Using Statewide Database (SWDB) Data in Maptitude: User Guide

Requirement: Maptitude for Redistricting 2020 Software

Resources:
- [Statewide Database Website](#)
- [Caliper's Maptitude for Redistricting 2020 Tutorial](#)
- [Caliper's Maptitude for Redistricting 2020 Learning Portal](#)
- [Caliper's Maptitude User Guide](#)

User Guide Content List:
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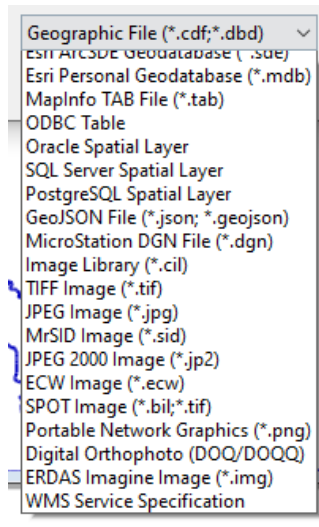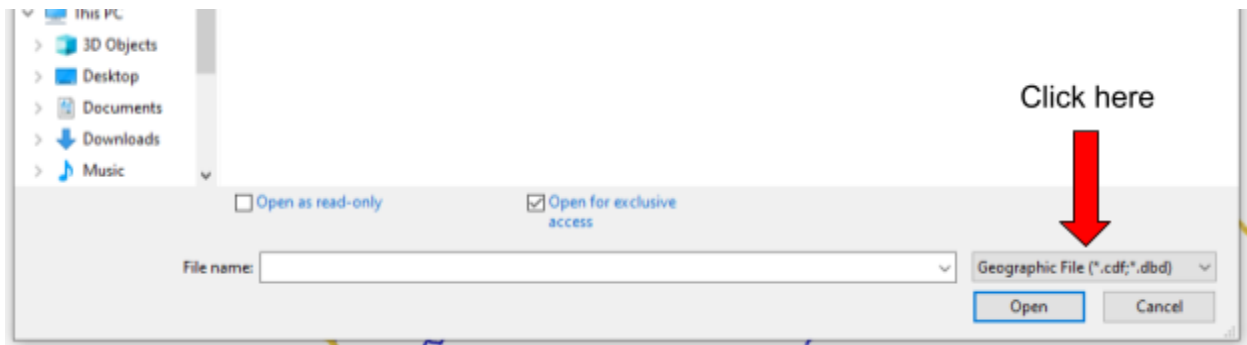9. Join block-level CVAP Data to the Census Block Layer

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1. Download District and Census Boundaries from SWDB:
   - Click [REDISTRICTING DATA](#) on the top right corner of SWDB website, find 2011 Redistricting Data Based on 2010 Census Geography, under GEOGRAPHIC DATA, click [District and Census Boundaries](#). You will be redirected to Geographic Data - Electoral Districts & Census TIGER.LINE Boundary Files page. Download the desired files under the data type: MAPTITUDE. *Note: .CDF is one of Maptitude's proprietary file types*
   - Once the file download is complete, go to file location and you will see a .ZIP file.
   - Right click on the downloaded file > "Extract All" > Select a destination/folder to keep the file > click "Extract"
   - *You can use these steps to download any .CDF files on SWDB*

2. Open .CDF file on Maptitude:
   - Open file location where you extracted the .zip file and you will see a .CDF file with an earth icon

Name	Date modified	Type	Size
06_blk14.bin	4/30/2021 11:37 AM	BIN File	63,802 KB
06_blk14	4/30/2021 11:37 AM	Caliper Compact ...	104,472 KB
06_blk14.DCB	4/30/2021 11:37 AM	DCB File	1 KB
06_blk14.sty	4/30/2021 11:37 AM	STY File	1 KB

- ○ Double click on it to automatically open it on Maptitude
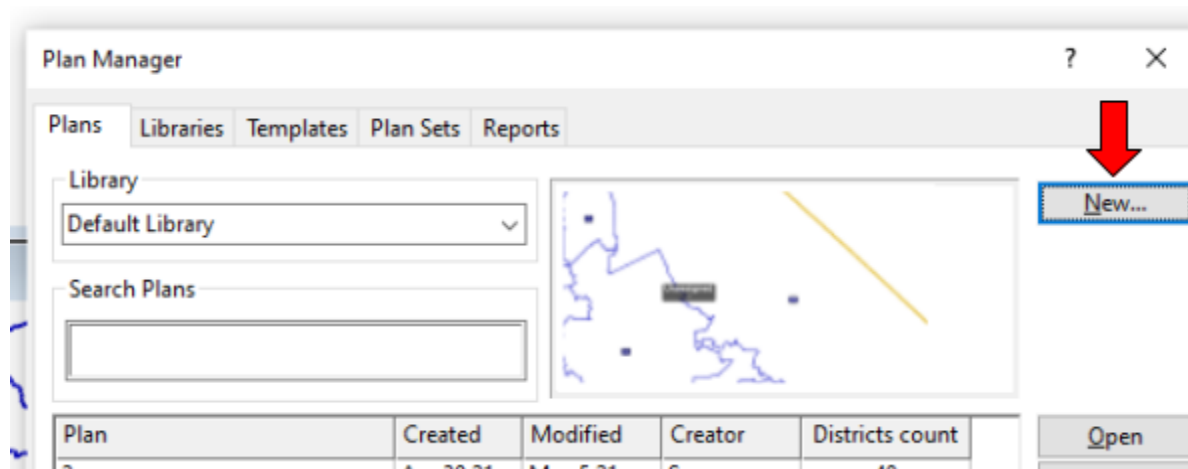
3. Adding Layers to the Map
   - ○ Right click on your map window > Click "Layers" > Click "Add Layer." A window will open so that you can browse the layer you want to add to your existing map. You can also use **Ctrl+L** to open the layers window.
   - ○ The default data type will be set to Geographic File (.cdf, .dbd). To add a different type of layer, choose the file type you would like to open from the drop-down menu.
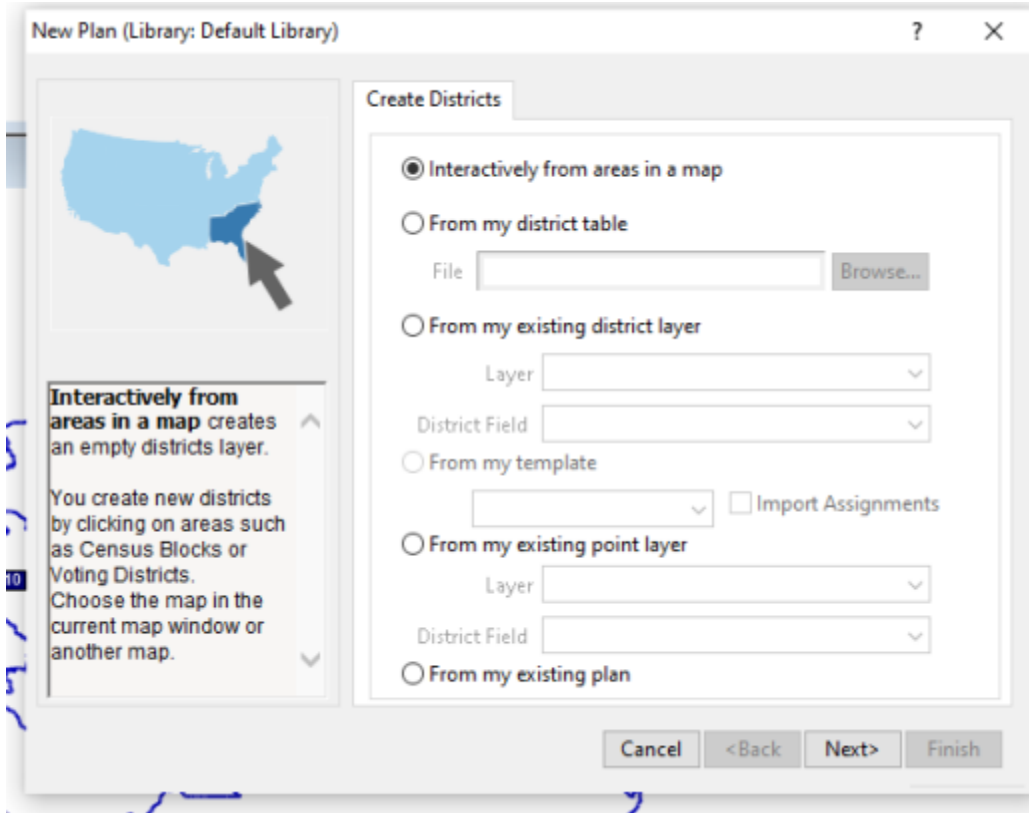
Click here

Geographic File (*.cdf;*.dbd)
Esri ArcSDE Geodatabase (*.sde)
Esri Personal Geodatabase (*.mdb)
MapInfo TAB File (*.tab)
ODBC Table
Oracle Spatial Layer
SQL Server Spatial Layer
PostgreSQL Spatial Layer
GeoJSON File (*.json; *.geojson)
MicroStation DGN File (*.dgn)
Image Library (*.cil)
TIFF Image (*.tif)
JPEG Image (*.jpg)
MrSID Image (*.sid)
JPEG 2000 Image (*.jp2)
ECW Image (*.ecw)
SPOT Image (*.bil;*.tif)
Portable Network Graphics (*.png)
Digital Orthophoto (DOQ/DOQQ)
ERDAS Imagine Image (*.img)
WMS Service Specification

- ○ After selecting your data, click "Open". Your layer should be visible on the Layer window; click "Close"

4. Creating a New Plan
   - ○ You cannot use Maptitude's redistricting tools until you create a plan
   - ○ *Note: Your base layer should be a census block layer*
   - ○ Redistricting > Plan Manager > Click "New..." .

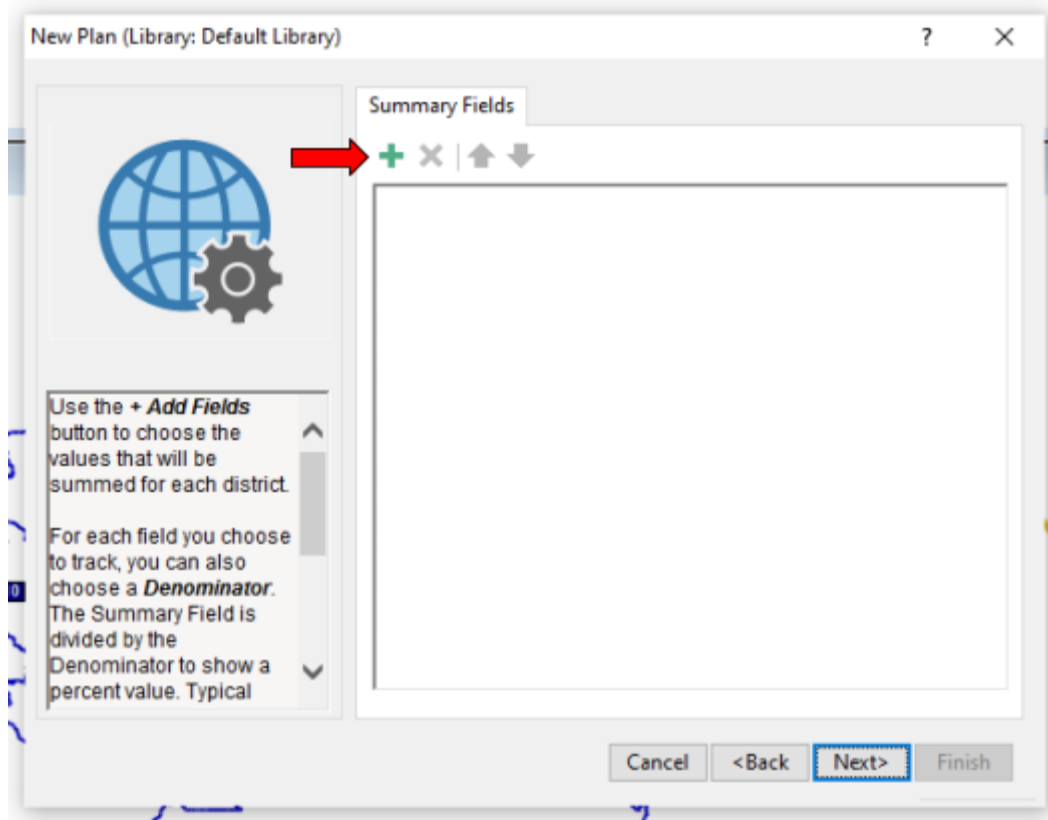- ○ You will be directed to the Create District window. Check the appropriate one that fits your data:

1. **Interactively from areas in a map**
   a. Supports FIle Type = .map files
   b. This creates an empty Districts layer. You create new districts by adding area from layers on the map, for example the Census Block layer.
   c. Choose the map in the current map window or another map.
2. **From my district table**
   a. Supports File Type = .xlsx, .xls, .bin, .csv, .txt, .tab, .dbf, .asc
   b. This creates districts based on an equivalency or block assignment file.
3. **From my existing district layer**
   a. Supports File Type = .map files
   b. This lets you use an area layer in an open map as your districts.
   c. This is a good choice if you have an existing Districts layer you want to work with and modify
4. **From my Template:**
   a. Disabled until you create or import a template on the Templates tab which can be located on the Plan Manager window
5. **From my existing point layer**
   a. Supported File Type = .map files
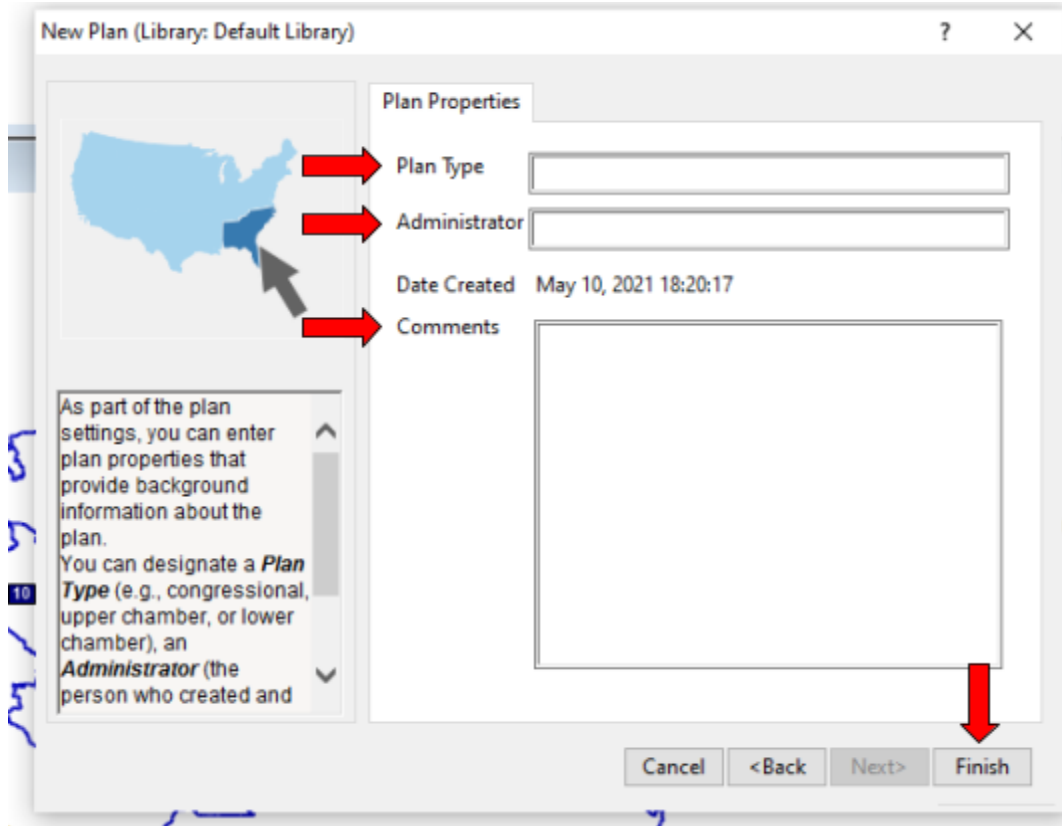   b. This assigns areas to the district of your closest point.

      c. This option uses a point layer (e.g., registered voters) to create districts. This option requires a field of names or identifiers for the districts to which the points belong (e.g. Congressional, State House/Senate code).

      d. With this option, Maptitude for Redistricting assigns areas (e.g., registered voters) to the district of your point location that they are nearest to in straight-line distance.

      e. Overlapping districts are not created, even if multiple points are in the same area. Areas are not assigned to a district if they fall outside of the circular boundary that encompasses all of your points.

6. **From my existing plan**

      a. This creates a copy of an existing plan or plan backup.

- If you select "Interactively from areas in a map" OR "From my existing district layer" OR "From my existing point layer" OR "From my existing plan", browse and select on your dataset, click "Open", then click "Next>"
- If you select "From my district table" > click "Browse…" > Select the appropriate table for your map > click "Next>"
- Before continuing, you need to generate an ideal value. Generating the ideal value is determined by the number of districts. To let Maptitude to auto generate the "Ideal Value", click "Compute" > click "Next>"
- Add Summary Fields by clicking on the green "+" button. You can also leave it blank. Click "Next>"

○ Add the appropriate text on Plan Type, Administrator, and Comments > click "Finish"

- ○ A pop-up will prompt you to save the plan. Name it accordingly.
- ○ Depending on the scale of the dataset, it might take a while to load. Please be patient.

5. Loading geographic data into Maptitude:
   - ○ Click REDISTRICTING DATA on the top right corner of SWDB website, find 2011 Redistricting Data Based on 2010 Census Geography, under GEOGRAPHIC DATA, click 2002-2011 Precinct to Block Conversions.
   - ○ You have the options to download 3 different types of precinct data; choose accordingly. We recommend using SR:
     - ■ **RG**: Original Registration Precincts (designated by County Registrar)
     - ■ **RR**: Registration Precincts. RR precincts are aggregations of RG precinct tabular data into MPREC geography. Generally speaking Map Precincts are RR precincts
     - ■ **SR**: Consolidated Precinct. Because the resulting RR precincts may include RG precincts that are consolidated into different SVPRECs (Original Voting Precincts), we create geographic consolidation SR precincts to contain whole RR and SV precincts.
   - ○ Depending on the file you have downloaded, follow steps 6 or 7.
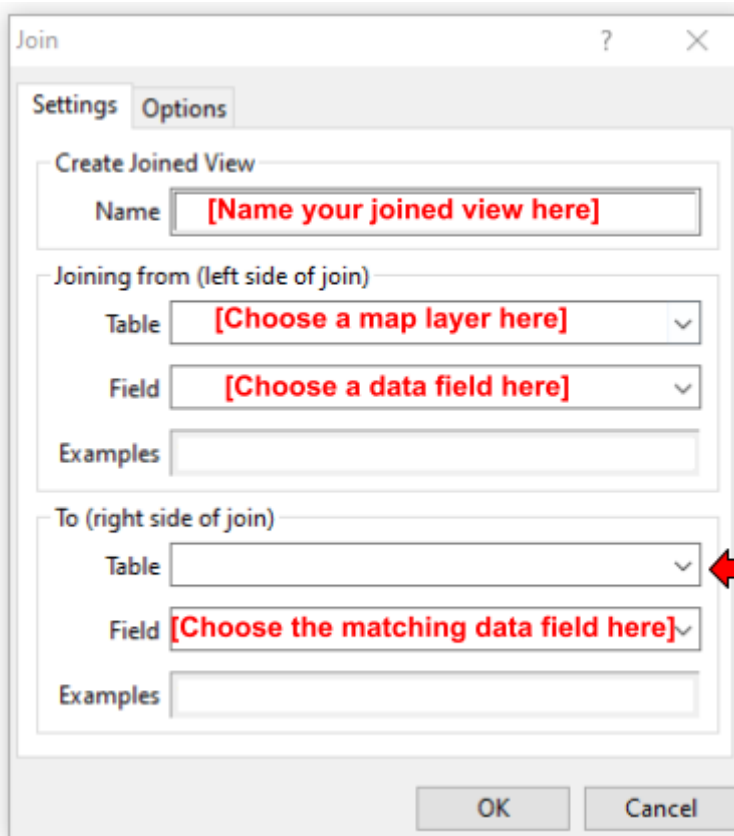
6. Opening a .bin file to view it on Dataview:
   - File > New… > Dataview > Click "OK" > Double click "Open File…" > Browse your folder for the appropriate .bin file > Click "Open"
   - Dataview window will open

7. Quickly Starting a Map Using a .DBF file:
   - File > New… > Map > Click "OK" > Select "Map my data/table/spreadsheet" > Next to "Files" click "Browse" > Browse your folder for the appropriate .xlsx file and click "Open" > "Choose your excel sheet" pop-up will open, select your excel file and click "OK" > click "Next >" > Review the fields to be used to map your data > click "Next>" > Click "Finish"

8. Merge Data to Geography in Maptitude
   - Creating a Joined View:
     i. Dataview > Table > Join, then fill in the required information accordingly:

     ii. Click "OK"

> iii.   A join view will be created that links your map layer to the dataview.

9. Join block-level CVAP Data (table) to the Census Block Layer
   ○ Plan Manager > File > Open > Browse for your block-level cvap data
   ○ Open a map that contains the census block layer
   ○ Choose Redistricting > Plan Utilities > Disaggregate/Aggregate… > Click "Table"
   ○ At the "Choose a Layer or Table to Disaggregate" section, choose the desired data from the "Table" dropdown > on the "Match Field", choose the field containing the Census Block codes
   ○ At the "Choose a Layer with Matching Geography" section, choose "Census Block" from the "Layer" dropdown > on the "Match Field" select "Block"

   ○ Click "Next>" > Look through the list and uncheck fields or check fields you wish to include or not include > Click "Next>" > Uncheck any layers you do not want aggregate > Click "Finish"