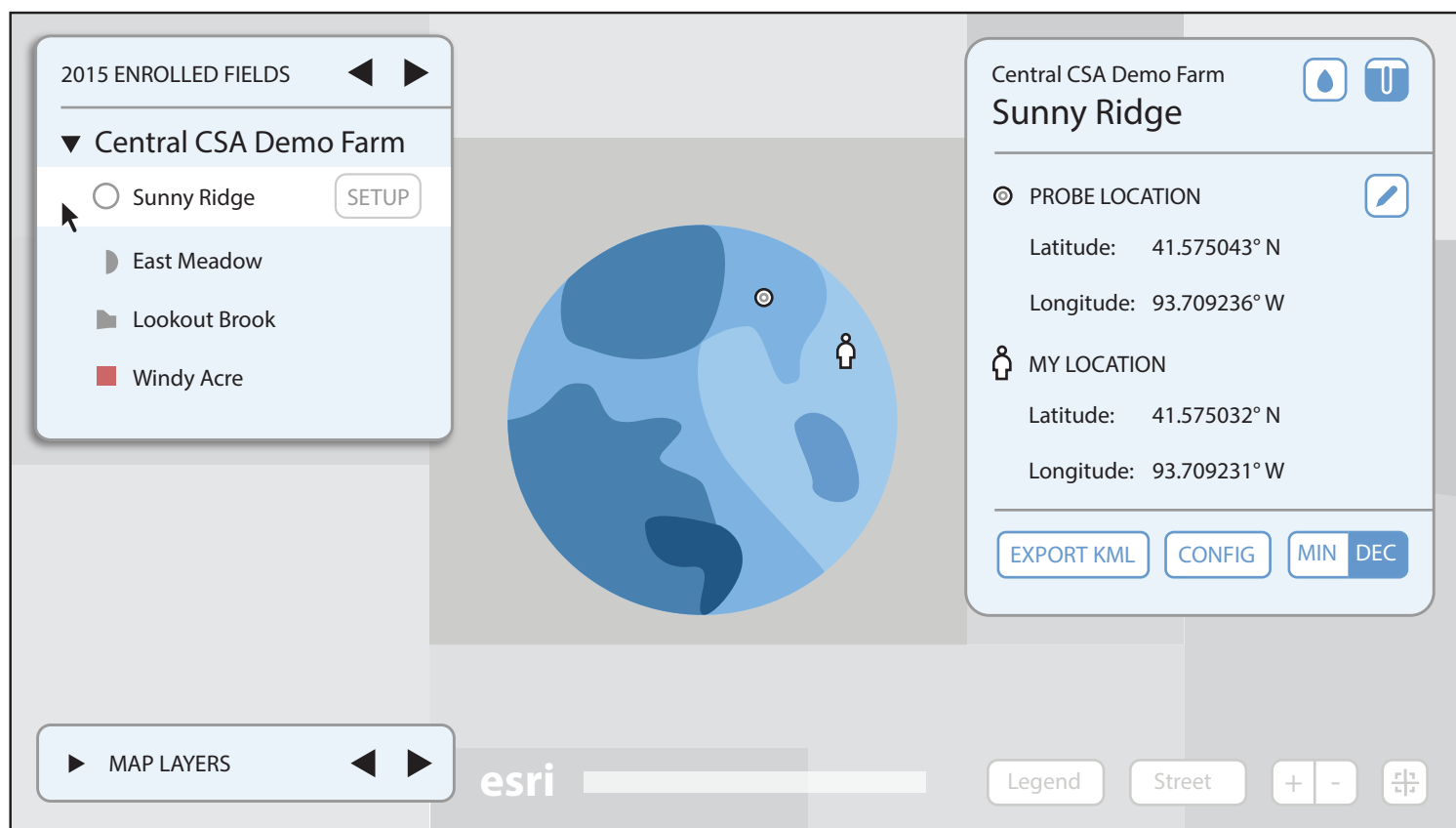




Probe Placement for iPad (device enabled with precision location service)

Probe Location in Read-only Mode




Probe Location in Edit Mode:

Central CSA Demo Farm



Sunny Ridge

☐ PROBE LOCATION




Latitude:

° N

Longitude:

° W

SAVE LATITUDE/LONGITUDE

 MY LOCATION

Latitude:

° N

Longitude:

° W

SAVE MY LOCATION AS PROBE LOCATION

EXIT EDITING

RESET

MIN

DEC

Map Annotation Panel Nav

The user will navigate between the UI for Moisture Monitoring and Probe Placement by toggling between the two icons in the upper right corner of the map annotation panel. Moisture Monitoring will be the default tab, although Probe Placement is active in the UI pictured here. Once the user clicks on the Probe Placement panel, if the user's device is capable of precision location (iPad), a browser-standard popup will ask permission to enable location service. If the user assents, the Probe Placement UI will display the user's lat/lon, as shown above. If precision location is not possible or accepted, the Probe Placement UI will only display the probe lat/lon, as shown on the next page.

Markers on Field

If the user has not set a probe location, the location will be system-generated, and will appear as an icon on the map. The probe icon's central dot will represent the probe moisture status, following the color-coding rules established for the field icons in the main nav. A person icon will represent the user location. The shoulders of the person icon are the same diameter as the probe icon, and the probe icon will have a higher z-index. This is so that when both icons' lat/lon match, the superimposed icons will display the person "holding" the probe icon

Edit Mode

The user must click the edit icon (pencil) to put the UI in edit mode before updating lat/lon. Once the UI is in edit mode, there are three ways lat/lon may be updated. 1: The user may click within the boundary of the selected field on the map. The lat/lon will update with the click, and the user must click SET PROBE TO LAT/LON ABOVE to confirm the change. 2: The user may edit the text string in the entry fields. Misformatted entries and entries outside the field boundary are considered invalid. Invalidity messages will replace the button SET PROBE TO LAT/LON ABOVE. 3: The user may click SET PROBE TO MY LOCATION. This will automatically copy the user's personal lat/lon location into the probe location field. After clicking one of the two SET buttons, the UI will return to read-only mode. Clicking the edit icon while in edit mode will not put the UI back into read-only mode. The available buttons in edit mode are different than in read-only mode, with the exception of the lat/lon format toggle, which offers a choice between MIN for degrees and decimal minutes, and DEC for decimal degrees

Probe Placement for Laptop (or device without precision location service)

Probe Location in Read-only mode



Probe Location in Edit Mode:

Central CSA Demo Farm Sunny Ridge

PROBE LOCATION

Latitude: 41.575043 ° N

Longitude: 93.709236 ° W

SAVE LATITUDE/LONGITUDE

EXIT EDITING RESET MIN DEC

Central CSA Demo Farm Sunny Ridge

PROBE LOCATION

Latitude: 41 ° 34.5750 ' N

Longitude: 93 ° 23.9236 ' W

SAVE LATITUDE/LONGITUDE

EXIT EDITING RESET MIN DEC

Central CSA Demo Farm Sunny Ridge

PROBE LOCATION

Latitude: ° 34.5750 ' N

Longitude: 93 ° 23.9236 ' W

Please enter a whole number

EXIT EDITING RESET MIN DEC

Degrees Decimal (DEC) Toggle

The default format for lat/lon format is DEC.

Acceptable Formats

Entry may be whole number or float, but number MUST be inside selected field boundary to be correct. Negative numbers are valid as long as location is within field boundary. Negative lon may occur, but negative lat will not, since that would be outside the US.

Degrees Minutes (MIN) Toggle

A user may switch to decimal minutes format, whether in read-only or edit format.

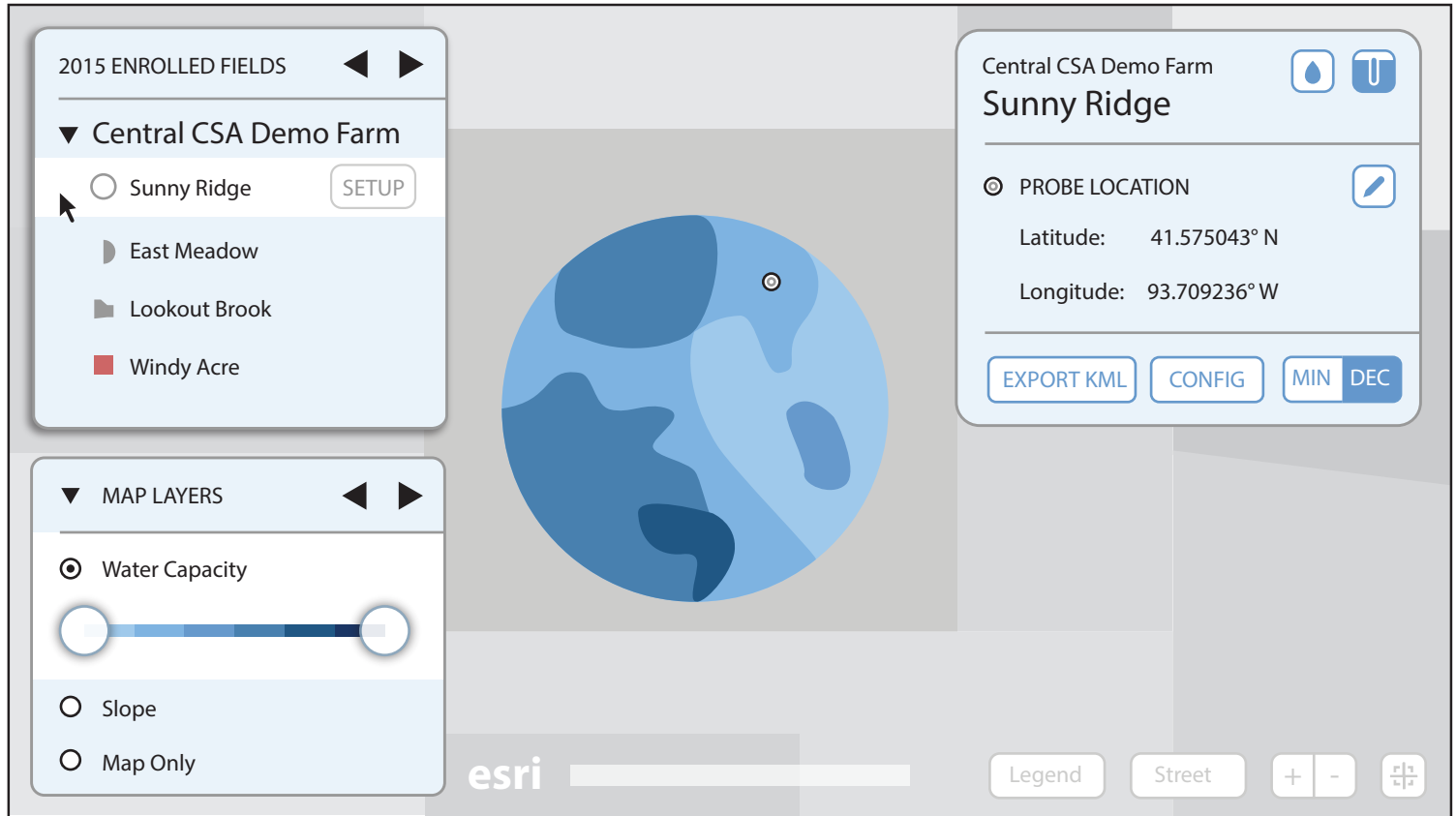
Acceptable Formats

Negative numbers are not valid. Degrees must be a whole number. Minutes may be a whole number or a float. A useful guide to formatting rules may be found here: https://www.map-tools.com/tutorials/lat_lon/formats

Validation warnings

If an entry is invalid, a message will appear in lieu of the button. If more than one field is invalid, only one message will appear.

Map Layers

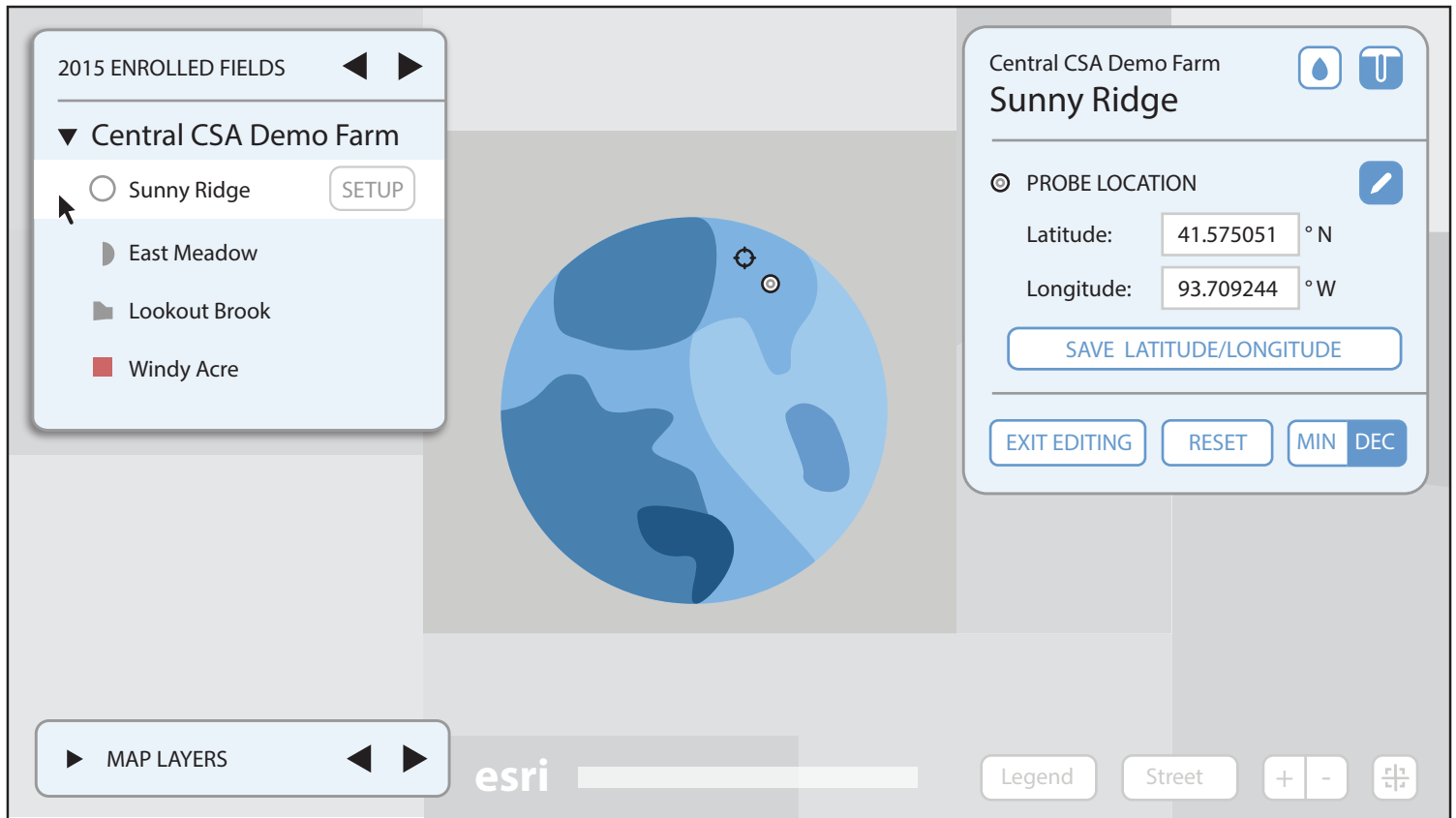


Map Layers Collapsed State

By default, the Map Layers panel will be collapsed. In the collapsed state, it is still possible to quickly skip through the layers list using the back/next arrows on the right side of the header. If the user clicks the expand/collapse arrow on the left side of the header, the Map Layers panel will expand. If the expansion encroaches on the vertical space necessary for the farm/field Nav panel, then the Nav panel height will shorten accordingly.

Map Layers Expanded State

The expanded Map Layers panel lists all possible map layers, which are selectable by radio button. Any option may be selected by clicking anywhere in its horizontal width, not just by clicking the radio button. Options have a selected state and a hover state identical to the hover state on the farm/field Nav panel above. If Water Capacity or Slope is selected, a slider will be available for that layer which will enable the user to reduce the histogram display to a narrower range of values. If a user jumps to a new field, the range slider handles will be in whatever position they were left the last time the user adjusted them on that particular field.



Reticule Behavior

A reticule/crosshairs icon will be used to mark a tentative probe location on the field after the user has clicked or keyed a new lat/lon, but before the user has clicked the SAVE button to confirm the choice. The reticule may appear under two different circumstances.

1: If the user clicks/taps directly on the field, the reticule will appear at the click/tap point. The reticule may also be dragged. The field's probe icon will not change at this point. Once the user hits any SAVE button, the reticule will vanish, and the field's probe icon will move to the confirmed lat/lon

2: If the user enters a new, valid lat/lon into the lat/lon entry fields, the reticule will appear at the new lat/lon position. Once the user hits SAVE, the reticule will vanish, and the field's probe icon will move to the spot formerly occupied by the confirmed lat/lon.

The reticule may appear on either the UI for devices precision location services or the UI for non-precision location, but if the user has chosen the GPS-enabled SAVE MY LOCATION AS PROBE LOCATION button to choose a lat/lon, there is no reason for the reticule to appear.