

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”



ID	Address	PostalCode
1	2200 7th Avenue SW, Cullman, AL, 35055, USA	35055
2	5801 Southwest Regional Airport Boulevard, Bentonville, AR, 72712-9431, USA	72712-9431
3	405 E Booth Rd, Searcy, AR, 72143-8854, USA	72143-8854
4	24701 West Southern Avenue, Buckeye, AZ, 85326-4928, USA	85326-4928
5	21101 Janssen Road, Apple Valley, CA, 92307, USA	92307
6	1300 South F Street, Porterville, CA, 93257-5968, USA	93257-5968
7	10015 State Highway 99W, Red Bluff, CA, 96088, USA	96088
8	7500 East Crossroads Blvd, Loveland, CO, 80538, USA	80538
9	4860 Wheatley's Pond Rd, Smyrna, DE, 19977, USA	19977
10	10015 NW 115th Ave, Alachua, FL, 32615-6056, USA	32615-6056
11	5100 Kettering Road, Brooksville, FL, 34602-8311, USA	34602-8311
12	4001 S Jenkins Rd, Fort Pierce (St Lucie County), FL, 34981-4629, USA	34981-4629
13	1401 Baker Hwy W, Douglas, GA, 31533, USA	31533
14	385 Calloway Church Rd, LaGrange, GA, 30241, USA	30241
15	1501 E Mapleleaf Dr, Mt Pleasant, IA, 52641, USA	52641
16	3100 Illinois Highway #1, Spring Valley, IL, 61362, USA	61362
17	2100 East Tipton Street, Seymour, IN, 47274, USA	47274
18	3300 Highway K 68, Ottawa, KS, 66867, USA	66867
19	680 Crenshaw Blvd, Hopkinsville, KY, 42240, USA	42240
20	3160 Highway 743m, Opatovass, LA, 70570, USA	70570
21	510 Jonesville Rd, Coldwater, MI, 49036, USA	49036
22	1100 Matlock Dr., St. James, MO, 65559, USA	65559
23	2200 & 2210 Manufacturers Blvd., Brookhaven, MS, 39601, USA	39601
24	1057 Sand Hill Road, Hope Mills, NC, 28348-9467, USA	28348-9467

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

Locate by Address (View: Walmart Distrib... ? x

Data To Locate: Address | Postal Codes

Create Layer

Name: Walmart Distribution Center Layer

By locating: All Records

In Region: USA (HERE) - 2016 Quarter 4

Streets/Index: HERE Streets (USA, October 2016)

Input Fields

Record ID: ID

Address Fields: Address

(continued):

ZIP Code: PostalCode

Mode: ☒ Automatic ☐ Ask if Uncertain

OK Cancel

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

Locate by Address Results ? x

Results	Number of Records
Total Records Examined	42
Records Located	27
Records Not Located	15
Records with Invalid IDs	0
Street Addresses	42
Intersections	0

OK

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

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

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

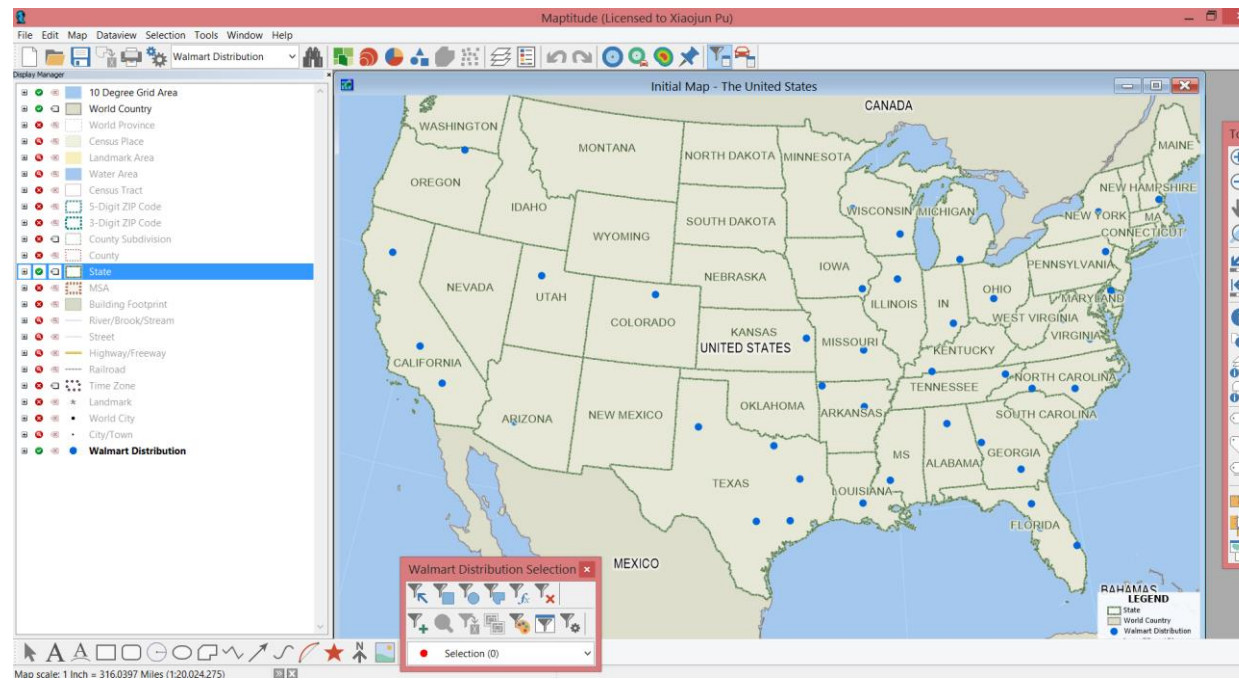
☐ Scattered within 1 Miles of the ZIP Code

OK Cancel

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

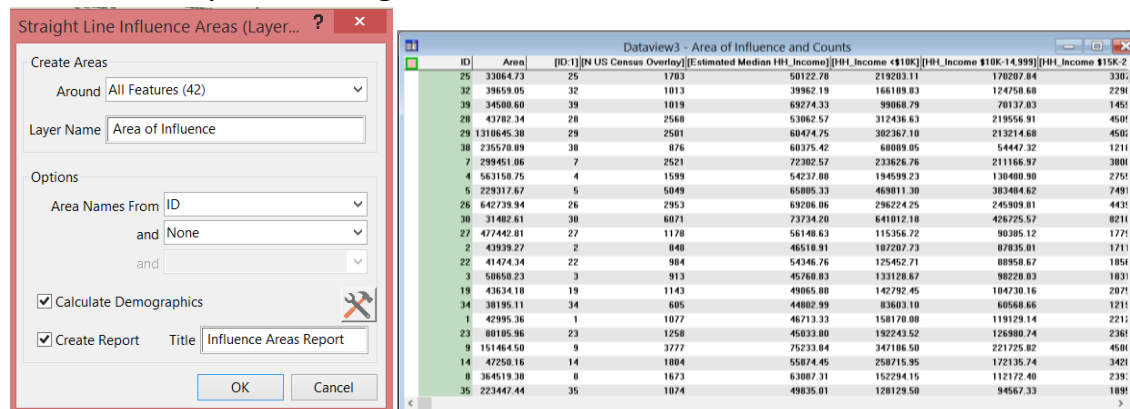
Results	Number of Records
Total Records Examined	15
Records Located	15
Records Not Located	0
Records with Invalid IDs	0

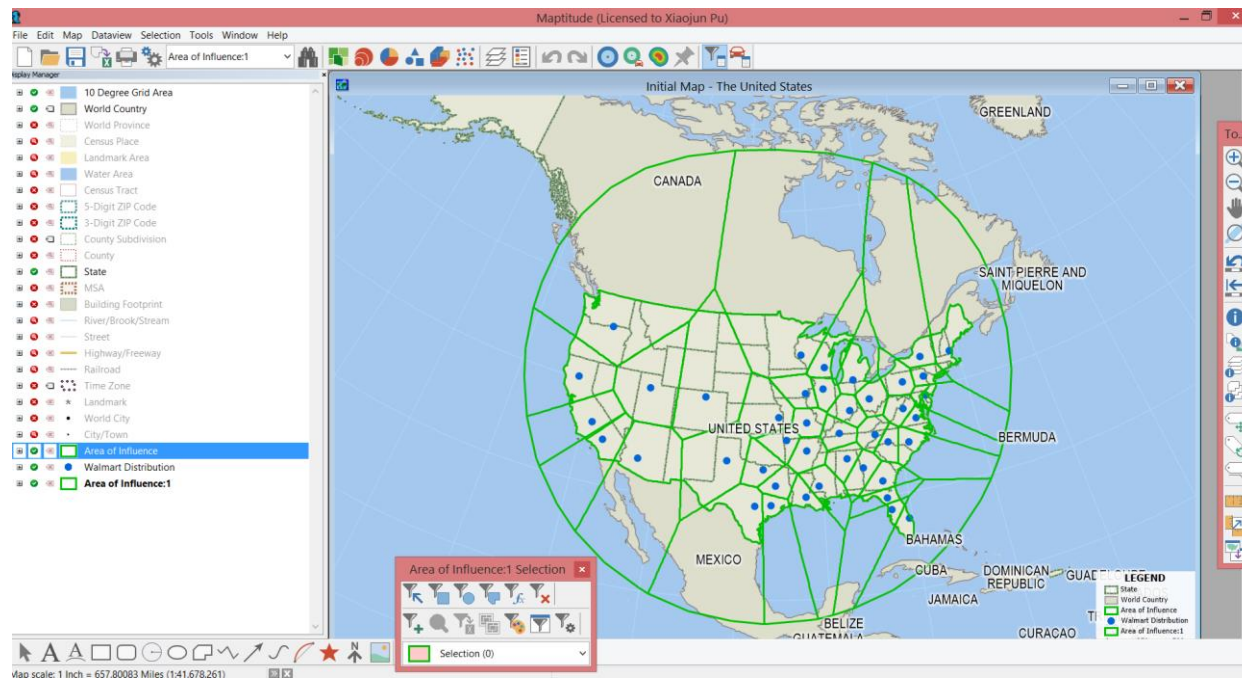
OK



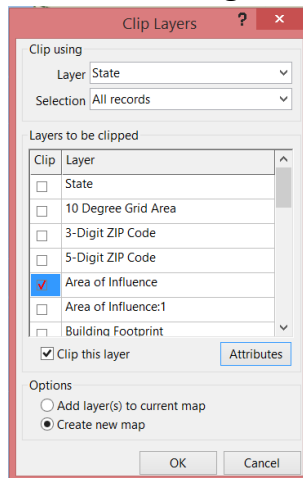
2. Calculate area of influence around Walmart distribution centers

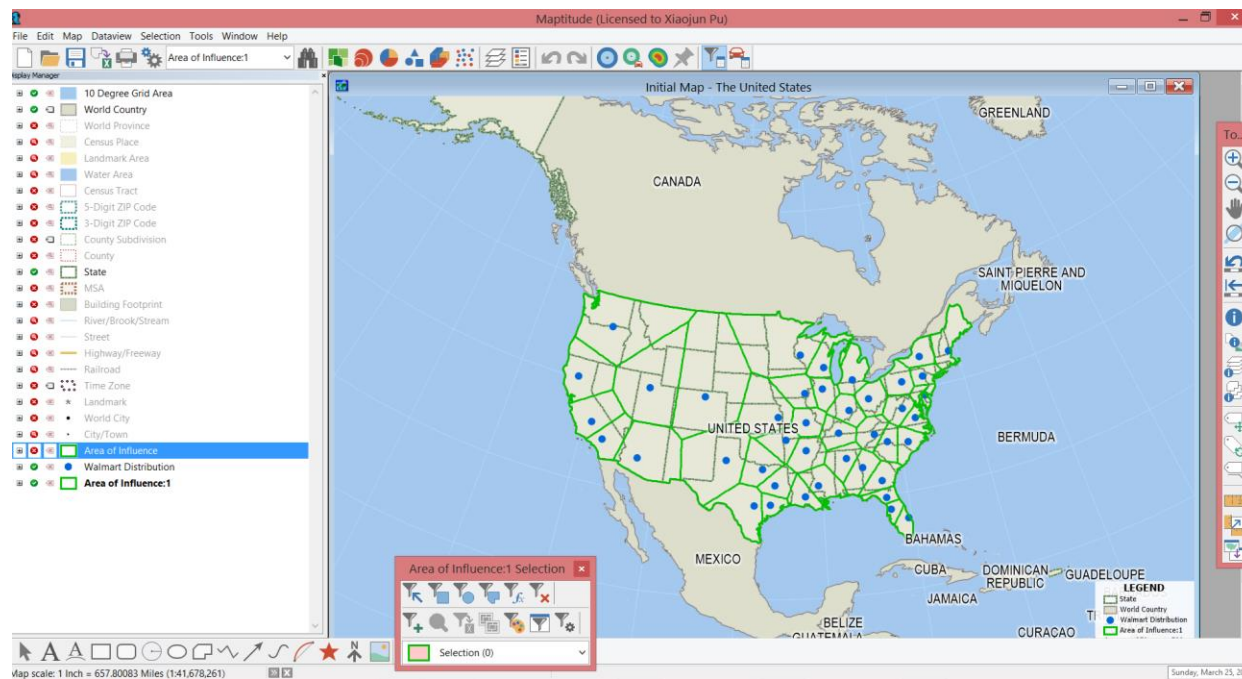
(1) Tools -> Analysis -> Straight Line Influence Areas






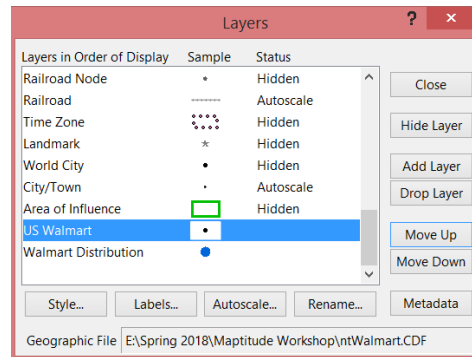
(2) Tools -> Editing -> Clip Layers





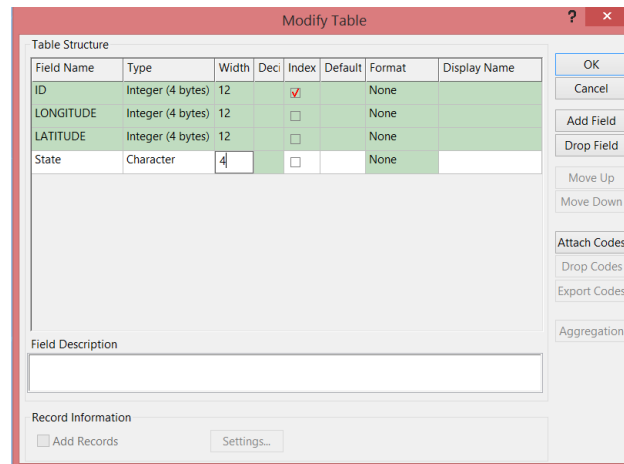
3. Import Walmart retailer stores

- (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

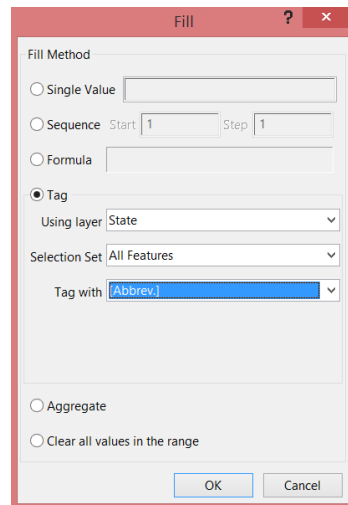


4. Choose Walmart located in TX

- (1) Choose “US Walmart” as the active layer from the drop-down list.
- (2) Dataview -> Table -> Modify Table -> Add Field



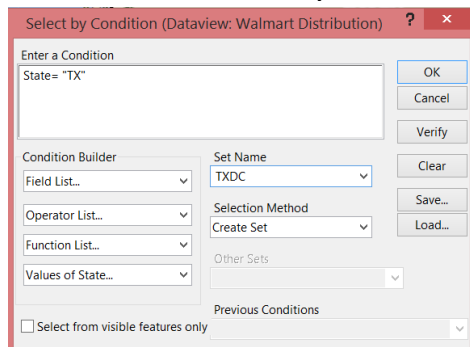
(3) Dataview -> New Dataview -> choose “state” column -> right click -> Fill -> Tag



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

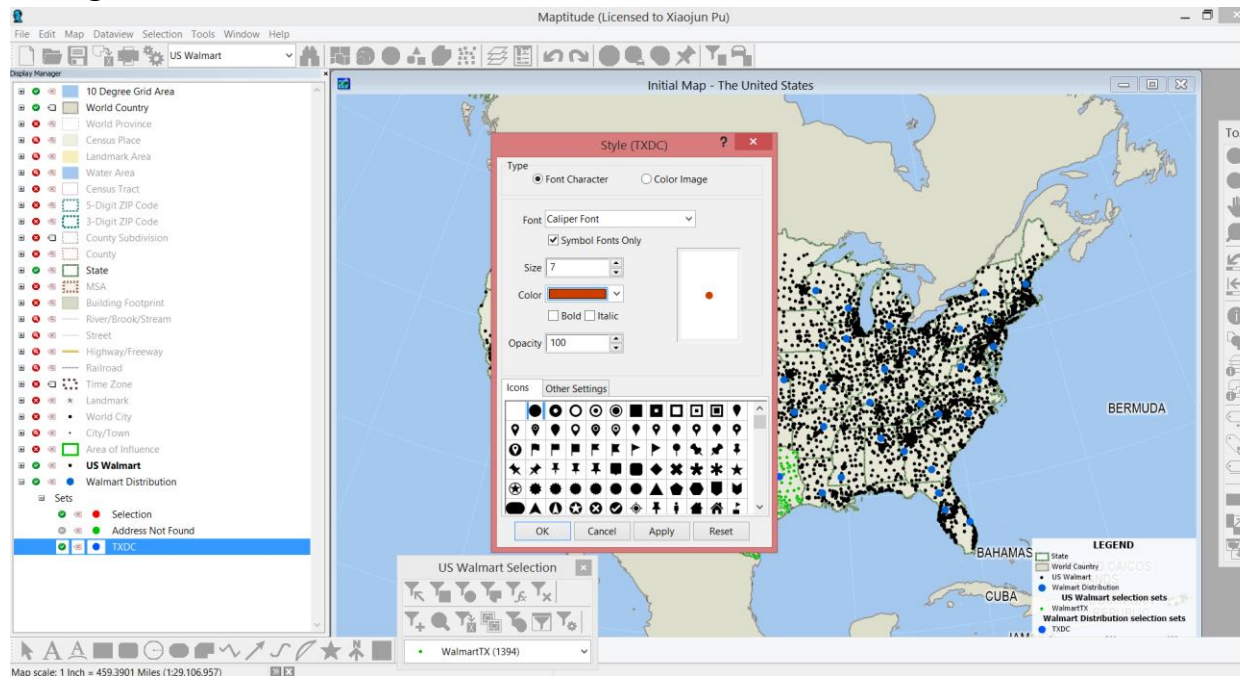
Longitude	Latitude/Address	PostalCode	State
-71163891	43035719 42 Freetown Road, Raymond, NH, 03077-2385, USA	03077-2385	NH
-75315174	43168556 8827 Old River Rd, Marcy, NY, 13403, USA	13403	NY
-78348108	41009760 100 Wal-Mart Dr. State Rte 970, Woodland, PA, 16881, USA	16881	PA
-75425101	41180919 300 Veterans Dr. Tobyhanna, PA, 18466, USA	18466	PA
-75626247	39289360 4860 Wheatley's Pond Rd, Smyrna, DE, 19977, USA	19977	DE
-78922063	38357768 6000 Walton Way, Mount Crawford, VA, 22841, USA	22841	VA
-77533653	37195147 21504 Cox Rd, Sutherland, VA, 23885, USA	23885	VA
-81533578	35309201 220 Wal-Mart Drive, Shelby, NC, 28150, USA	28150	NC
-78958483	34979282 1057 Sand Hill Road, Hope Mills, NC, 28348-9467, USA	28348-9467	NC
-84964986	33030252 385 Calloway Church Rd, LaGrange, GA, 30241, USA	30241	GA
-82862610	31500986 1401 Baker Hwy W, Douglas, GA, 31533, USA	31533	GA
-82542996	29761819 18815 NW 115th Ave, Alachua, FL, 32615-6056, USA	32615-6056	FL
-82220121	28503998 5100 Kettering Road, Brooksville, FL, 34602-8311, USA	34602-8311	FL
-80381969	27384055 4001 S Jenkins Rd, Fort Pierce (St Lucie County), FL, 34981-4629, USA	34981-4629	FL
-86845963	34142442 2200 7th Avenue SW, Cullman, AL, 35055, USA	35055	AL
-83023174	36203408 1655 Prottertown Rd, Midway, TN, 37809, USA	37809	TN
-90444531	31578650 2200 & 2210 Manufacturers Blvd., Brookhaven, MS, 39601, USA	39601	MS
-87476224	36730865 690 Crenshaw Blvd, Hopkinsville, KY, 42240, USA	42240	KY
-83103532	39892782 3880 Southwest Blvd, Grove City, OH, 43123, USA	43123	OH
-85849912	38957892 2100 East Tipton Street, Seymour, IN, 47274, USA	47274	IN
-84974569	41985599 510 Jonesville Rd, Coldwater, MI, 49036, USA	49036	MI
-91533261	40974119 1501 E Mapleleaf Dr, Mt Pleasant, IA, 52641, USA	52641	IA
-88800635	43505747 115 Distribution Way, Beaver Dam, WI, 53916, USA	53916	WI

(5) Selection -> Select by Condition

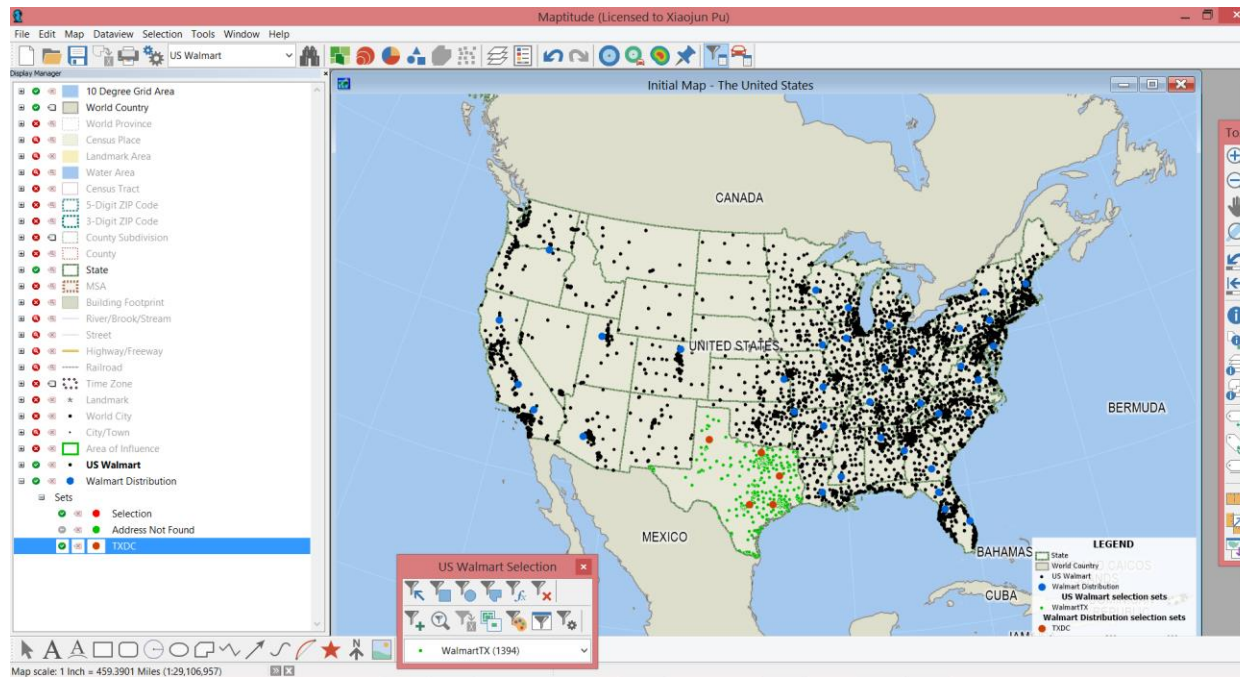


(6) Select Walmart retailer stores in TX

(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

Distance and Travel Time Tables ? x

Origins (From)

Layer US Walmart v

Selection WalmartTX (1,394) v

Name ID v

Destinations (To)

Layer Walmart Distribution v

Selection TXDC (5) v

Name ID v

Options

Using Distance v

☐ Skip calculation for Distance greater than 1000 mi

Output

☒ Matrix ☐ Table

☒ Open in Excel

OK Cancel

	ID	33	34	35	36	37
1						
2	7801	184.5977	406.178	373.1634	399.2006	299.92
3	7809	184.5977	406.178	373.1634	399.2006	299.92
4	7817	184.5977	406.178	373.1634	399.2006	299.92
5	22833	256.0893	473.5872	643.2062	533.0977	326.5673
6	22841	256.0893	473.5872	643.2062	533.0977	326.5673
7	22849	171.3039	392.8843	430.8303	432.3895	286.6262
8	22857	171.3039	392.8843	430.8303	432.3895	286.6262
9	22865	171.3039	392.8843	430.8303	432.3895	286.6262
10	22873	145.2368	366.8172	456.9994	421.1243	259.5519
11	22881	145.235	366.8154	456.9977	421.1226	259.5501
12	22889	145.235	366.8154	456.9977	421.1226	259.5501
13	22897	110.3399	331.9203	410.3563	380.7317	225.6622
14	22905	110.3399	331.9203	410.3563	380.7317	225.6622
15	22913	110.3399	331.9203	410.3563	380.7317	225.6622
16	22921	189.5797	411.16	543.4244	465.4675	282.5892
17	22929	189.5708	411.151	543.4154	465.4585	282.5802
18	22937	189.5708	411.151	543.4154	465.4585	282.5802
19	22945	189.5708	411.151	543.4154	465.4585	282.5802
20	22953	186.8173	408.3976	540.662	462.705	277.037
21	22961	186.8173	408.3976	540.662	462.705	277.037
22	22969	186.8173	408.3976	540.662	462.705	277.037
23	22977	182.7497	404.3301	536.5945	458.6374	281.0707
24	22985	182.7497	404.3301	536.5945	458.6374	281.0707
25	22993	180.4497	402.0301	534.2946	456.3374	279.6699
26	23001	84.34583	305.9263	448.396	360.2333	199.258
27	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