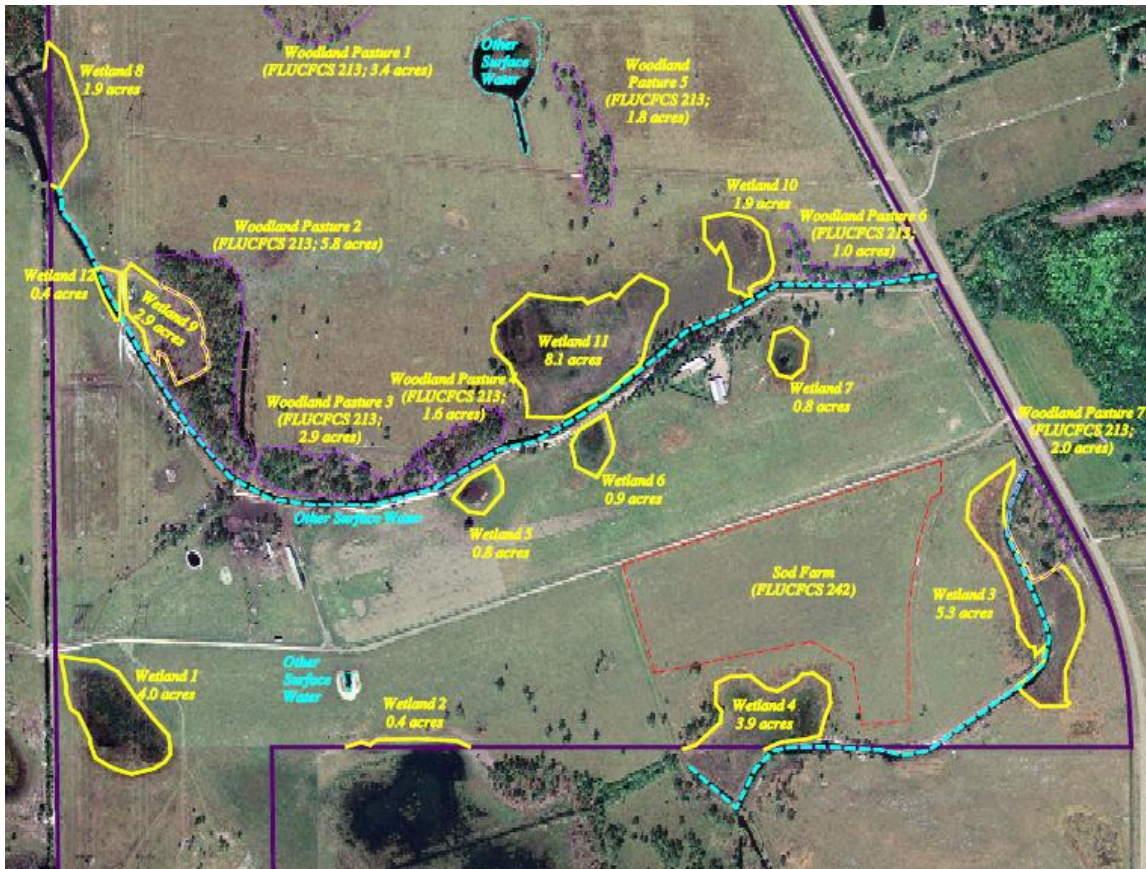


ENVIRONMENTAL data export MANUAL



A MANUAL FOR DATA EXPORT AND EDITING USING ARCMAP



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VIEW YOUR COLLECTED DATA

1. Open the 'EXPORT_MAP' ArcMap project located on the GIS Share Drive:

\\mdthq\mdtshares\AppData\MDTGISSTD\MAPS\CUSTOM\ENV\COLLECTOR\EXPORT_MAP.mxd

2. Follow the sign-in below:

The screenshots illustrate the sign-in process. The first window is the ArcGIS Sign In dialog box, where the 'ENTERPRISE ACCOUNT' option is selected. The second window is the 'Sign In' page, where the URL 'mdt.maps.arcgis.com' is entered and the 'CONTINUE' button is highlighted. The third window is the 'Sign in to Montana Department of Transportation' page, where the 'USING YOUR MDTHO ACCOUNT' option is selected and the 'Continue to Sign In' button is highlighted.

3. This map contains the 'FIELD DATA - COLLECTOR FOR ARCGIS' service that was used in the field on the iPads to collector your data. By default, when you open this map, you will see the data that everyone in the group has collected.

- The map also contains other **resource layers** that may be helpful for your projects
- This map's projection is '**NAD_1983_StatePlane_Montana_FIPS_2500_Feet_Intl**'
 - This will come in handy later when you are ready to export your data.


The screenshot shows the ArcMap interface with a map of Montana. The Table of Contents on the left lists the following layers:

- Main Map
 - FIELD DATA - COLLECTOR FOR ARCGIS
 - MDT ENVIRONMENTAL COLLECTOR - POINT
 - MDT ENVIRONMENTAL COLLECTOR - LINE
 - MDT ENVIRONMENTAL COLLECTOR - AREA
 - MDT Routes / Section Houses / Railroads
 - Maintenance Section Houses
 - Reference Marker
 - On System Route
 - Off System Route
 - Railroads
 - Hydro
 - Boundaries
 - NAIP Imagery
 - Basemaps
 - World_Topo_Map
 - World_Imagery
- Location Map
 - Montana Outline - 24,000 Scale
 - County Boundary
 - Basemap
 - World_Topo_Map
 - Basemap
 - World_Street_Map


4. First, **SAVE THIS MAP AS A NEW MAP TO YOUR PROJECT FOLDER.**

- Since you can't save this map itself because it is located on the GIS Share Drive, saving it to your own project folder can help preserve any changes you make (i.e. saving it to the extent of your data collection area).
- File > Save As > navigate to your own directory.

- c. If you have another map that you would prefer to use, drag-and-drop the **FIELD DATA - COLLECTOR FOR ARCGIS** group layer into another ArcMap project and save it.

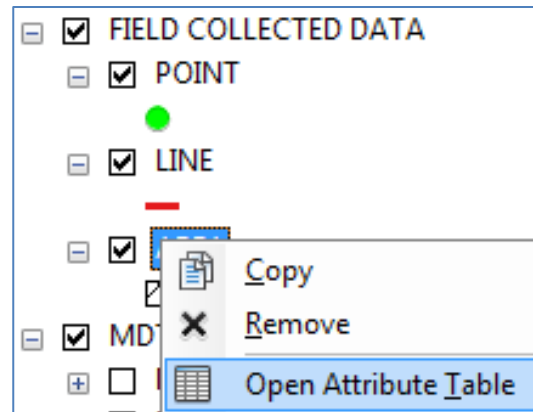
5. Next, to view your recently collected data in more detail, first, use the **Zoom-In** tool , and zoom to the area of your collection.

6. By default, the wetlands (or areas), are the **only feature currently selectable**.

- a. Select the feature(s) you would like to export, by using the  tool.
- b. To change the selectable layers, right click on the layer you would like to select from the map (i.e. Point, Line, or Area), choose 'Selection', and then '**Make this the only selectable layer.**'

7. We are first going to export the data from the **Field Collected Data** and then clean it up afterwards if we need to.


- a. Once your features are selected, Open the attribute table for the wetland data.
- b. Right-click on the '**AREA**' and select **Open Attribute Table**.
- c. To view your selected record from the table, click '**Show Selected Records**' as seen below. In this case, 1 out of 144 is selected.



MDT ENVIRONMENTAL COLLECTOR - AREA		
OBJECTID	NAME	
136	WL 2B 9431 S547 east side	<N
135	9341 WL2A S547 west side culvert	<N
144	Mandeville creek ds	<N
143	WL 6	<N
142	WL 5	<N
141	WL 4 ditch	<N
140	WL 3	<N

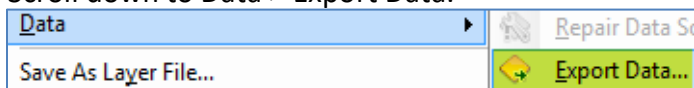
MDT ENVIRONMENTAL COLLECTOR - AREA (1 out of 144 Selected)

8. Select any additional features from the table that correspond with your field collection. This will ensure that you didn't miss any in the field.

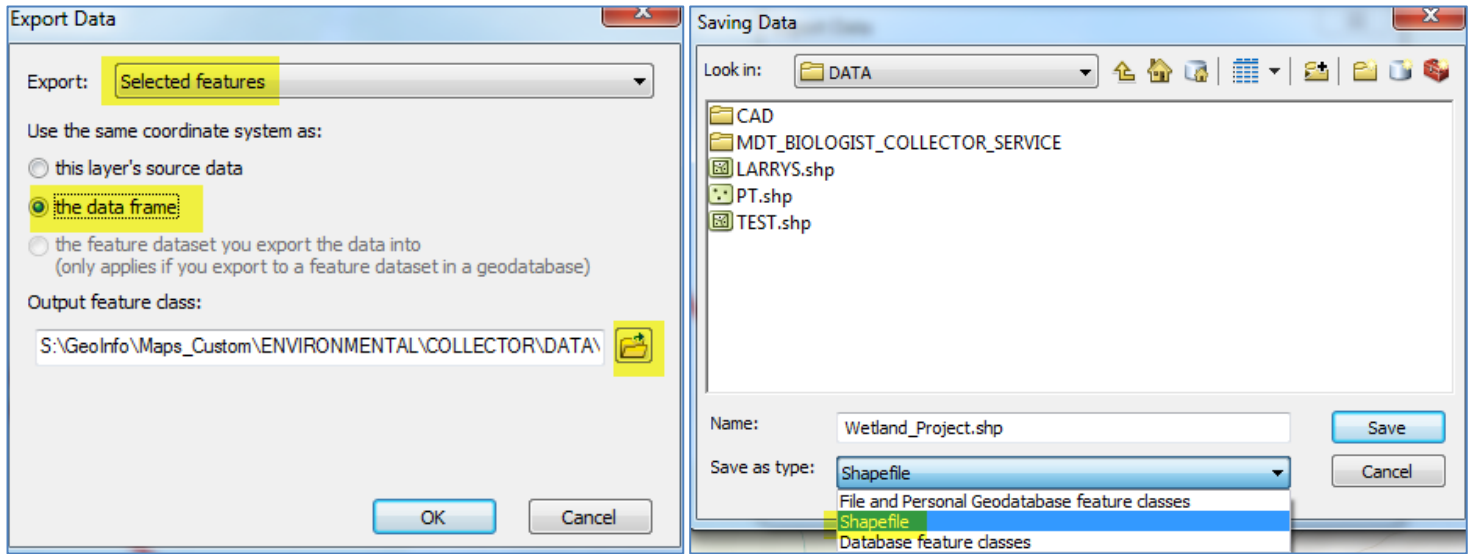
- a. Sort the '**created_date**' field if necessary. This will sort the collection date ascending or descending.
- b. In addition, pan and zoom around the area you collected and while holding SHIFT, use the select tool  and select any additional wetland features.

9. Return to the '**AREA**' layer in your table of contents and right-click on it.

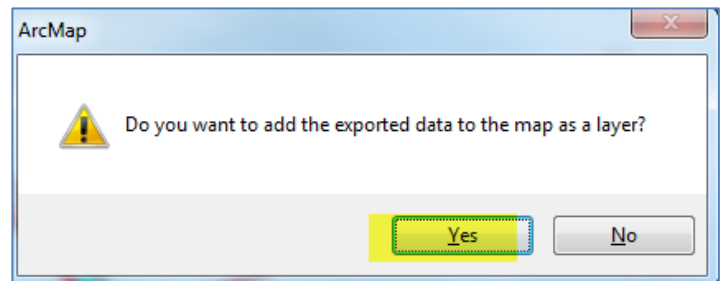
- a. Scroll down to Data > Export Data.



10. Within the Export Data window, ensure selected features is selected and then select 'the Data Frame' as we want to export this data with the data frame's projection of International feet.
 - a. Navigate to an appropriate folder to save the exported data.
 - b. Name the exported data and save as Shapefile for file type.

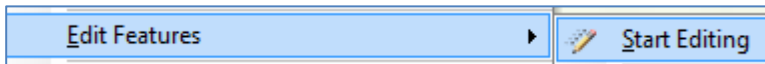


- c. Select 'Save' and then 'OK' to export the data.
- d. Select 'Yes' to add the data to the map.
- e. Now that the wetland data has been added to the map, you can turn off the 'FIELD COLLECTED DATA' group.



EDITING TOOLS

- 1) To edit or clean-up the data you just exported, you'll need to use the editing tools.
- 2) Right-click on your wetland layer shapefile now (the one you just added to map) and choose **Edit Features > Start Editing**.



- 3) Use the **Editor Toolbar** for common editing tasks such as: splitting, reshaping, or merging polygons.



4) Editing Vertices

- a) With the arrow selected above, double click on the wetland in question. This will enable all vertices to be visible. If there is a vertex that seems out of place, delete it or move it with the **black arrow**. This is the most common editing task of moving vertices and will probably resolve many issues without diving into the other tools.

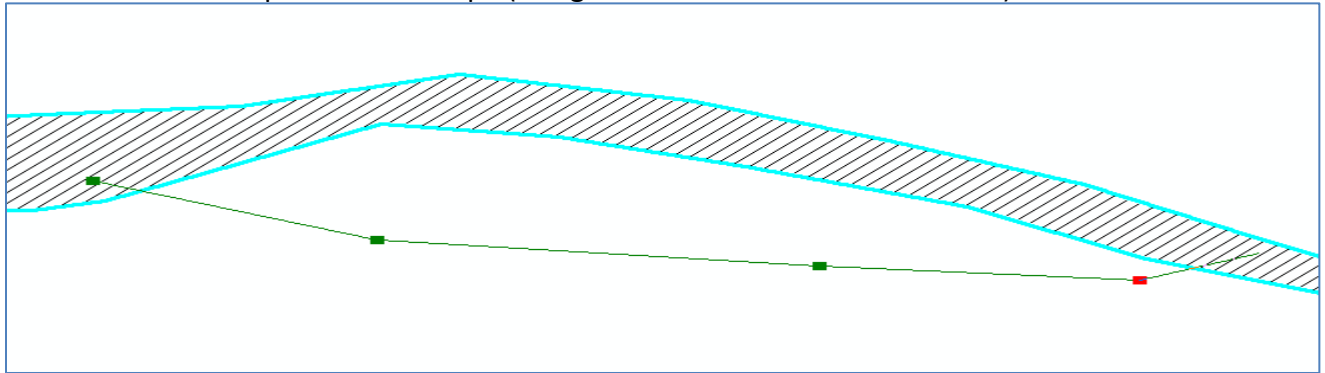
5) Reshaping Areas

- a) If your wetland area requires a lot of editing work, the **Reshape** tool works well to draw in new areas.

- b) First, select you feature with the Editor arrow. Then, select the **Reshape**



Tool to the right. Click inside of the feature first then draw outside of it to redraw the boundary. Double-click to complete the Reshape (or right-click and select 'Finish Sketch').



6) Cut Areas

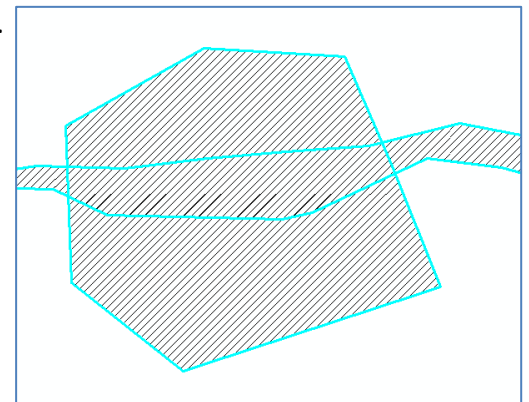
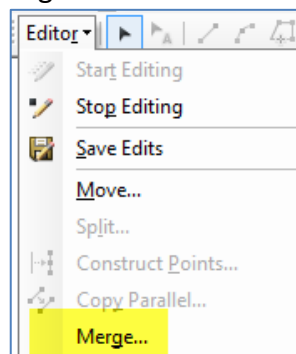
- a) Use the **Cut Polygons Tool** to split or cut your areas. This may be helpful if you need to separate two areas.



7) Merge Areas

- a) Use the **Merge tool** by selecting two or more wetland areas and merging them into a single file. You will be prompted to choose which feature (i.e. WL 1 or WL 2) you will be merging into.
- b) Say you wanted to merge these two features into one feature.
- i) Once they are both selected, select the menu drop-down on the Editor Toolbar and select Merge.

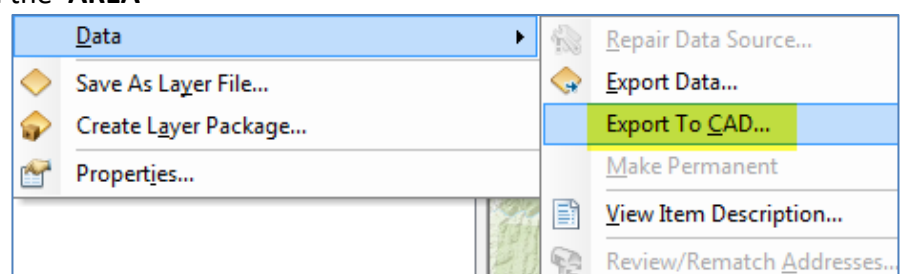
- 8) Save your edits, by using the Editor tool Drop-down menu and selecting '**Stop Edits**'. You will automatically be prompted to **save your Edits**. If you are unhappy with your edits, don't save. Also, remember '**Ctrl + Z**' or Undo is accepted in ArcMap.



EXPORT TO CAD

- Using the **Select Features** options outlined earlier, re-select your wetland features that need to be **exported to CAD**. This time you will be selecting features from the shapefile (not the service).
- Once they are all selected, right-click on the '**AREA**'

and choose **Data > Export to CAD**.



3. For the window that pops up, the **Input Features** will already have your wetland features loaded.

a. Selected features. Change the **Output Type** to '**DGN_V8**' and choose an appropriate output path and file name.

4. Leave the '**Ignore Paths in Tables**' box checked and '**Append to Existing Files**' unchecked (these are defaults).

5. For the **Seed file option**, select the 'template2d_foot_intl.dgn' located within the 'DGN_seed_files' folder on the environmental directory.

6. Select 'OK' and the DGN file **will automatically be placed in your table of contents**. The DGN file always creates 5 components: Point, Polyline, Polygon, MultiPatch, and Annotation. However, as you will see by opening the attribute tables for these components, only Polyline and Polygon have values populated.

7. Remove it from ArcMap if it is unnecessary and view it in **Microstation** to ensure that it was created correctly.

8. Remember, save this map to a local copy if you made any specific map edits or close out of the map and select 'Unsave' if you are still using the 'EXPORT_MAP' on the share drive.

9. After opening the file in Microstation, **adjust the layer properties that meet the standards** for your deliverable.

