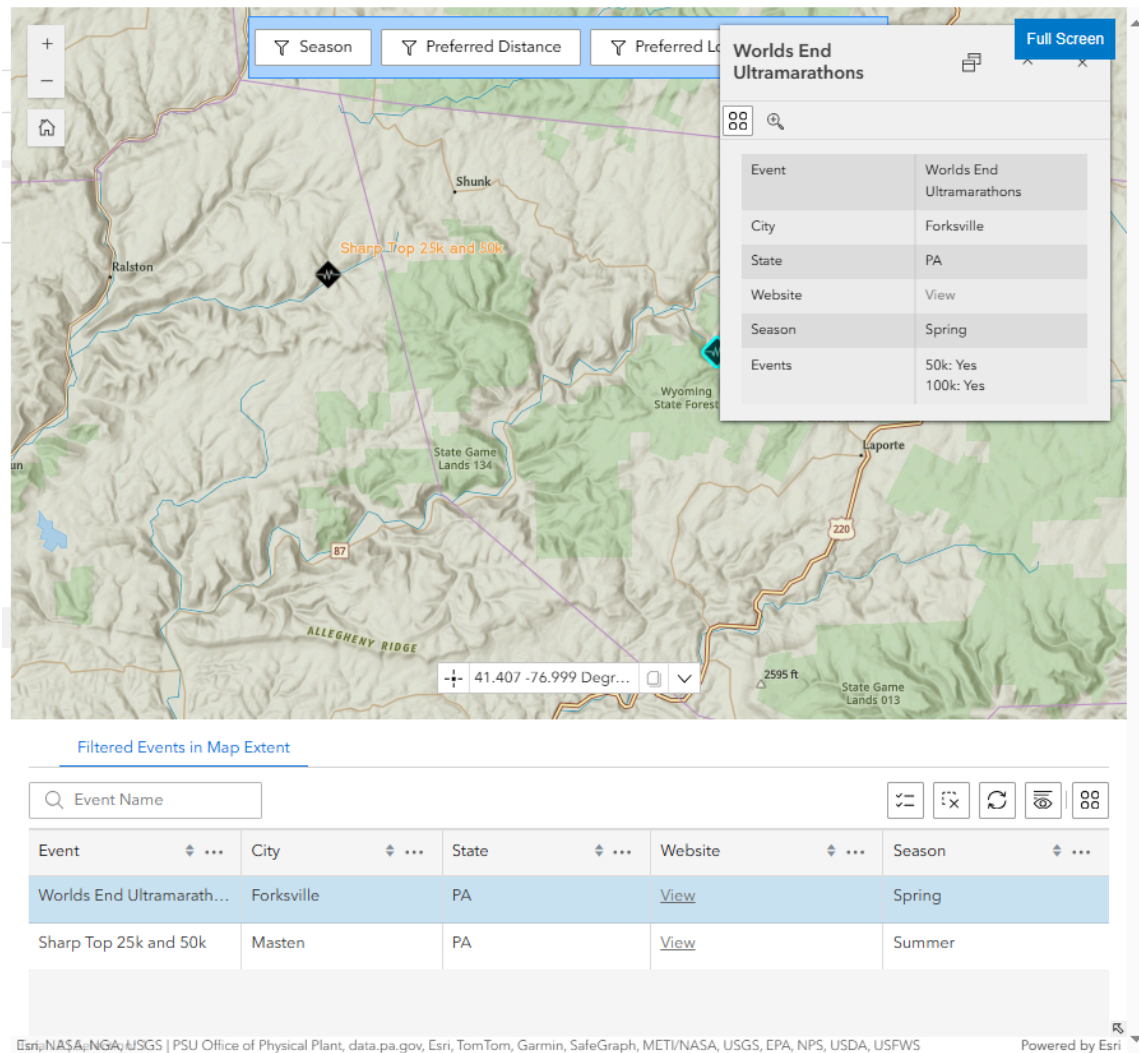
Event	City	State	Website	Season
Worlds End Ultramarath...	Forksville	PA	<a href="#">View</a>	Spring
Sharp Top 25k and 50k	Masten	PA	<a href="#">View</a>	Summer

Layers:

- ☒ Ultramarathon ...
- ☐ Level 1 Ecoregi...
- ☐ Level 3 Ecoregi...

- To see more information about a point, first make sure that it is set as selectable in the Selection Controls panel at left. The Ultramarathon Trail Events should be checked.
- Click on the point of interest and a popup will appear with all event information including distances/loop duration. Notice that selected events are also highlighted on the map and in the table.

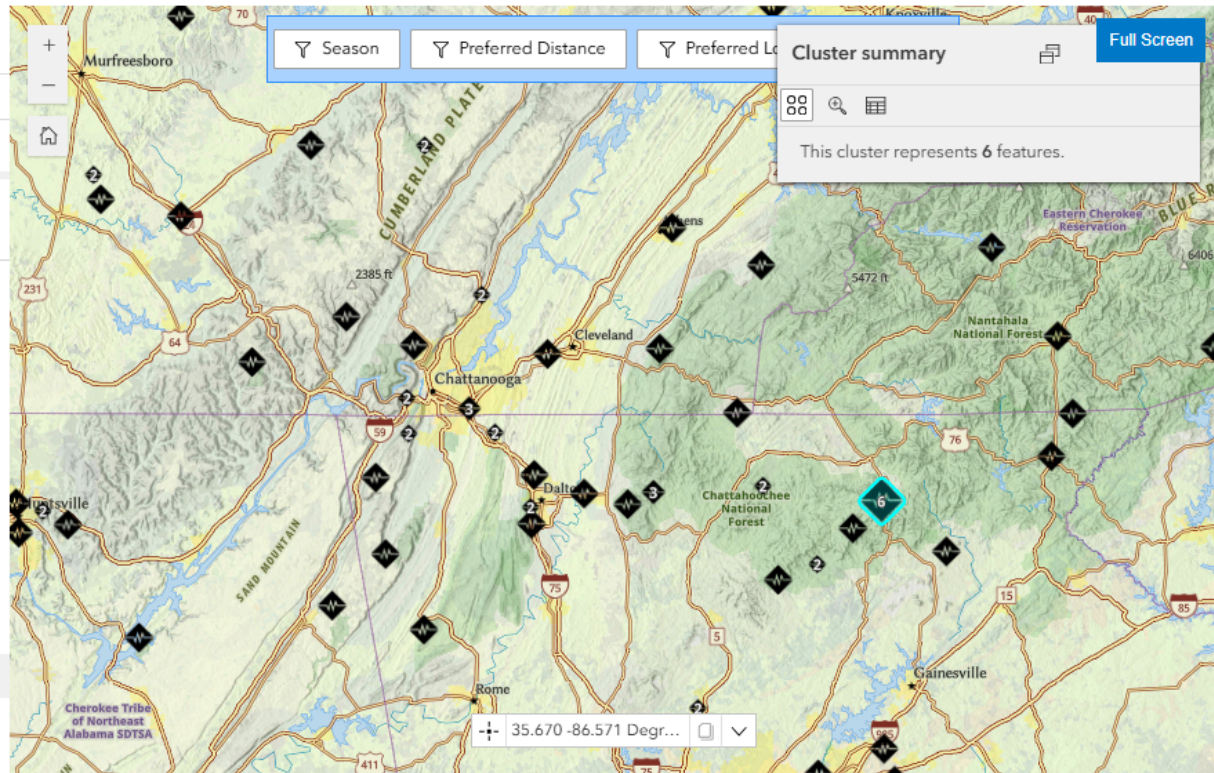





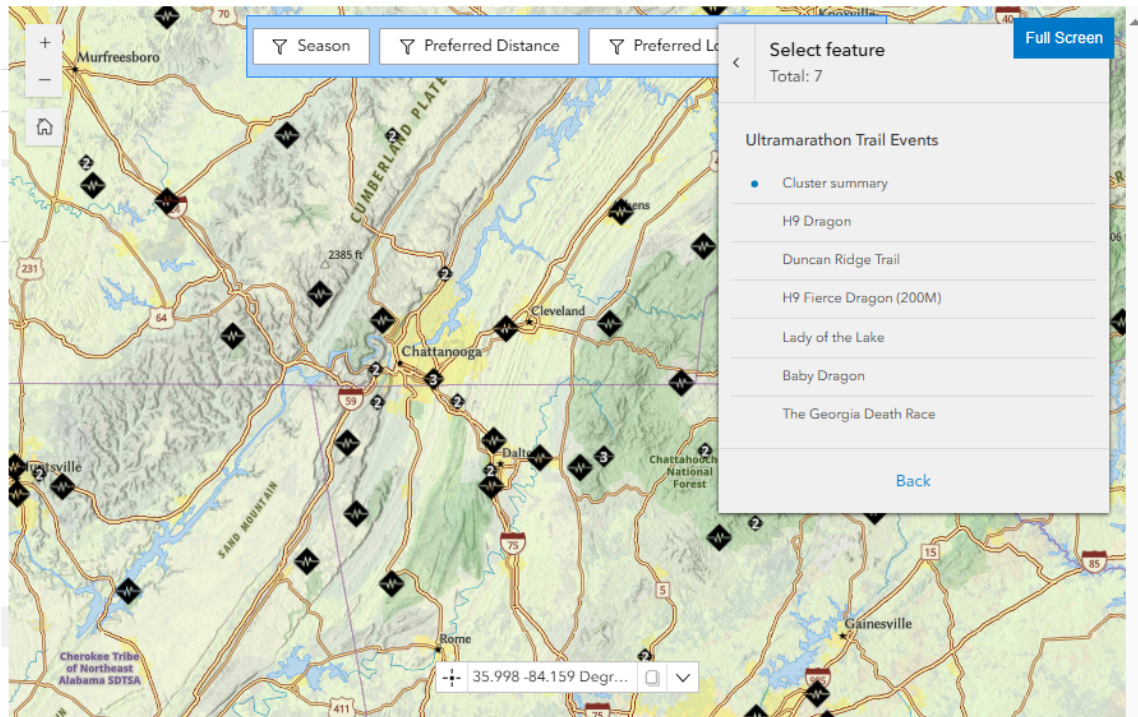
- Clicking away from the selected event on the map or selecting the Clear All button from Selection Controls will unselect the event and make the popup panel disappear.

## Selecting clustered events

Events that are in close proximity at a current zoom level will be clustered with larger icons and a numeric representation of the amount of events that have been consolidated. Users can zoom in further to see the points rendered individually or select the respective cluster by clicking on it.



- A Cluster Summary popup will appear showing the high level representation of the events.
- Click on the Table  icon to explore further.
- This action will show a list of event names that have been clustered together. Users may select an event of interest from the popup to see details.



## Table Operations

The table can be used for added functionality.

**Use Case: A user wants to find an event they heard about called Tuscazoar in Ohio and learn more about what Level 3 Ecoregion it falls within.**

- Drag the map so that Ohio is at center, then use Zoom Controls or the mouse wheel to zoom so that the entire state of Ohio can be seen within the map extent.
- Turn on the Level 3 Ecoregions layer in the Layer Display List (upper left)
- In the Event Name box at the top of the table begin typing the event name, Tuscazoar. This will auto-complete based on available events in the map extent and table.

Filtered Events in Map Extent

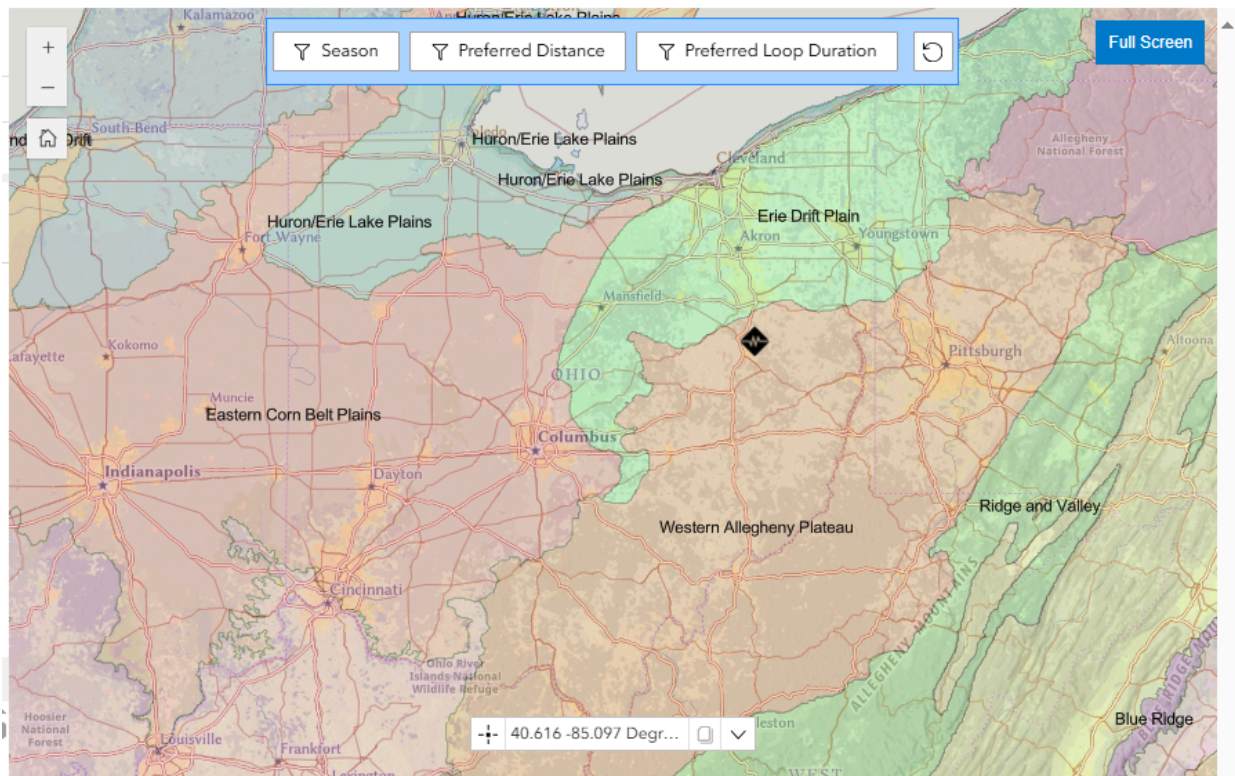
City	State	Website	Season
Tuscazoar Endurance Race	IN	<a href="#">View</a>	Summer
8 Hour Dream Enduran...	IN	<a href="#">View</a>	Fall
Prairie On Fire Backyar...	IN	<a href="#">View</a>	Fall
Sorta Mountain Stage R...	IN	<a href="#">View</a>	Fall

Sources: Esri, USGS, VGIN, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

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- Selecting the prompted event name will filter the table and map view to just that event where we can see that it is contained in the Western Allegheny Plateau ecoregion.



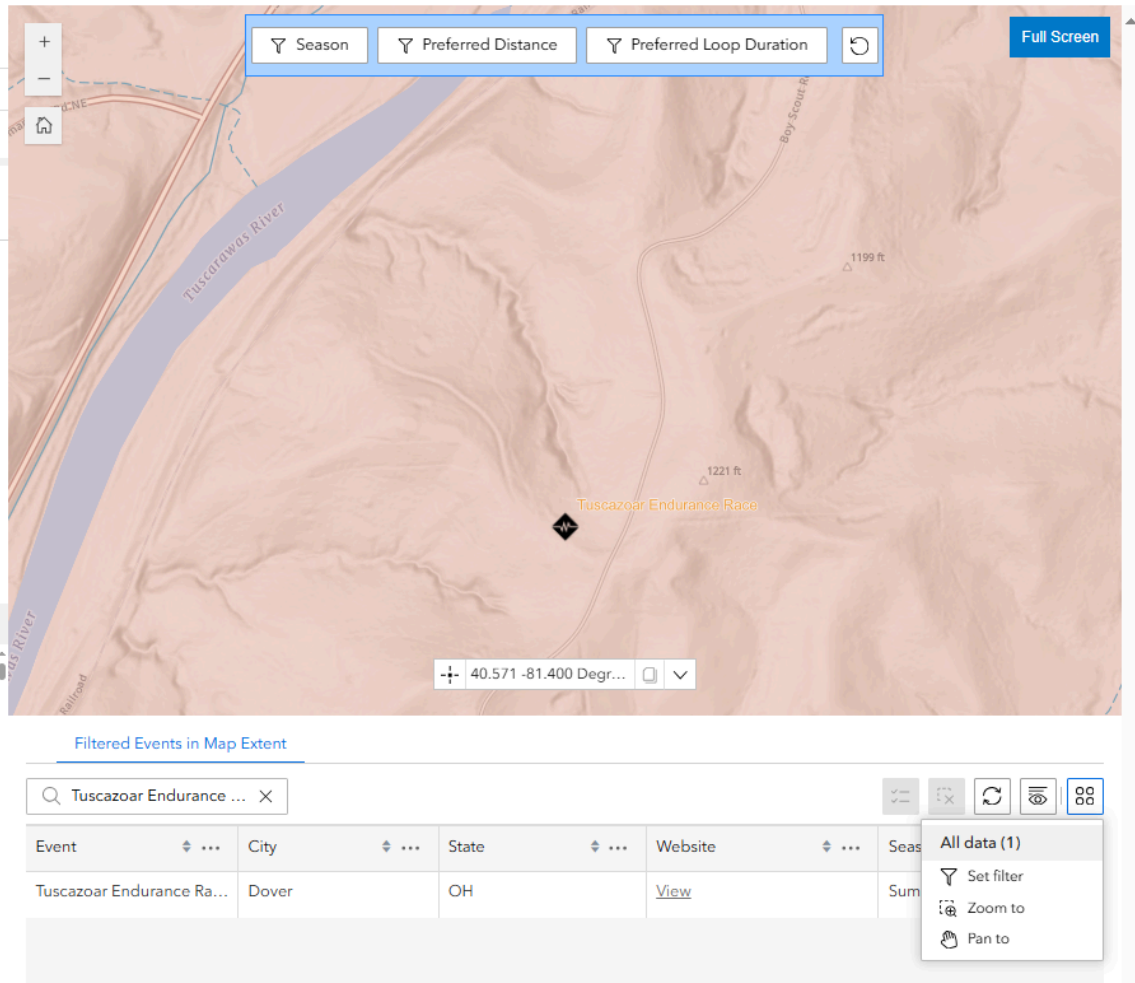


Filtered Events in Map Extent

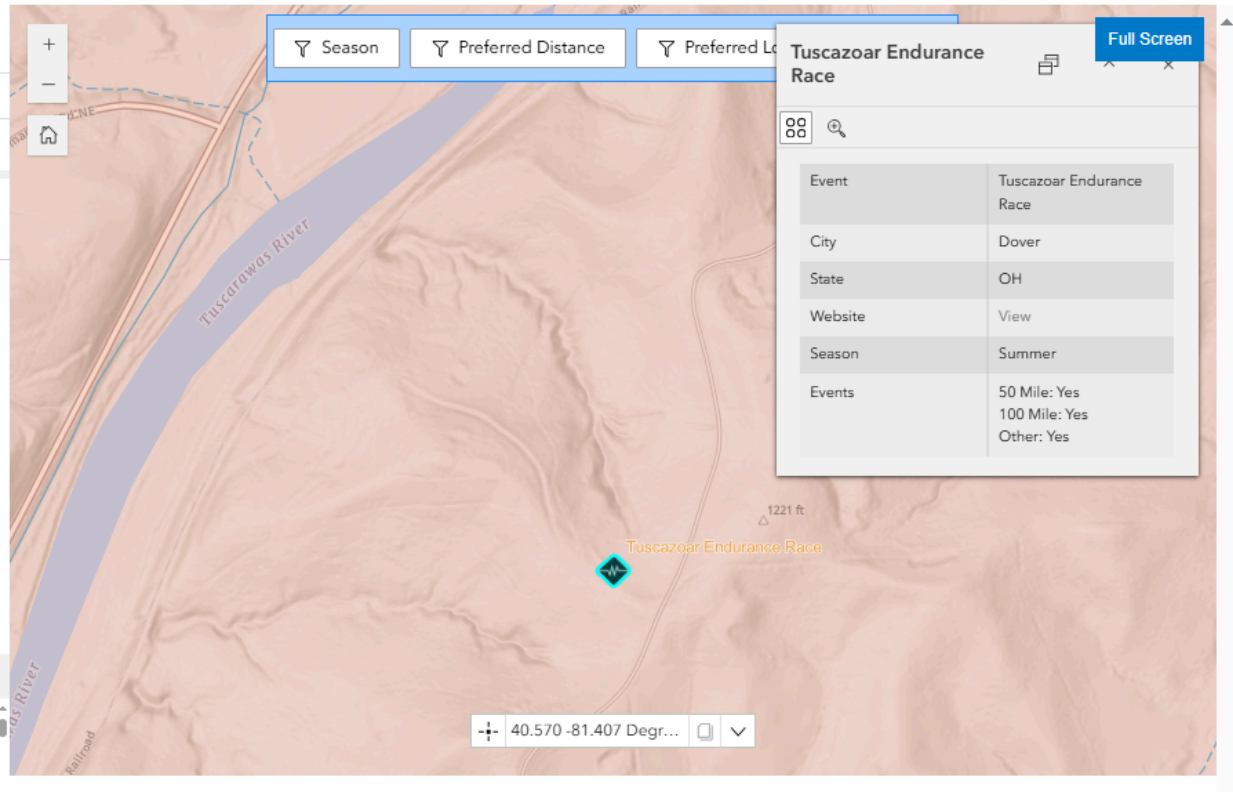
Tuscazoar Endurance ... X						<input type="button" value="Zoom In"/> <input type="button" value="Zoom Out"/> <input type="button" value="Refresh"/> <input type="button" value="Full Screen"/> <input type="button" value="List View"/>
Event	City	State	Website	Season		
Tuscazoar Endurance Ra...	Dover	OH	<a href="#">View</a>	Summer		

- Selecting the Actions button  at the top-right corner of the table offers additional functions like zooming or panning to the specific event. In this example - choosing Zoom To provides a closer look.

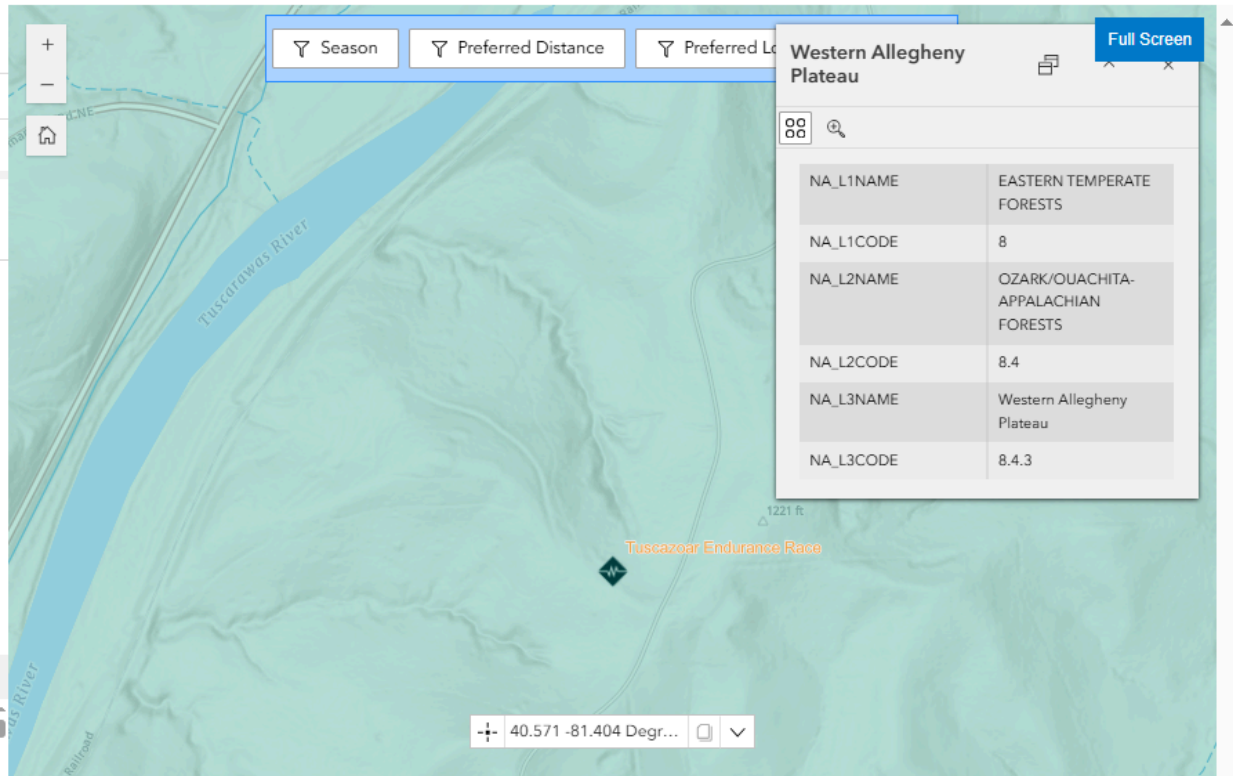




- Selecting the Event point on the map provides additional details about the Tuscazoar Endurance Race, including a link to the website, season and available distances.



- From here, users can select the associated L3 Ecoregion by clicking near the point on the map and viewing the popup showing the detailed hierarchy of the ecoregion.



Filtered Events in Map Extent

- Scrolling down on the Find Events page, below the map, provides users access to more details about the Ecoregions and links to additional information including details about the Western Allegheny Plateau (8.4.3) or other Level III regions [here](#).

# Ecoregion Levels

Level I Ecoregions



North America has been divided into 15 broad, level I ecological regions. These highlight major ecological areas and provide the broad backdrop to the ecological mosaic of the continent, putting it in context at global or intercontinental scales. Source: [Ecoregions | US EPA](#)

LEARN MORE

Level III Ecoregions



Level III mapping describes smaller ecological areas nested within level II regions. At level III, the continent currently contains 182 ecological regions.

These smaller divisions enhance regional environmental monitoring, assessment and reporting, as well as decision-making. Because level III regions are smaller, they allow locally defining characteristics to be identified, and more specifically oriented management strategies to be formulated (CEC 1997).

Source: [Ecoregions | US EPA](#)

LEARN MORE

- Additionally the Video Gallery links on the home page are great for exploring a particular ecoregion. In this example the [Region 8 Gallery](#) features an example event from 8.4.3 - Western Allegheny Plateau.

## Explore events and regional scenery in the video gallery!

A rotating cast of events by ecoregion.

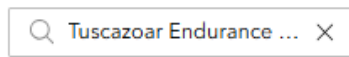
REGIONS 3-7 VIDEOS


REGION 8 VIDEOS

REGIONS 9-15 VIDEOS




- Be sure to remove the filtered Event name from the Event Name Search box before continued exploration - by clicking the X next to the name.



- If at any point the table remains filtered to single events, simply selecting the Clear Selection  button at top right will restore all events within the map extent to the list.

**Use Case: A user wants to find all events within the map extent that are located in Utah.**

- Drag the map so that Utah is at center then use Zoom Controls or the mouse wheel to zoom so that the entire state of Utah can be seen within the map extent.
- Select the Actions button  at the top-right corner then choose Set Filter

The screenshot shows the application interface with a search bar at the top left containing 'Event Name'. Below it is a table with columns: Event, City, State, Website, and Season. The table contains three rows of data:

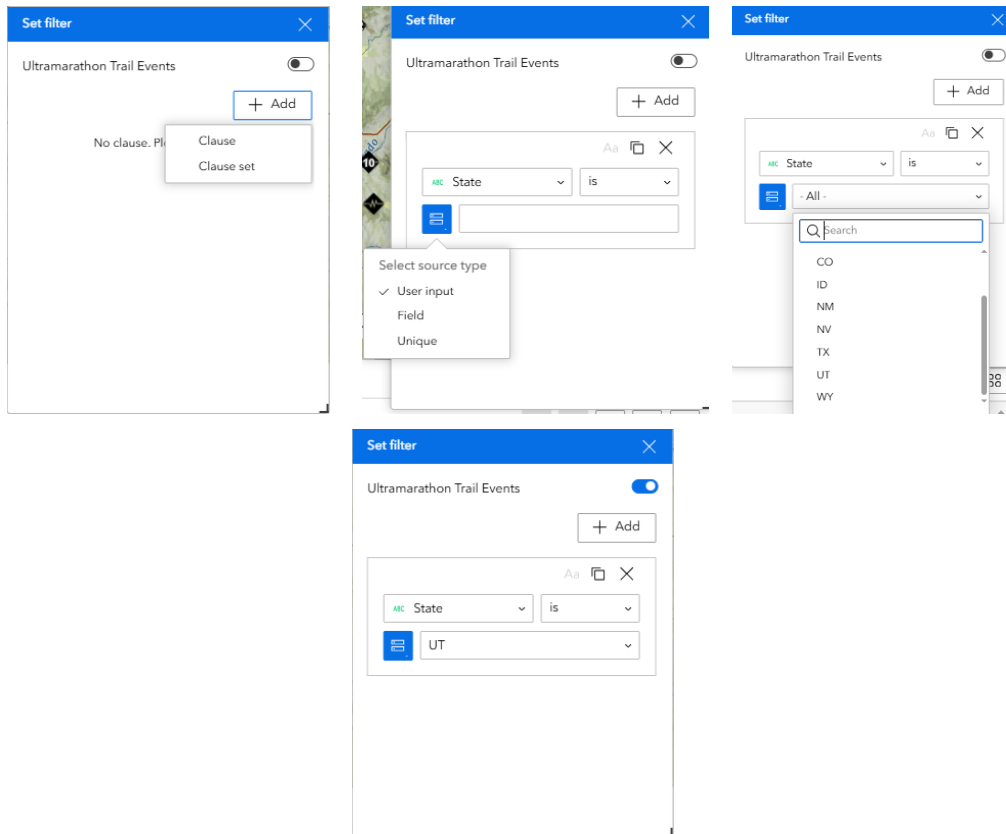
Event	City	State	Website	Season
Hypnosis Night Runs	Goodyear	AZ	<a href="#">View</a>	Summ
Flagstaff Extreme Big Pi...	Flagstaff	AZ	<a href="#">View</a>	Summ
Stunner Night Runs	Mesa	AZ	<a href="#">View</a>	Summ

At the top right, there is a toolbar with several icons. The Actions button (represented by a grid icon) is highlighted, and a dropdown menu is open, showing the following options:

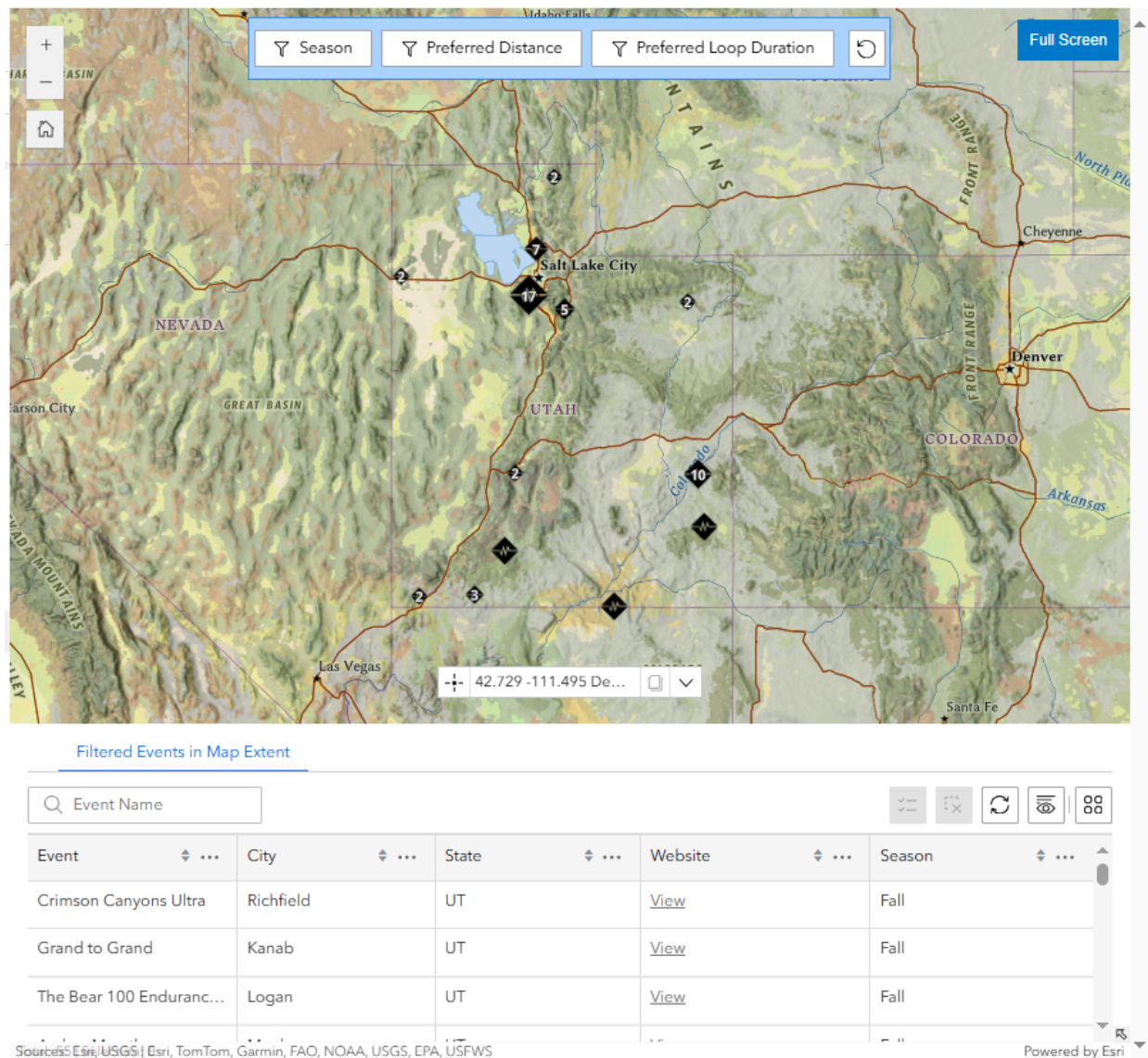
- All data (300)
- Set filter
- Zoom to
- Pan to
- Statistics

At the bottom left, there is a text string: 'Sources: Esri, USGS, Eri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS'. At the bottom right, there is a text string: 'Powered by Esri'.

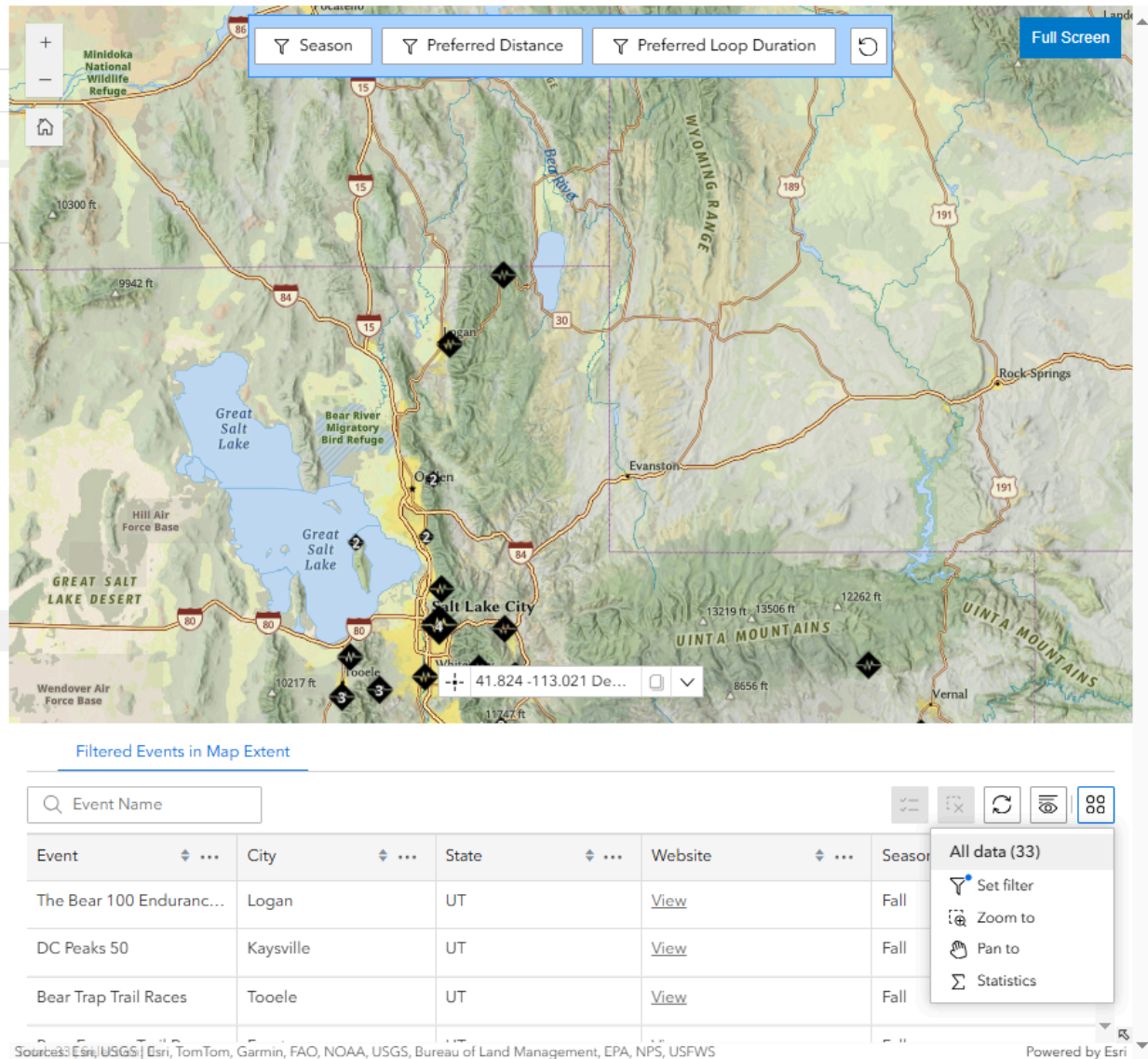
- From the popup select + Add → Clause (left graphic below)
- Then switch the dropdown field list to State
- Change the source type to Unique (left-middle graphic below)
- From the selection list - choose the state abbreviation, in this case UT (right-middle graphic below)
- Then slide the filter toggle at top right to activate the filter, then close the dialog box (right graphic below)



- The map results and associated table now only show the events filtered for Utah

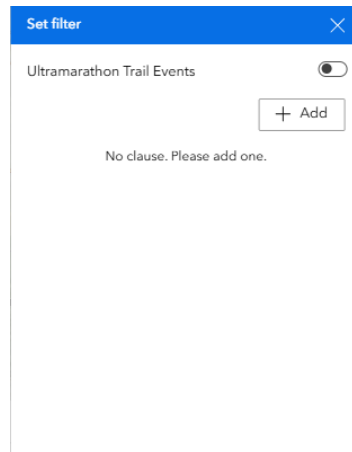


- It's important to note that this filter will remain until cleared which means that when the map is moved to other locations completely outside of the extent of the filter - no results will return. The filter must be reset. A blue dot prompt next to the Set Filter selection, as seen in the graphic below, indicates an active filter.



- In this case the filter is limiting the display to only the 33 features in the map extent that fall within the Utah state boundary. To remove the filter:
  - Select Set filter
  - Delete the previously entered clause (by clicking the X) and/or slide the filter toggle to off. Both options were performed in the example graphic below.





- Now all of the events in adjacent states, outside of the old filter parameters, reappear

Filtered Events in Map Extent

Event	City	State	Website	Season
Kessel Run Ultra	Fruita	CO	<a href="#">View</a>	Fall
Desert Rats Trail Running...	Fruita	CO	<a href="#">View</a>	Spring
Desert Rats Kokopelli St...	Fruita	CO	<a href="#">View</a>	Summer

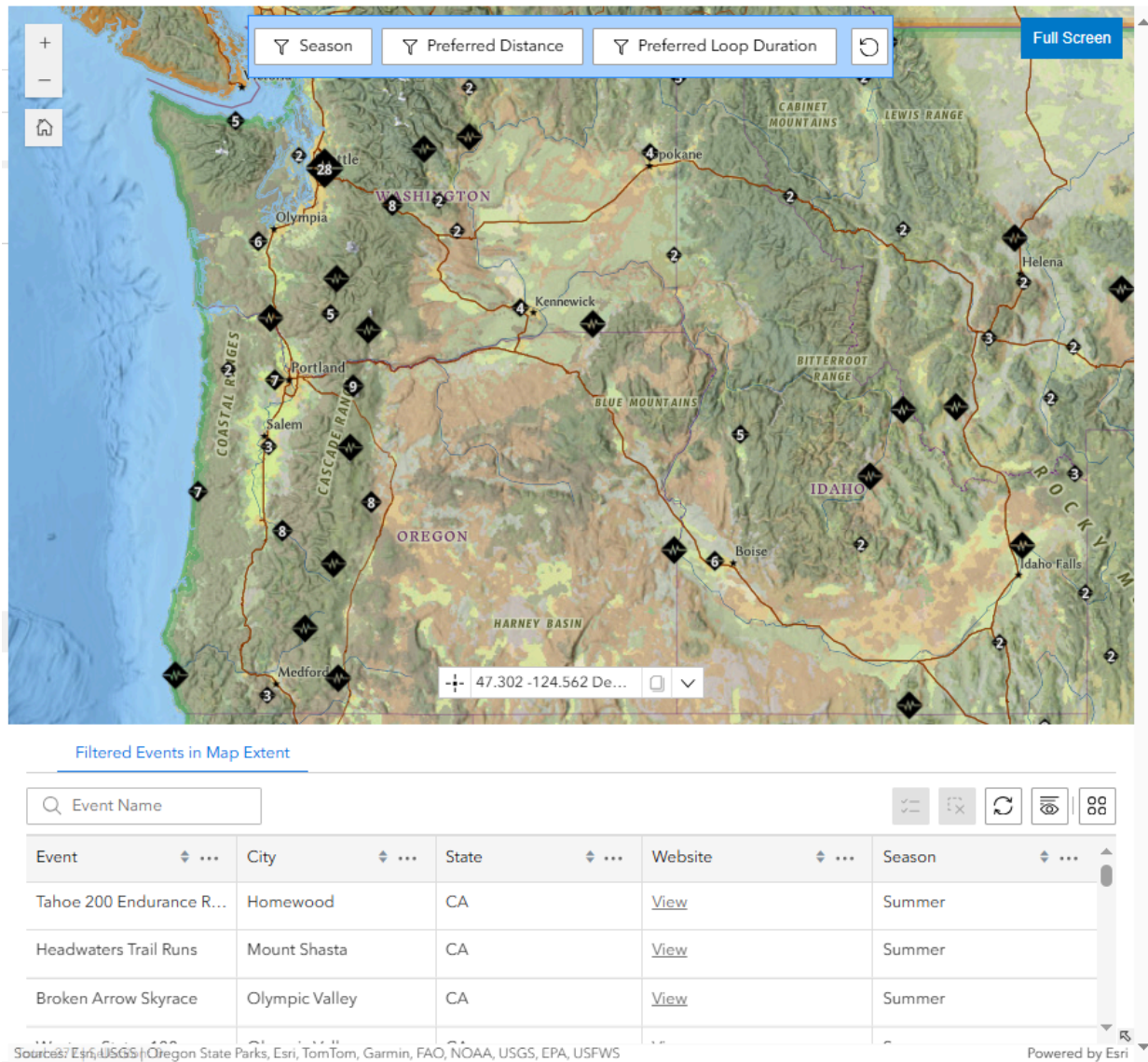
Powered by Esri

## Set Event Filters

The Set Event Filters can be used to thoroughly target events of specific characteristics such as season, distance and loop duration within the map extent. These filters are used in combination so that only events that meet all of the user-entered conditions will show on the map.

**Use Case: A user wants to find events in the Pacific Northwest that are 50 miles or 100k in distance and occur during the Fall season.**

- Drag the map so that an area approximating the Pacific Northwest region is at center then use Zoom Controls or the mouse wheel to target the desired extent of the area of interest.



Season Preferred Distance Preferred Loop Duration Full Screen

47.302 -124.562 De...

Filtered Events in Map Extent

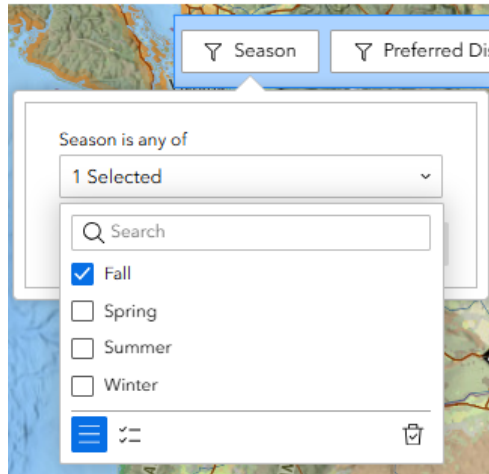
Event Name

Event	City	State	Website	Season
Tahoe 200 Endurance R...	Homewood	CA	<a href="#">View</a>	Summer
Headwaters Trail Runs	Mount Shasta	CA	<a href="#">View</a>	Summer
Broken Arrow Skyrace	Olympic Valley	CA	<a href="#">View</a>	Summer

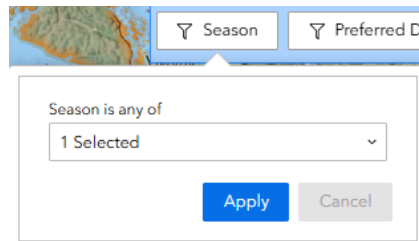
Sources: Esri, USGS, Oregon State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS

Powered by Esri

- Select the Season filter at the top of the screen and check the box next to Fall.



- Click on the original prompt “Season is any of” and then click the Apply button.



- Click the Season button again to retract the filter dialog box. Notice that the events on the map and in the table are now reduced to only the events occurring in the Fall. The Season filter box now has a blue outline showing that it is active too.

The screenshot displays a web application interface. At the top, there is a map of the Pacific Northwest region, including parts of Washington, Oregon, and Idaho. The map shows major cities like Seattle, Portland, and Boise, as well as mountain ranges like the Coast Range, Cascade Range, and Blue Mountains. Above the map, there are three filter buttons: "Season", "Preferred Distance", and "Preferred Loop Duration". The "Preferred Distance" button is currently selected. To the right of these buttons is a "Full Screen" button. Below the map, there is a search bar labeled "Event Name" and a table titled "Filtered Events in Map Extent". The table has columns for Event, City, State, Website, and Season. It lists three events: Mendocino Running Fe..., Mile Madness Enduran..., and Greenhorn Ranch Trail ... Each event has a "View" link in the Website column. At the bottom of the page, there is a footer with source information and a "Powered by Esri" logo.

Filtered Events in Map Extent

Event	City	State	Website	Season
Mendocino Running Fe...	Mendocino	CA	<a href="#">View</a>	Fall
Mile Madness Enduran...	Rocklin	CA	<a href="#">View</a>	Fall
Greenhorn Ranch Trail ...	Quincy	CA	<a href="#">View</a>	Fall

Sources: Esri, USGS, Oregon State Parks, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS

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- Select the Preferred Distance filter at the top of the screen and change the parameters so that the boxes indicate 50 Miles is Yes and 100k is Yes.



Season Preferred Distance Preferred

Marathon is  
- All -

50k is  
- All -

50 mile is  
Yes

100k is  
Yes

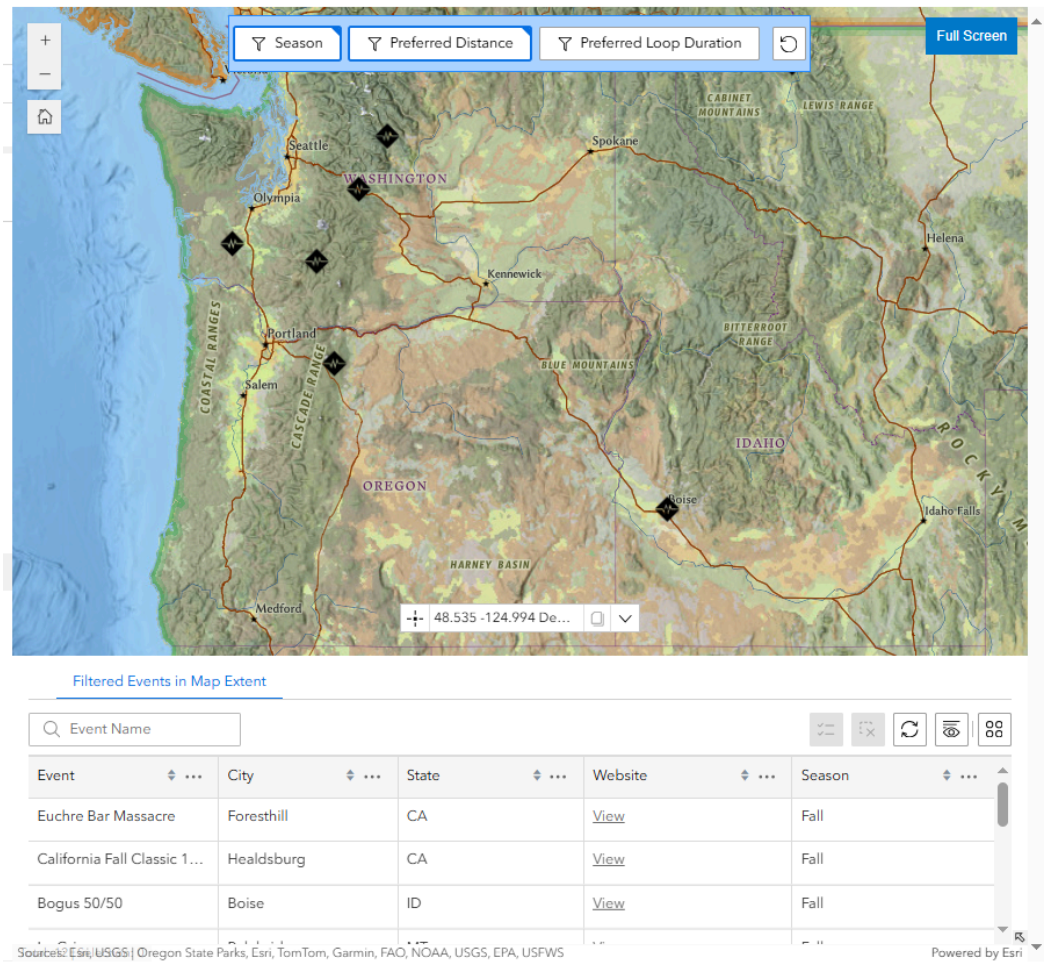
100 mile is  
- All -

200 mile is  
- All -

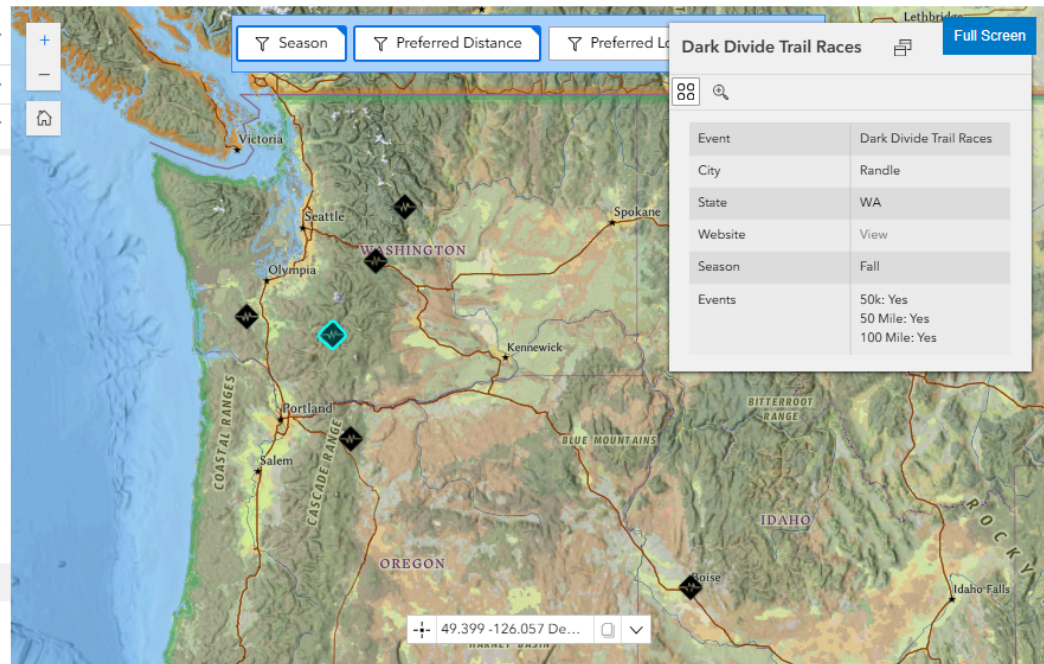
Other is  
- All -

Apply Cancel

- Click Apply.
- Click the Preferred Distance button again to retract the filter dialog box. Notice that the events on the map and in the table are now reduced to only the events occurring in the Fall and offering 50 mile and/or 100k events. The Preferred Distance filter box now has a blue outline showing that it is active too. In this case only 12 events in the example extent qualify.



- The remaining events can be explored by clicking on them to see the popup details (like shown below) or by selecting rows of interest from the table.




- Some important notes about distance and loop parameters
  - Events that meet these parameters may also host other distances outside of the provided parameters. In this example, these events may also offer 100 mile or marathon or 50k options. The filter only means that they explicitly offer that distance/duration.
  - The Other option under Distance is set as Yes for events that offer shorter, longer or non-standard distances outside of the base parameters (ex. Half marathon or 70 miles)
- The associated filter(s) will remain locked with the map and table only showing qualifying events as a user pans and zooms to different areas. In this example, if a user pans the map to Austin, TX, only Fall events that are 50 miles or 100k in distance will display (as seen below).

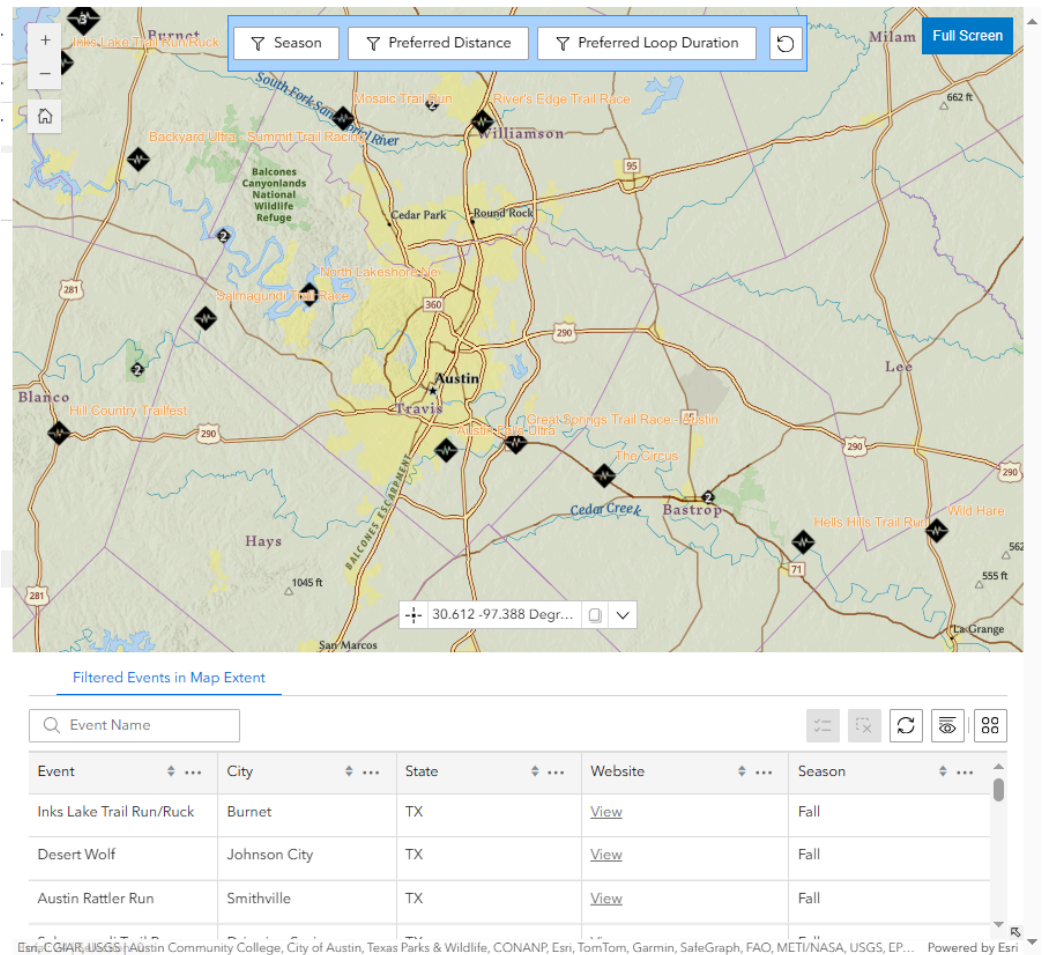
Filtered Events in Map Extent

Event	City	State	Website	Season
Desert Wolf	Johnson City	TX	<a href="#">View</a>	Fall
Wild Hare	Warda	TX	<a href="#">View</a>	Fall
Big Texas Ultra	Georgetown	TX	<a href="#">View</a>	Fall

Esri, CGIAR, USGS | Austin Community College, City of Austin, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EP... Powered by Esri

- To reset event filters so that all events are displayed, simply select the Reset Filters button  at the right of the event filters pane.
- From the last example in Austin, notice the difference when the reset button is applied. The blue filter indicators disappear and all events reappear in the map extent and table.

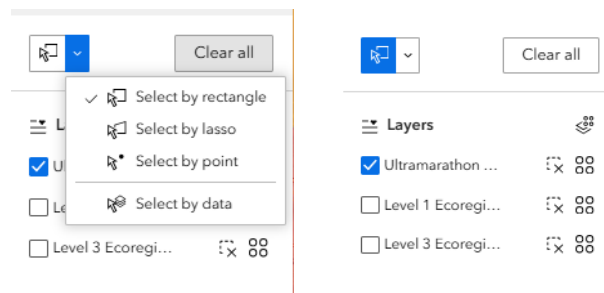




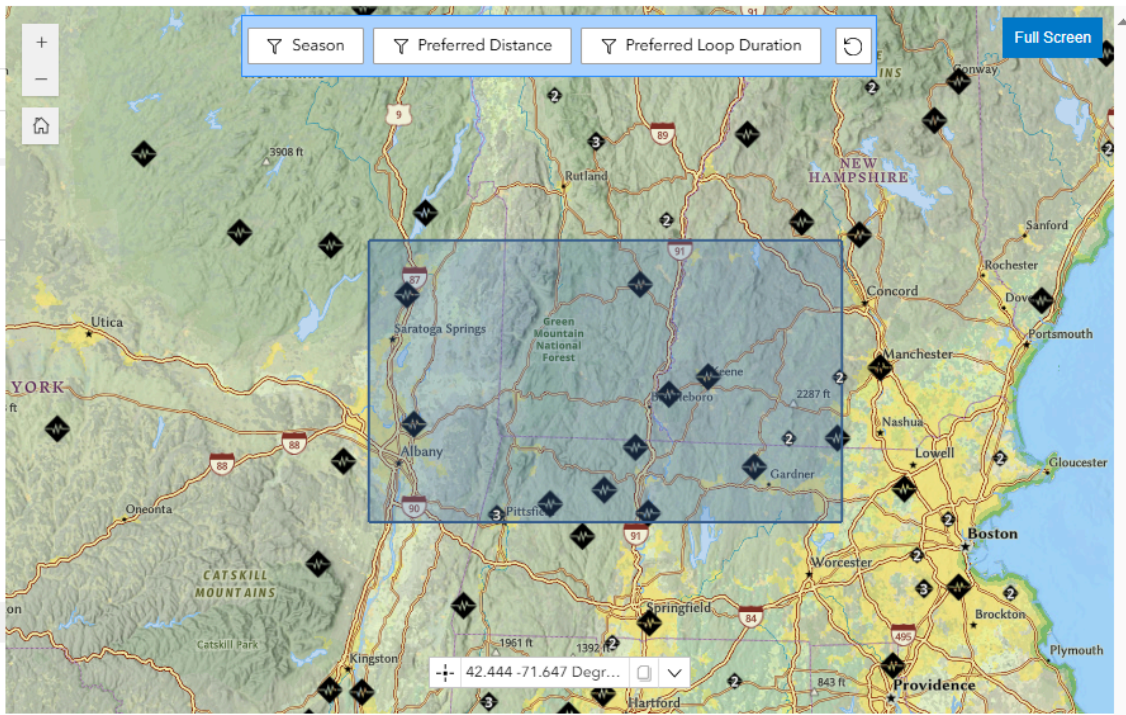
## Bulk Selection

The Selection Controls panel allows users to bulk select multiple unfiltered events or events that have been prefiltered using previously described processes.

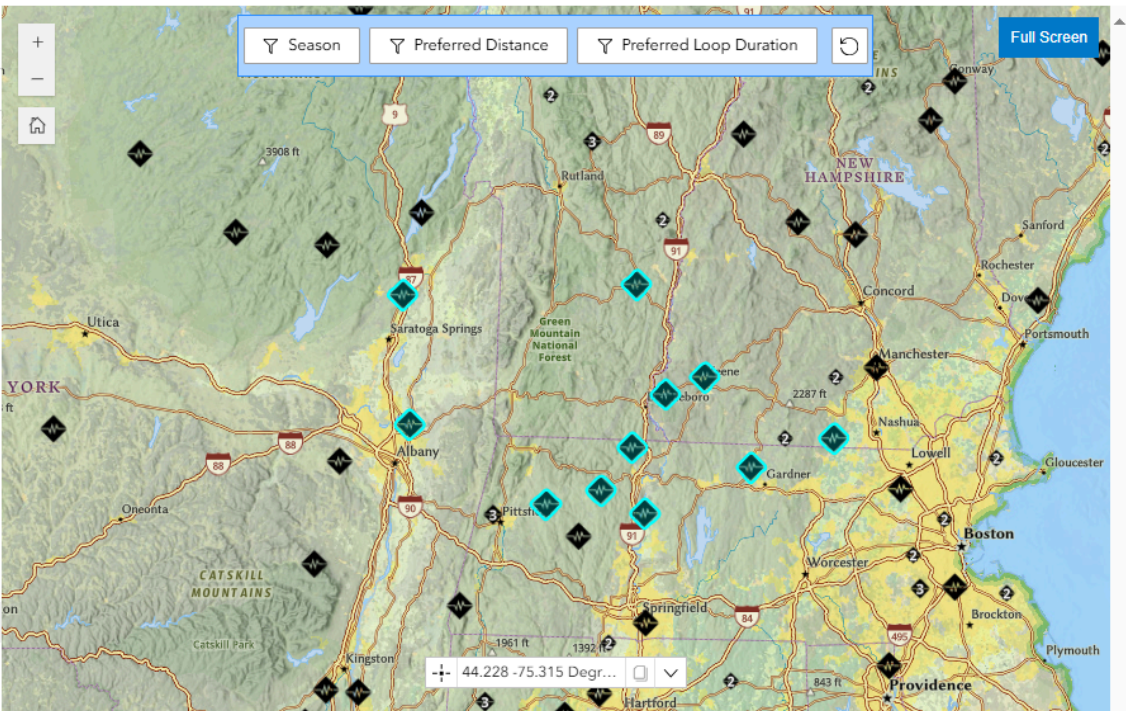
- Make sure that the appropriate layer is set to select then choose the selection method from the dropdown list. Once the method has been selected click the select box to activate so that it is blue (right graphic)




- The cursor changes shape and now allows for drawing of a selection - like the rectangle below








- Selected events will be highlighted



- To switch the table to only showing selected events choose the Show selection icon  at top right. The table only shows selected items at this point with rows darkened - indicating selection

Filtered Events in Map Extent

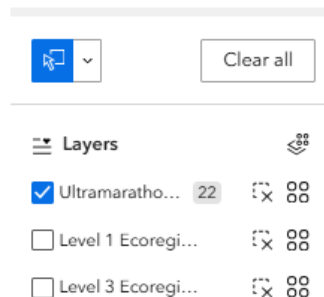







Event	City	State	Website	Season
Notchview Ultra	Adams	MA	<a href="#">View</a>	Summer
Free to Run Trail Races	Pittsfield	MA	<a href="#">View</a>	Fall
Race for DFL	Winchendon	MA	<a href="#">View</a>	Fall

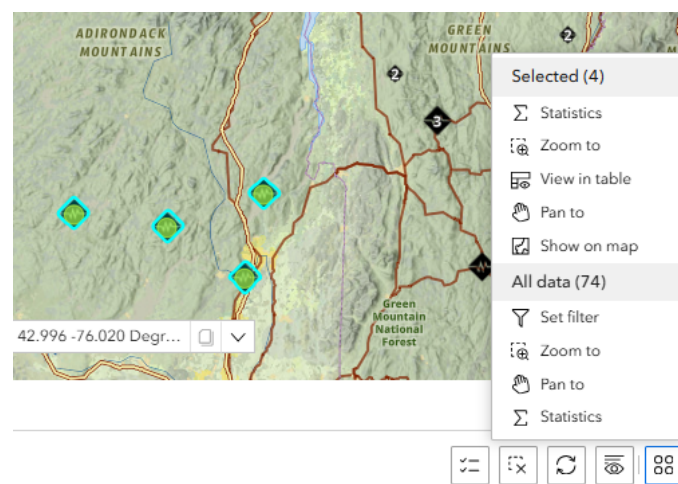
Sources: Esri, USGS | Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

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- The Selection Controls panel also shows a count of selected features by layer



- Note that as the map extent changes the selected features list in the table will change as features are no longer contained within the map view
- The Action button  on the table and Selection Controls dialog offers several actions to use with selected data



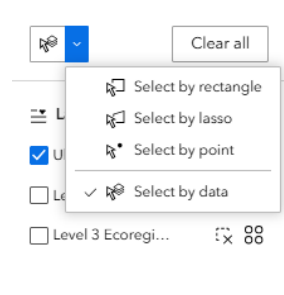


- Now the Show selection button has switched to Show all which, when clicked, returns the table to showing all events within the map extent.
- Clear selection  or the Clear all button on the Selection Controls panel will cancel the selection. Drawing a new selection will cancel the previous selection.
- Clicking the Blue Selection box deactivates selection and allows regular map controls.

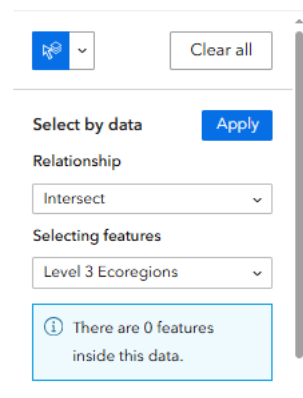
Select by data allows users to use features from other layers to make selections. This makes the Ecoregions layers usable as a selector for ultramarathon events.

**Use Case: A user has identified the Idaho Batholith as an area of interest and wants to select all 50k events in Level 3 Ecoregion 6.2.15 - Idaho Batholith**

- Navigate to the area of the Idaho Batholith
- Select 50k is Yes under the Preferred Distance filter.
  - Change the selection type in the Selection Controls dropdown to Select by data and click the selection box so that it is blue (active)

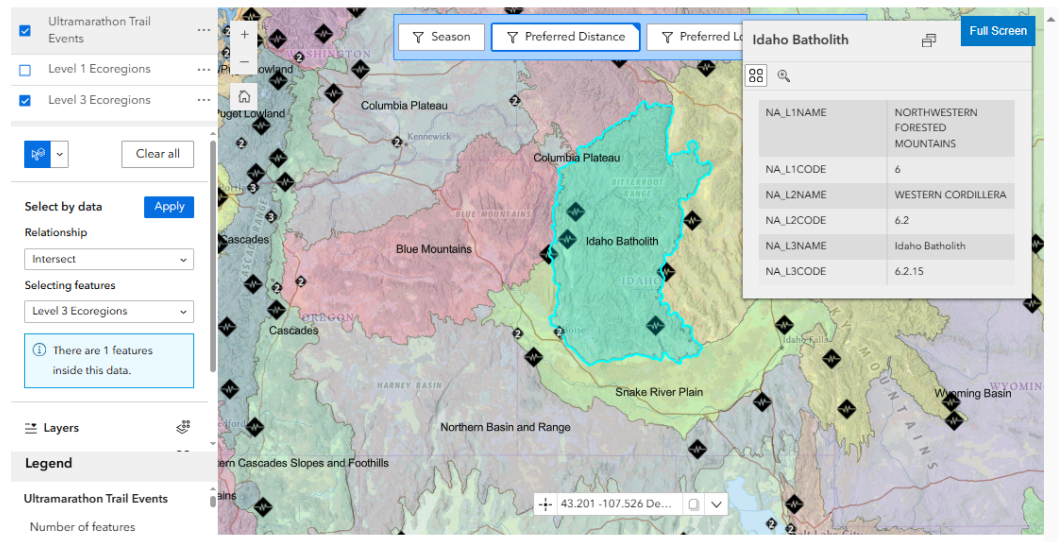


- The Selection Controls dialog box changes



- Switch the Selecting features to Level 3 Ecoregions then click on the Idaho Batholith polygon on the map. In this step, multiple polygons / regions could be selected if desired.





- Click the Apply button and now four 50k events are selected in the map

