Accessibility to Walmart Distribution Center Tutorial

This tutorial uses Walmart retailer stores and Walmart distribution center data to practice locating points, calculating influencing area, managing attribute table, tagging attribute, choosing subset, calculating distance matrix.

1. Locate Walmart distribution centers

(1) File -> Open -> Change file type as "Excel Worksheet" -> Open "Walmart Distribution Center.xlsx"

(2) Tools -> Locate -> Locate by Address

Only 27 out of 42 distribution centers are located by address.

(3) Tools -> Locate -> Locate by ZIP Code

Locate By ZIP Code (View: Walmart Distribution) ? ×

Create Layer

Name Walmart Distribution

Region USA (HERE) - 2016 Quarter 4   ...

Using

Records Address Not Found

ID Field

ZIP Code Field PostalCode

Locate Records

● Centered at the ZIP Code point
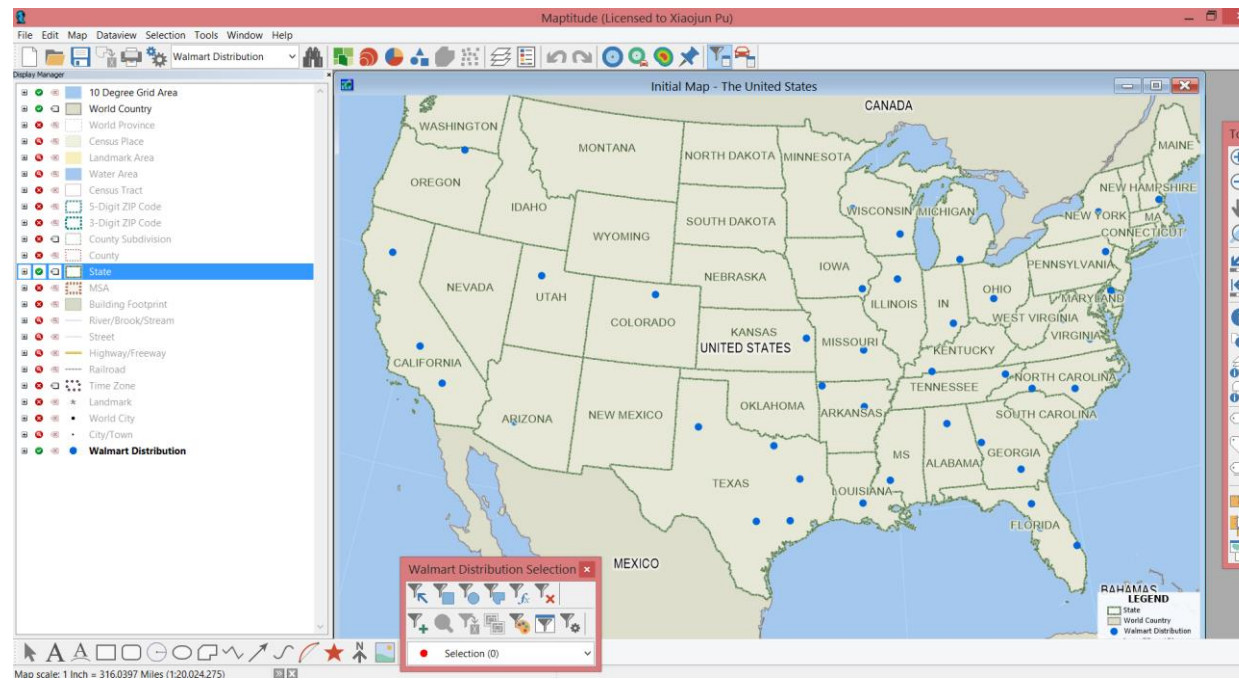○ Scattered Evenly inside the ZIP Code area
○ Scattered within 1 Miles of the ZIP Code

OK   Cancel

Locate By ZIP Code (View: Walmart Distribution) Results ? ×

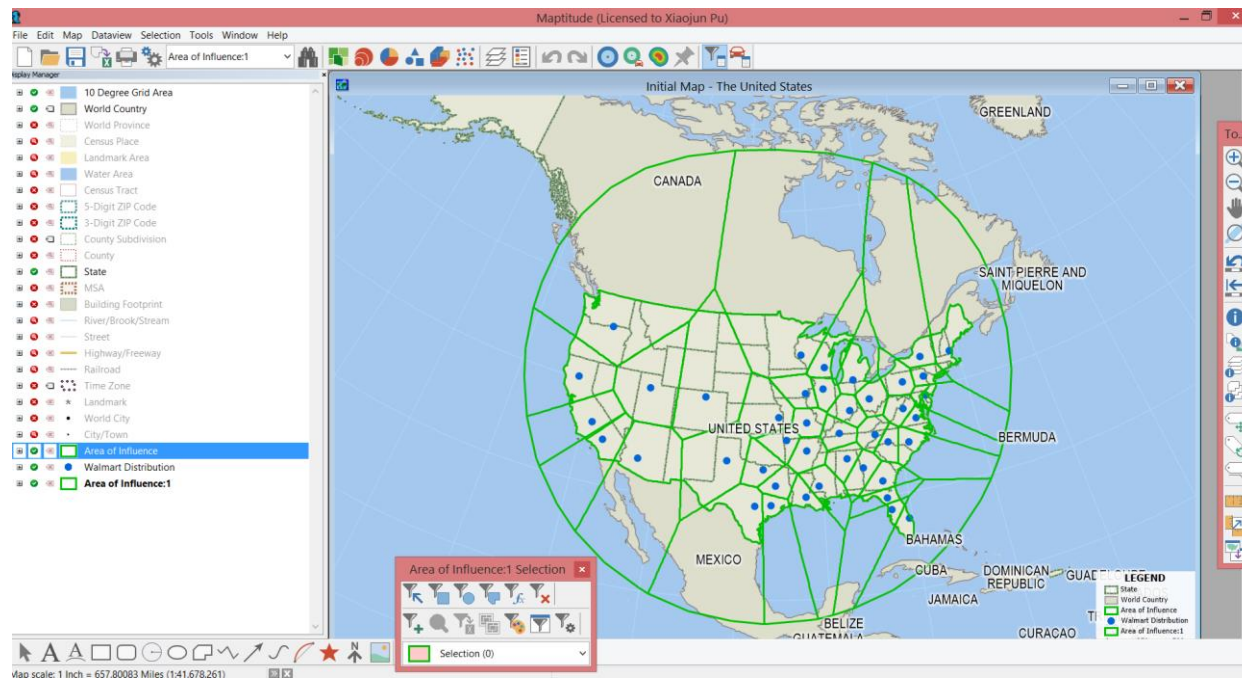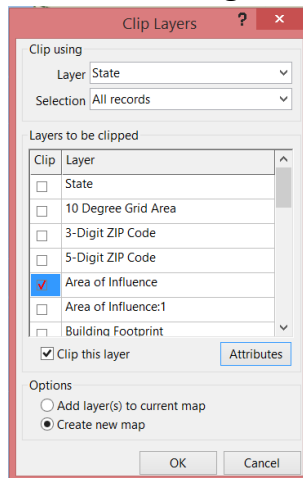| Results	Number of Records
Total Records Examined	15
Records Located	15
Records Not Located	0
Records with Invalid IDs	0

OK

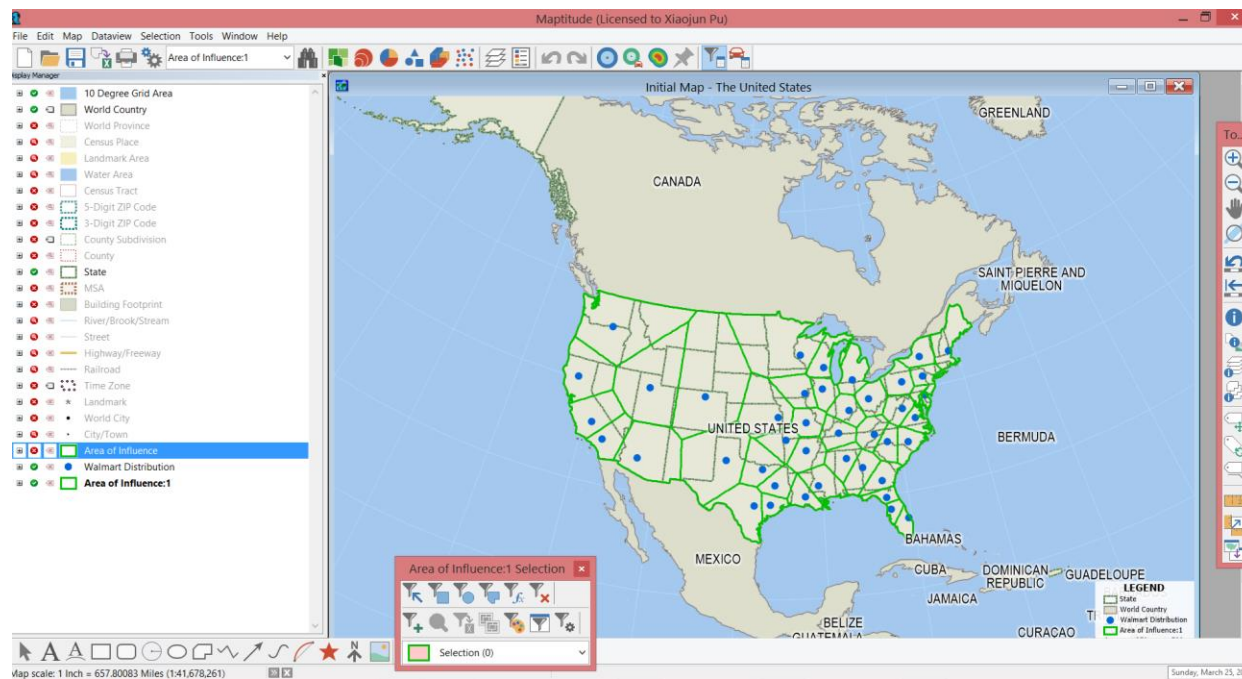## 2. Calculate area of influence around Walmart distribution centers

(1) Tools -> Analysis -> Straight Line Influence Areas
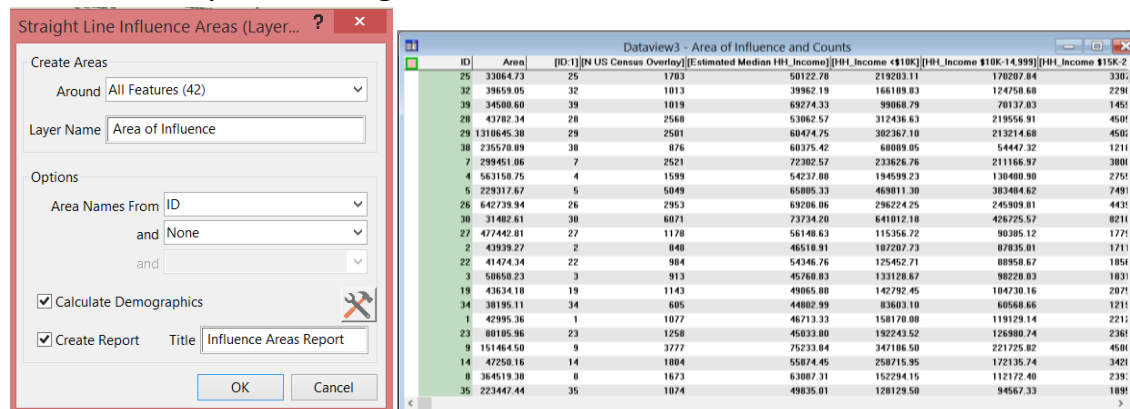
(2) Tools -> Editing -> Clip Layers

3. Import Walmart retailer stores
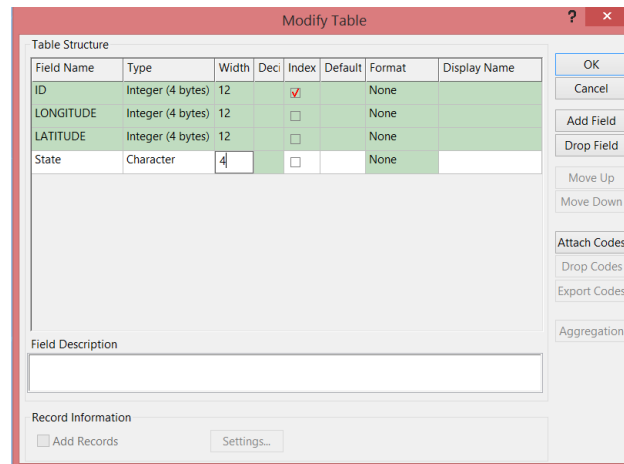
(1) File -> Open -> Change file type as "Geographic File" -> Open "nWalmart.Cdf"

(2) Map Layers ⬚ -> choose "US Walmart" layer -> click "Move Up" to display Walmart distribution centers layer above Walmart retailer stores layer
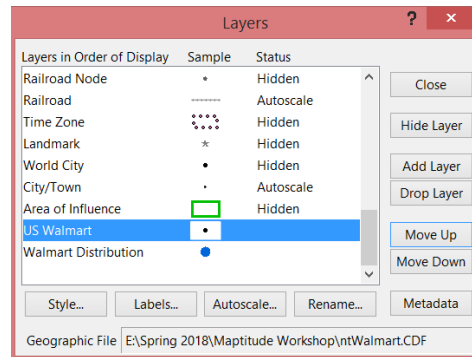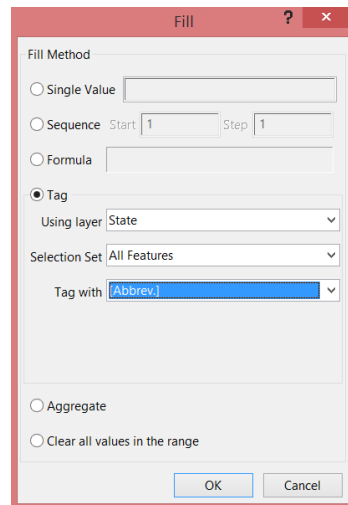
4. Choose Walmart located in TX

(1) Choose "US Walmart" as the active layer from the drop-down list.

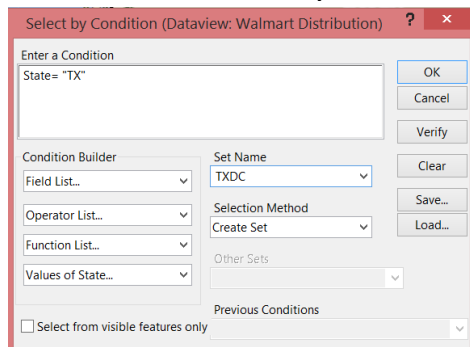(2) Dataview -> Table -> Modify Table -> Add Field

(3) Dataview -> New Dataview -> choose "state" column -> right click -> Fill -> Tag

(4) Choose "Walmart Distribution Center" as the active layer -> Tag state abbreviations to the layer

(5) Selection -> Select by Condition

(6) Select Walmart retailer stores in TX
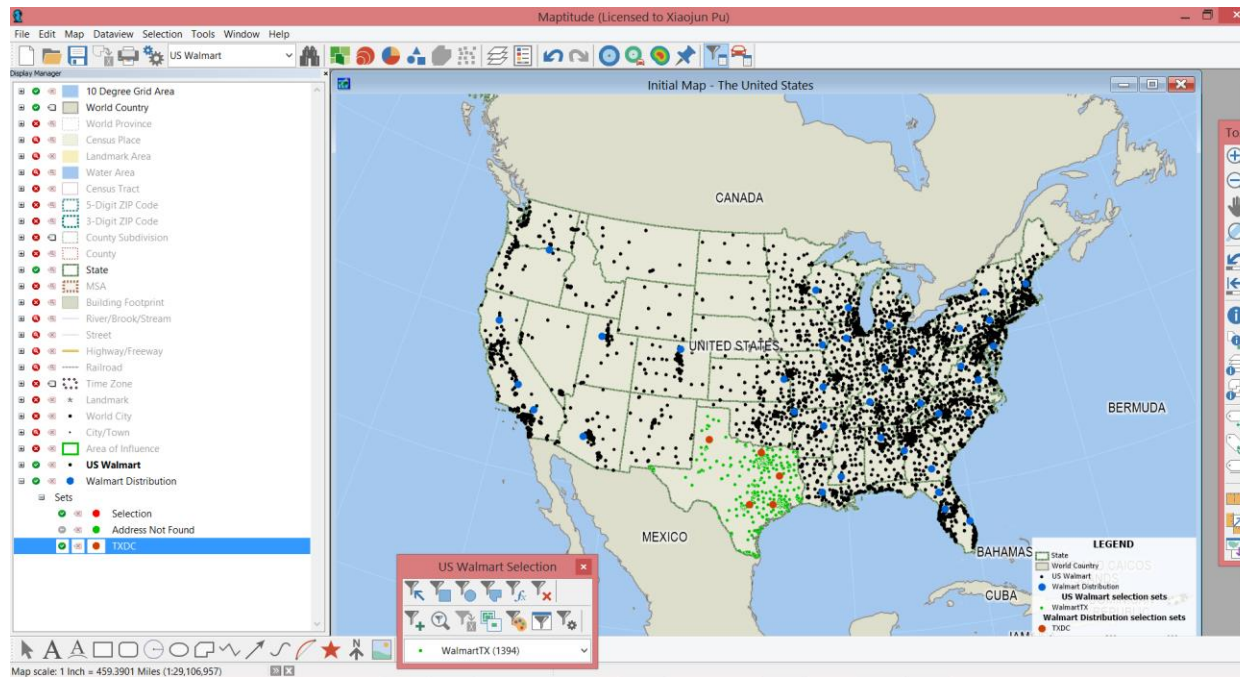
(7) Change color of selected sets
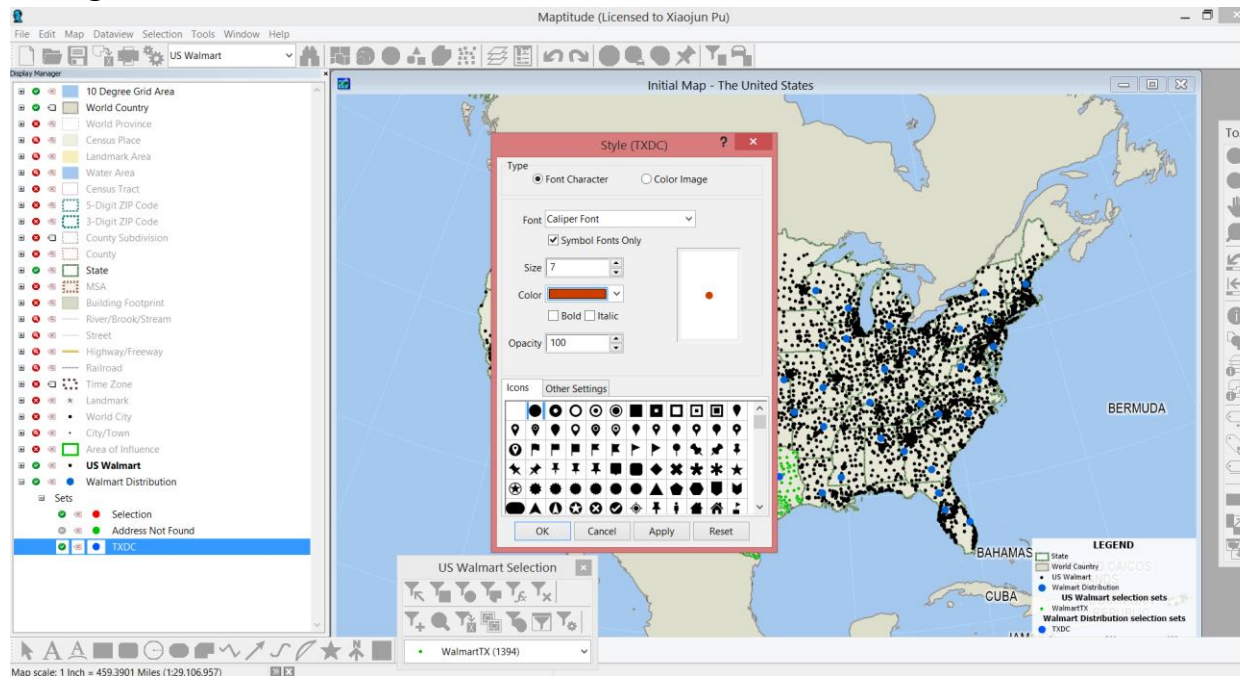
(8) The selected subset should be displayed as

5. Calculate distance matrix

(1) Tools -> Routing & Directions ->Distance and Travel Time Tables -> It takes about half hour for calculation

ID	33	34	35	36	37
7801	184.5977	406.178	373.1634	399.2006	299.92
7809	184.5977	406.178	373.1634	399.2006	299.92
7817	184.5977	406.178	373.1634	399.2006	299.92
22833	256.0893	473.5872	643.2062	533.0977	326.5673
22841	256.0893	473.5872	643.2062	533.0977	326.5673
22849	171.3039	392.8843	430.8303	432.3895	286.6262
22857	171.3039	392.8843	430.8303	432.3895	286.6262
22865	171.3039	392.8843	430.8303	432.3895	286.6262
22873	145.2368	366.8172	456.9994	421.1243	259.5519
22881	145.235	366.8154	456.9977	421.1226	259.5501
22889	145.235	366.8154	456.9977	421.1226	259.5501
22897	110.3399	331.9203	410.3563	380.7317	225.6622
22905	110.3399	331.9203	410.3563	380.7317	225.6622
22913	110.3399	331.9203	410.3563	380.7317	225.6622
22921	189.5797	411.16	543.4244	465.4675	282.5892
22929	189.5708	411.151	543.4154	465.4585	282.5802
22937	189.5708	411.151	543.4154	465.4585	282.5802
22945	189.5708	411.151	543.4154	465.4585	282.5802
22953	186.8173	408.3976	540.662	462.705	277.037
22961	186.8173	408.3976	540.662	462.705	277.037
22969	186.8173	408.3976	540.662	462.705	277.037
22977	182.7497	404.3301	536.5945	458.6374	281.0707
22985	182.7497	404.3301	536.5945	458.6374	281.0707
22993	180.4497	402.0301	534.2946	456.3374	279.6699
23001	84.34583	305.9263	448.396	360.2333	199.258
23009	84.34583	305.9263	448.396	360.2333	199.258

(2) Use "=MATCH(MIN(B2:F2),B2:F2,0)" command in Excel to find the closest distribution center of each retailer store