



QUICK START FIELD GUIDE

OVERVIEW

Now that you have identified a project or site where ESII will be used, these instructions describe the steps you need to take to begin collecting data in the field.

1. Log into the ESII Project Workspace
2. Create a new Site
3. Create a Data Collection Effort (DCE)
4. Log into the ESII App
5. Open the Site package
6. Create map units
7. Enter data into the survey
8. Upload field data

1. LOG INTO THE ESII PROJECT WORKSPACE

- [Project Workspace](#)

2. CREATE A NEW SITE

- Click on the Site dropdown menu, then scroll down and select “Create a new site...” (Figure 1). The following Site setup process is broken up into several steps which correspond with steps listed in the Project Workspace.

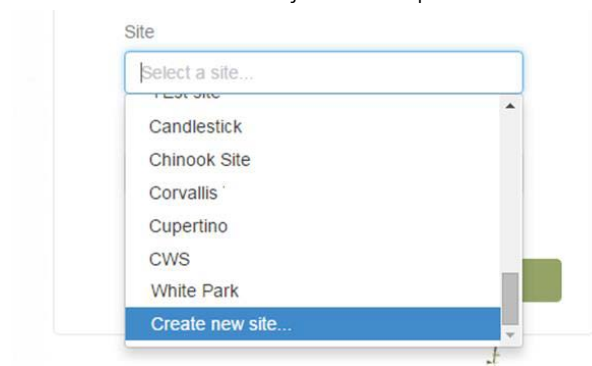


Figure 1. Dropdown menu used to create a new Site

- **Step 1. Site Location:** Use the search function to type in a location for the Site (Figure 2). You can enter a street address, city, state, or zip code. A map of the location will be displayed.

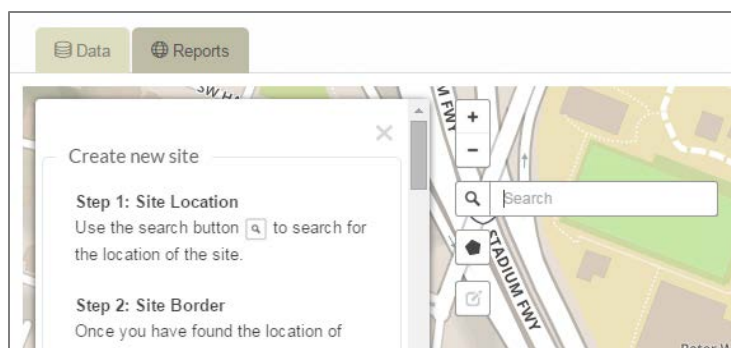


Figure 2. The Site location can be typed directly into the search window

- **Step 2. Site Border:** Zoom in to find the location of your project on the map. Then use the Draw tool to draw a border around the Site (Figure 3). A boundary in the ESII Tool is defined by a series of points, or *vertices*, connected by lines. Use the cursor to locate each vertex on the screen, then tap or click at that screen location to create the vertex. Each new vertex you create will be connected to the previous one by a line. When you arrive back at the initial vertex, click it again to complete the Site border (Figure 4). If you make an error or change your mind about a vertex, just click “Delete last point” and re-enter the vertex.

TIPS & TRICKS

It may be useful to define the Site boundaries using property boundary lines. Be sure to click the initial vertex where you started a second time to complete the Site boundary.

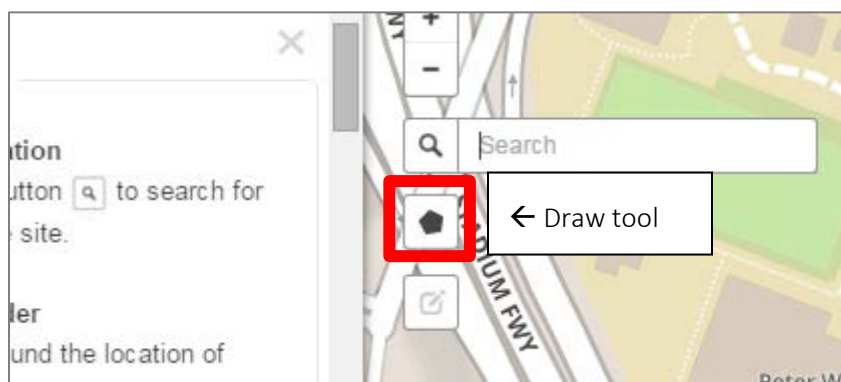


Figure 3. The Draw tool is used to draw borders around the Site



Figure 4. Site boundaries are drawn using the Draw tool

After the Site boundary is completed, you may edit the boundary by clicking on the Edit tool to display the vertices of the boundary. These vertices can be dragged to change the boundary's size and shape (Figure 5).

When you are done editing, click Save to save the changes.



Figure 5. Edit the site boundaries using the Edit tool

- **Step 3. Site Name:** Type in the name of the Site. Select a name that will be well understood by others in your organization.
- **Step 4. iPad Base map:** This is the background imagery that will be cached and displayed for this site in the ESII App. Mapbox Satellite and ESRI World Imagery maps are freely available resources and have been pre-loaded into the Project Workspace, although these maps may or may not have the most up-to-date images for your location. Check both resources to determine which is the most accurate to use. You may also upload a more up-to-date image if you have one. Uploadable data must be in the format of a GeoTiff or shapefile.¹ If a GeoTiff is available, click

¹ GeoTIFF is a computer file format for storing georeferencing information within computer graphic images. Georeferencing information may include map projections, coordinate systems and other data that establishes the exact spatial reference for the file. A shapefile is a format for storing the geometric location and attribute information of geographic features used in geographic information system (GIS) software.

- Choose File and navigate to the location of the image on your computer, or drag and drop the image from your computer onto the map in the Project Workspace.
- **Step 5. Site Questions:** For now, you may skip this information. This relevant regional data provides additional information for the site. You may create the Site without answering these questions. However, this information must be filled out before results can be generated. See the “Data Entry Validation” section or the Quick Start Results Guide for instructions.
- Click Create Site. A popup window will confirm that you’ve been successful. Click OK.

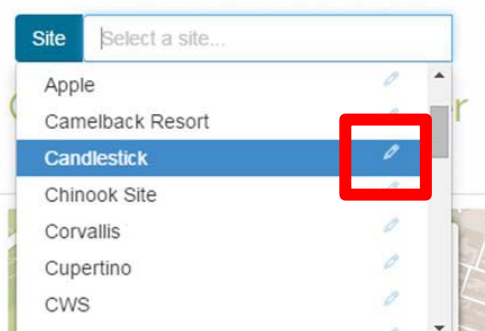


Figure 6. The Edit tool is used to edit Site information

EDIT SITE INFORMATION

To edit Site information, select the site from the Site dropdown menu and click the Edit icon on the right hand side (Figure 6). When the site information appears, you may edit the Site borders, Site name, iPad Base map selection, or regional data questions from Step 5. When finished, click Update Site to save the changes.

3. CREATE A DATA COLLECTION EFFORT (DCE)

- On the top toolbar, click on the dropdown arrow next to DCE and select “Create a new DCE...”. The following DCE setup process is divided into several steps which correspond to the steps listed in the Project Workspace.
- **Step 1. Border:** Follow the same steps used to draw the Site boundary by clicking on the Draw tool. You may edit the borders of the DCE using the Edit tool. When this tool is active the borders of the DCE are displayed and the vertices can be dragged to different locations to re-draw the boundary. In some cases the DCE boundary may be the same as the Site boundary. Even if this is the case, you must still create a DCE.
- **Step 2. Name:** Type in the name of your DCE. This should describe the area where data collection will take place within the Site. It should be short and concise (no more than about 50 characters) and descriptive. For example, a Site might be named “People’s Park”, with the DCEs within this Site named South Soccer Field, West Parking Lot, etc.
- **Step 3. Description:** Include a description of the DCE
- **Step 4. Status:** This is tied to the ability to edit information in the ESII App related to the baseline Scenario created within the DCE.
 - Pre-data collection: the DCE will not appear in the ESII App and you will not be able to create alternate scenarios for DCEs.
 - Active data collection: the baseline scenario created in the DCE will appear and can be edited in the ESII App. NOTE this is the default setting.
 - Post-data collection: the baseline scenario created in the DCE will appear in the ESII App, but cannot be edited in the ESII App.
 - Archive: the DCE will not appear in the ESII App.

TIPS & TRICKS

Check that the status of your DCE is set to “Active data collection” before field data collection takes place, otherwise the data within the DCE cannot be edited using the ESII App.

- **Step 5. Baseline scenario name:** Type in the name of the Scenario.
NOTE: The label used here will automatically appear as the Scenario name where map units will be created. The Scenario name cannot be edited or changed at a later date.
- **Step 6. Personnel:** The individuals selected will have view and edit privileges for the baseline Scenario within the DCE in the ESII App. Make sure that all of your colleagues (including yourself) who will be collecting data using the ESII App are selected.
- Click the green Create DCE button.

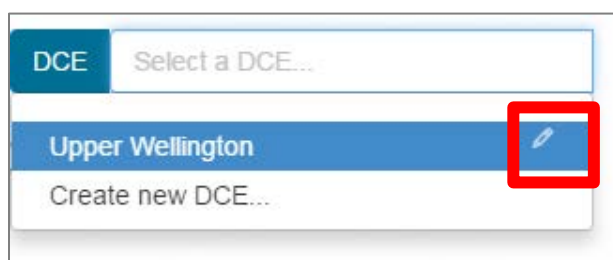


Figure 7. The Edit tool is used to edit DCE information

EDIT DCE INFORMATION

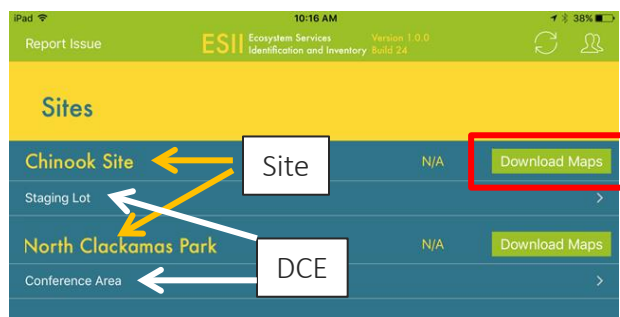
To edit DCE information, find the DCE on the DCE dropdown menu and click the Edit icon to the right of the DCE name (Figure 7). The DCE information will appear and you may edit the DCE border, Name, Description, Status, and Personnel. When finished, click Update DCE.

Now you are ready to begin collecting field data using the ESII Field App! You may draw map units in the Project Workspace or using the ESII Field App. This guide assumes you will create map units in the field. To learn how to create map units in the Project Workspace, see the “Get Started” section of the user’s guide.

4. LOG INTO THE ESII APP

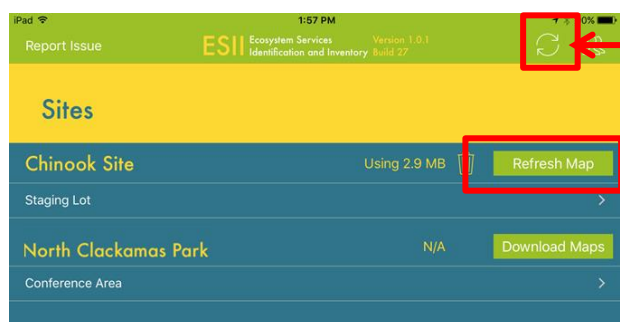
Before heading out into the field, you need to download the Site information you prepared onto your iPad. After logging in, the first screen you will see is the main Sites page (Figure 8). This page displays the Sites that are assigned to you, along with the DCEs associated with each Site and map download options.

- Tap Download Maps for each Site you will be working in (Figure 8). You may download map packages for more than one Site, depending on the memory capacity of your iPad device or the number of Sites you intend to visit.



This will say “Refresh Map” if you already have the map package but need to update it with new base map data from the ESII Project Workspace. Larger data packages will take longer to download.

Figure 8. Site and DCEs



Refreshing the map only imports the latest map data for respective sites. To refresh the data for map units in all sites loaded on your iPad (i.e., update with new data from the Project Workspace or send your data up to the Workspace), select the Sync option at the top right of the screen (Figure 9).

Figure 9. Refresh Map

TIPS & TRICKS

If you no longer need the map package, or need to clear some space on your device, you may remove the map package by tapping the trash can icon associated with a specific Site.

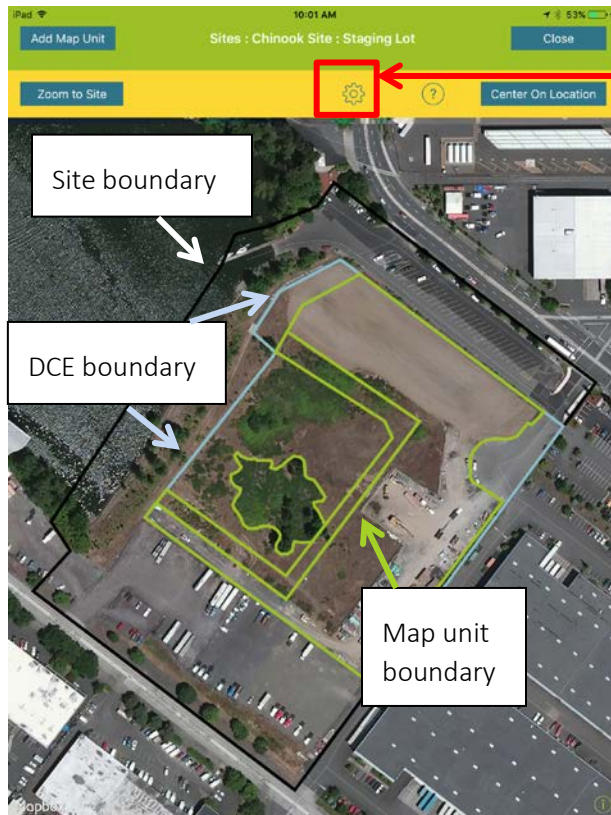
5. OPEN SITE PACKAGE

- Tap a DCE listed on the Sites screen to see all map units that were previously created (by yourself or another user) in the ESII Project Workspace (Figure 10). If map units have not been previously created, you will not see any listed. On this Map Units screen, tap the green Map button (Figure 10).



Figure 10. Opening a map

The Site boundary is marked in black; the DCE boundary is marked in blue; map units previously created in the Project Workspace are marked in green (Figure 11).



For a map legend, tap the Help icon.

Only map unit boundaries may be edited using the ESII App. The Site and DCE boundaries may only be edited in the Project Workspace.

Figure 11. Site, DCE and map unit boundaries

6. CREATE MAP UNITS

TIPS & TRICKS

If more than one person will be collecting field data using the ESII Field App, each field person should be assigned unique areas of the DCE to work in and a naming convention should be agreed upon so that each map unit has a unique identifier. This coordination should take place prior to the field visit so that everyone is working with the same map unit boundaries.

It's now time to draw preliminary boundaries for the areas where you will collect data in the field. Because a DCE may include areas with widely different characteristics, you will need to divide the DCE into smaller areas, each with more or less uniform characteristics. These smaller areas are called *map units*. You must create these unique areas as map units so that your data can be tied to the specific location where it applies.

There are multiple ways to divide a site into map units, but the two most common ways are to draw map unit boundaries around individual features or to start with a large map unit and split it into multiple units. This latter approach can result in less cleanup work, as it reduces the potential for creating slivers and gaps between separately drawn polygons. The "Special Features" section at the end of this document tells how to split a large map unit into multiple units in the ESII App.

Whichever approach you choose, you will draw map units around areas of relatively homogeneous natural features (e.g., grassy fields, forests, shrub/scrub, etc.) or man-made structures (e.g., buildings, roads, etc.). The degree to which you include anomalies in a map unit should be dictated by how much time you have and how precise you want the collected data to be. "Lumping" areas of moderate heterogeneity into one large map unit will result in a lower level of resolution than splitting a larger map unit into multiple ones. For expediency, map units may be aggregations of areas that share similar features, for example, a forest with multiple small grassy openings or an office complex including the surrounding landscaped areas.

CONDUCT A PRELIMINARY ASSESSMENT OF THE DCE AND MAP UNITS

Walk around the DCE to the extent this is safe, feasible and practical in terms of work flow (Figure 12). Note unique map units within the DCE and get a general sense for how they relate to the aerial imagery of the DCE. Add, refine, edit map units as needed based on your observations.



Figure 12. Walking around a DCE

- From the Map Units screen (see Figure 10), tap Map. On this next screen, new map units can be added by tapping Add Map Unit (Figure 13).

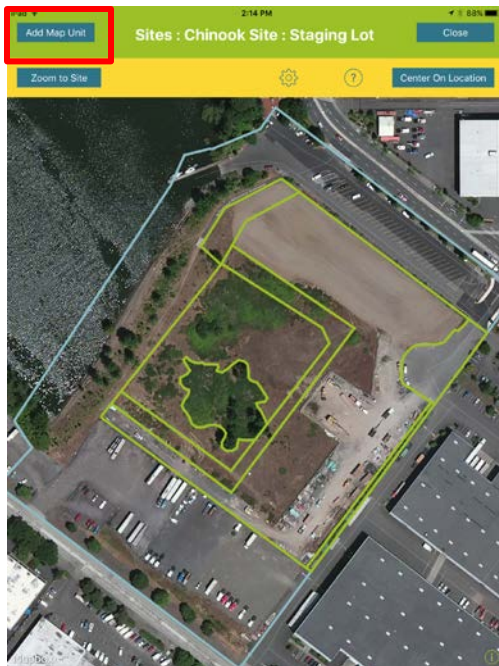


Figure 13. Adding a new map unit

- Create your first vertex by tapping the screen. Then create the map unit boundary by tapping additional vertices to trace out the boundary. (Figure 14). Tap on the first vertex a second time to close the map unit boundary. You will be prompted to type in a name for the new map unit (Figure 15).



Figure 14. Drawing a new map unit

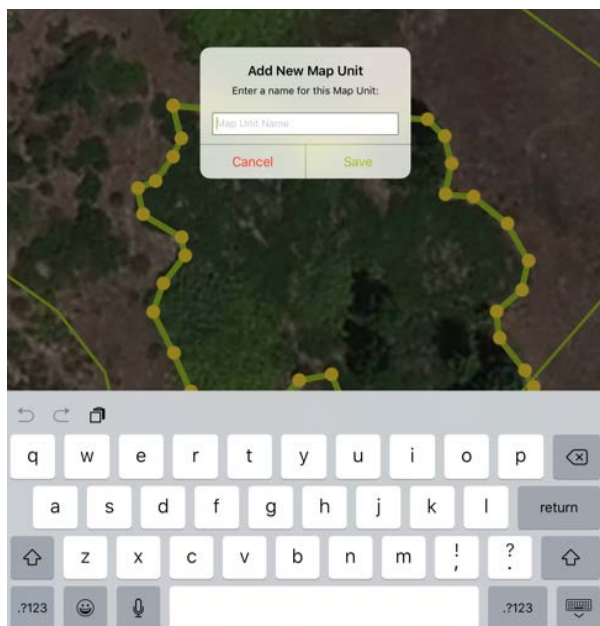


Figure 15. Naming a new map unit

- When you are finished creating map units, tap the Close button at the top right of the screen to return to the list of map units. The map units you have created will appear in this list and are ready for data entry (Figure 16).

Unit	Status	Modified By	Has Data to Upload
1	100%	Demo User	Yes
2	55%	Demo User	Yes
3	Not Started	Demo User	No
4	Not Started	Demo User	No
5	Not Started	Demo User	No
6	Not Started	Demo User	No
7	Not Started	Demo User	No

Figure 16. New map unit in a list

Special Features

Map units may have been previously created in the ESII Project Workspace. See the “Special Features” section at the end of this document for instructions on how to edit pre-existing map unit boundaries, split map units, and delete map units.

7. ENTER DATA INTO SURVEY

Walk the map unit and verify your estimates of the map unit’s attributes as needed throughout the data collection process. Look at enough of the map unit to make consistent estimates of attributes. For example, look at multiple locations within the map unit to evaluate the characteristics of the soil surface (Figure 17).

Data collection may go a bit slowly at first. But as you collect data for more and more map units, your ability to identify and estimate attributes will improve, and the process will go more quickly and efficiently.



Figure 17. Walking around a map unit

- Once a map unit has been selected from the list of map units, the first survey question will always be “Map Unit Habitat Type” (Figure 18). The survey will progress through four categories of questions: habitat, vegetation, surface characteristics, and noise and visual screening. The questions are designed to enable you to select the most appropriate response easily and quickly. Just tap on the answer that best describes the attributes for the current map unit.

Questions for different attributes will have different numbers of choices, so for some questions you may need to scroll to see the full set of responses. Your response will be highlighted in orange. Tap the forward arrow to advance to the next question, or tap the backward arrow to go back to the previous question (Figure 19).



On the map, you may zoom in or out using the two-finger pinch method on the screen or pan across the map by swiping.

Figure 18. Survey screen

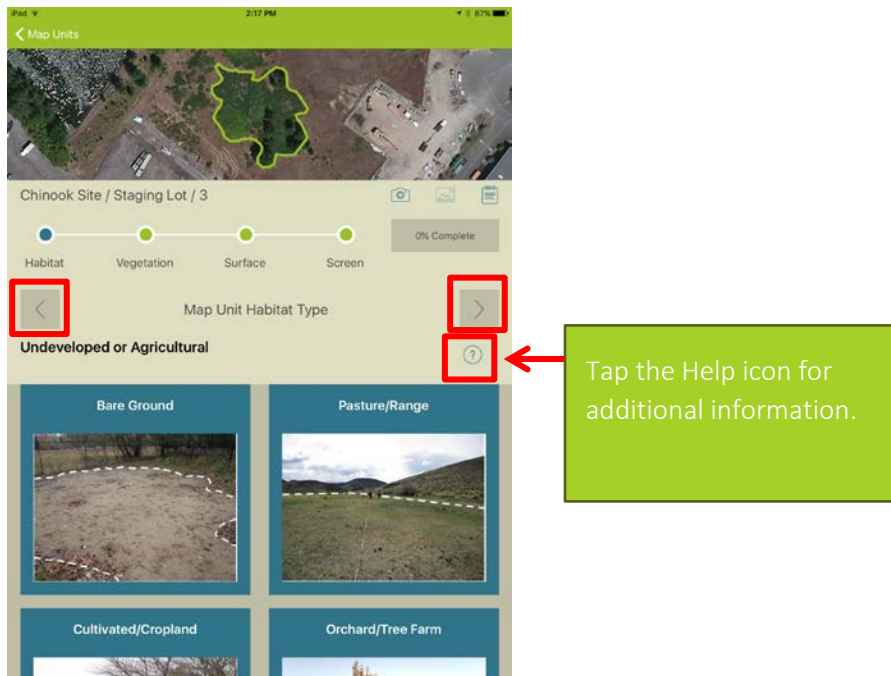


Figure 19. Arrow keys for scrolling through survey questions

- When you have answered the last question for the map unit, the forward arrow will no longer be visible and you will see “100% Complete” on the status bar. Tap Map Units at the upper left of the screen to return to the full list of map units, and move on to the next map unit. Your responses for each question are saved automatically within the ESII App as you go, so you will not see an option to save your responses.

8. UPLOAD FIELD DATA TO THE ESII PROJECT WORKSPACE

- This can be done in two ways:
 - Tap the Sync icon in the upper right corner of the sites page, shown on the left in Figure 20. This sync is most appropriate when you need to upload data from multiple Sites or when you log in and need to see the data for all Sites available to you.
 - Tap the Upload button on the Map Units screen, shown on the right in Figure 20. This allows you to upload data while working within an individual Site if other Sites are not ready to be transferred to the Project Workspace.

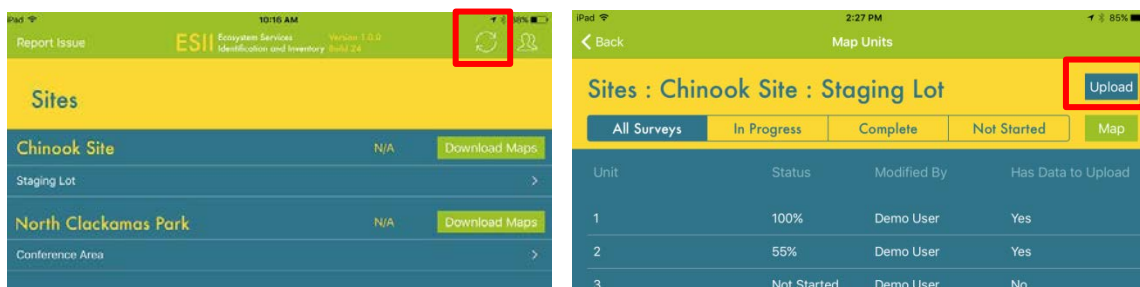


Figure 20. Uploading and syncing data

SPECIAL FEATURES

USE THE SPLITTING TOOL IN THE ESII FIELD APP

As noted previously, this method of creating new map units eliminates small gaps and overlaps between map units that may result from trying to match the edges of map units. The splitting tool is limited to lines that can be drawn between existing vertices.

Start with the first large map unit that corresponds with the DCE boundary. Select Split Map Unit from the popup box (Figure 21).

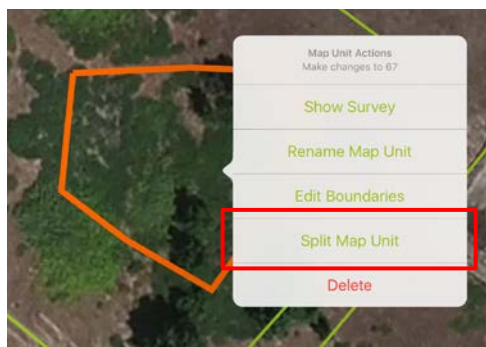


Figure 21. Select the Splitting tool

Tap one vertex as a starting point for the split and another vertex as the end point. These two vertices will be connected by a straight line (Figure 22). Now tap the Split button. If there is data associated with the original map unit, you will be asked to copy the survey responses to both map units or to discard them. If you discard them, you will have to re-enter survey data for both of the new map units.



Figure 22. Simple split (vertex to vertex)

For more complex splits, you may add new vertices, making sure the start and end vertices are already part of the original map unit boundary (Figure 23).



Figure 23. Complex split (adding vertices between start and end vertices)

TIPS & TRICKS

The splitting tool requires start and end vertices to complete a split. If there are no start and end vertices where you want them on the original map unit boundary, edit that map unit boundary and drop or move vertices as necessary to make the split.