

OnTheMap

How To Create a Concentric Ring Analysis

Local Employment Dynamics

All About Jobs

Purpose: This document will demonstrate how to quickly create a “concentric ring analysis.” In short, this involves creating map overlays and reports that allow comparisons between three buffered areas radiating from a single location.

For a complete introduction to OnTheMap, as well as sample analyses, please go to the [OnTheMap Version 4 Information/Help Page](#).

Sample Workforce Question: **What are the characteristics of workers* employed within 5, 10, and 15 miles the Redbird Workforce Center in Dallas, TX?**

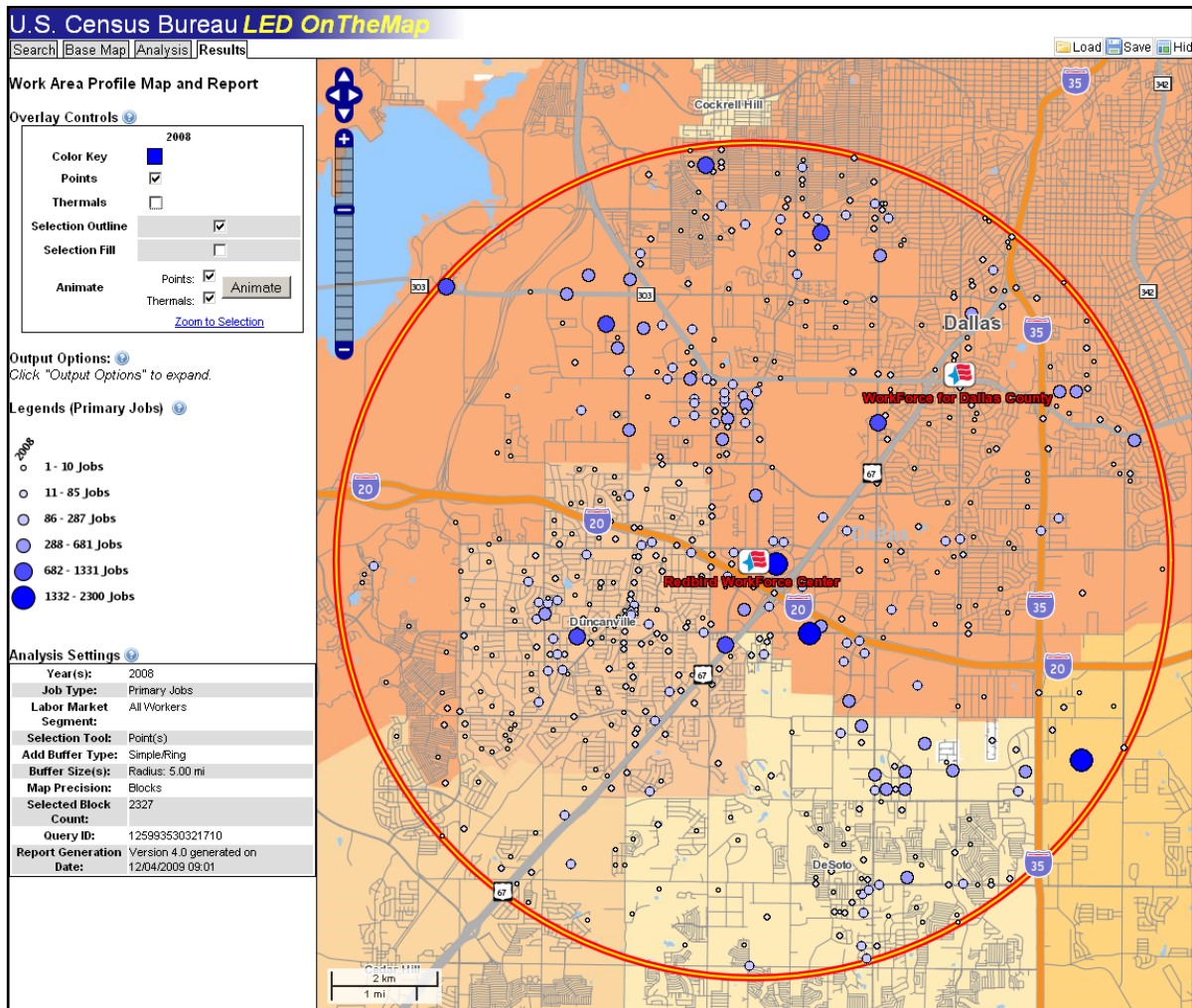
* Represented as primary jobs covered under the state unemployment insurance system.

1. Locate Redbird Workforce Center using OnTheMap

- a) Go to *Quick Links* at <http://lehd.did.census.gov> and choose *OnTheMap Version 4*.
- b) Enter *Redbird* in the Search Name text box and click *Enter*.
- c) Select *Redbird WorkForce Center* under the One-Stop Career Centers heading in the control panel on the left.

2. Create an Analysis using the Point(s) Selection Tool with the Simple/Ring buffer option

- a) After the map showing the One-Stop Center appears, click on the *Analysis* tab from the top of the control panel on the left.
- b) Select *Workplace Area*, 2008 under *Year(s)*, *Primary Jobs*, and *All Workers* from the Data Settings step. Click *Next* near the top of the control panel to proceed to the next step.
- c) Click on *Point(s)* from the available Selection Tools. Check the checkbox next to *Add Buffer to Selection* and enter “5” into the Radius box next to *Simple/Ring*. Using your mouse, simply left-click once in the map viewer on the symbol indicating the location of the Redbird Workforce Center.
- d) A red circle will appear in the *Area Shape* box in the control panel. Click *Next* to continue.
- e) In the third step, called Map Overlay/Report, keep the default setting – *Work Area Profile Analysis*. Near the top of the control panel, click *Go!* to generate the map overlay and report.



In the map above, the blue points represent employment locations within five miles of the One-Stop Center for 2008. Each point represents one Census Block.

3. Create Report (and/or Map Overlay) Output

- When the application finishes processing, click **Zoom to Selection** at the bottom of the Overlay Controls box. Map overlays of points, thermals, and a selection outline will appear within the five-mile buffer around the One-Stop Center. Overlay Controls, Output Options, Legends, and Analysis Settings should appear in the control panel on the left as part of the **Results** tab.
- If a Map Overlay output of each buffered area is desired, click on the **Print Map** button above the map viewer. Enter an appropriate Map Title, choose between HTML and PDF as the map output format, and click **Okay**. Set the map aside for now.
- In the middle of the control panel (with the **Results** tab active) click on the **Excel (XLS)** report output option to see the Work Area Profile report for the five mile buffered area. Make sure the pop-up blocker is turned off on your web browser and click **OK** when prompted to open the spreadsheet with Excel. Set the spreadsheet aside for now and return to the OnTheMap application.

4. Re-generate the Same Analysis Using a Different Ring Radius

- Click on the **Analysis** tab and select Step 2: Study Area Selection from the drop-down box. Change the Radius value from "5" to "10" and press Enter. There is no

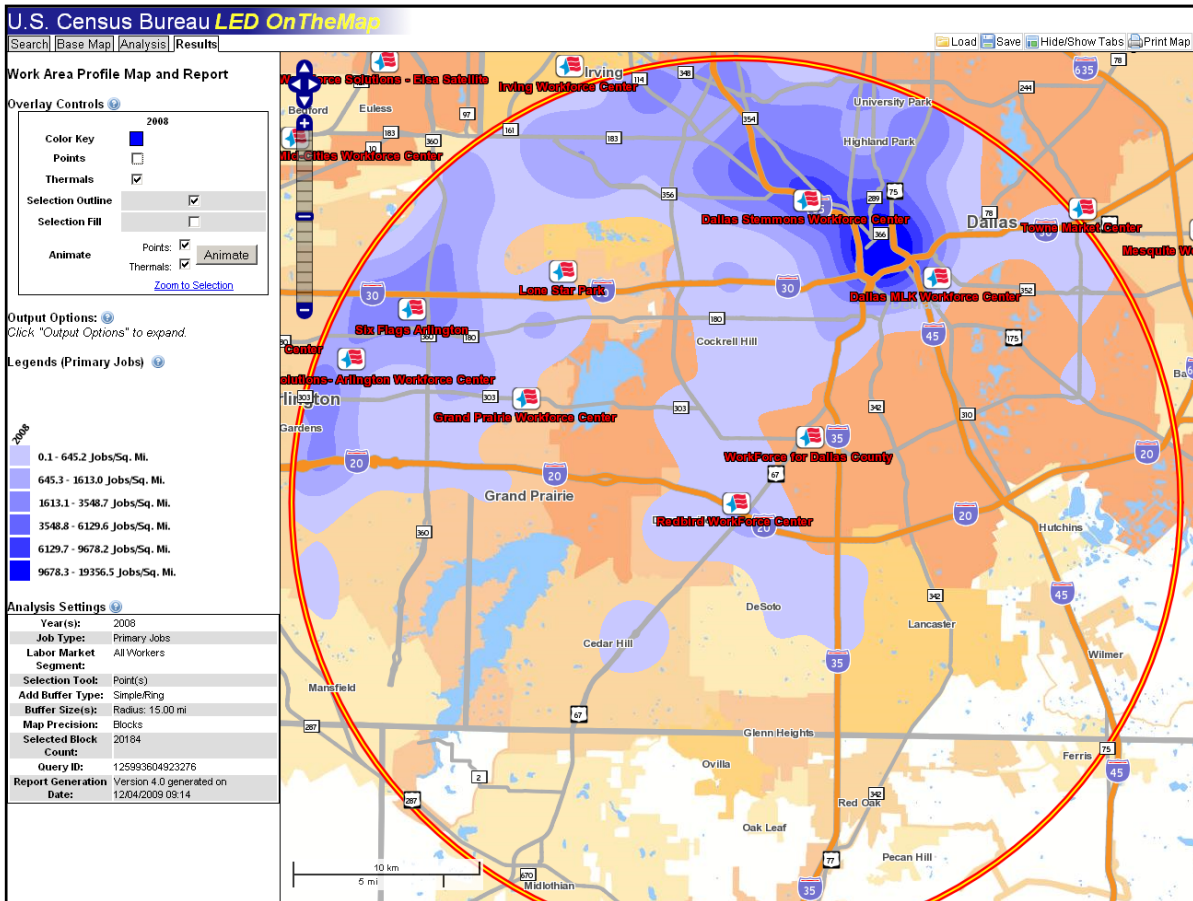
need to re-select the center point of the analysis. The application will automatically adjust the buffered circle to the new radius.

b) Click *Next* to continue to Step 3: Map Overlay/Report. Click *Go!* to re-generate the map overlay and report for the new buffered area of analysis.

c) Click *Zoom to Selection*, then click **Print Map** for a Map Overlay output, and then open the **Excel (XLS)** report and set aside.

5. Repeat Process to Create the Final Ring

a) Repeat Step 4, replacing the radius of “10” with “15” in the *Simple/Ring* radius box.



In the map above, density of employment locations within fifteen miles of the Redbird WorkForce Center for 2008 are show using the thermal overlay.

6. Combine and Analyze Report Outputs

a) Export the final report to an **Excel (XLS)** spreadsheet. In the 10 mile buffer spreadsheet, select and copy the **B** and **C** columns (Count and Share), and insert the columns into the **D** and **E** columns of the 5 mile buffer spreadsheet. Do the same thing with the 15 mile buffer spreadsheet – select and copy the **B** and **C** columns (Count and Share), and insert the columns into the **F** and **G** columns of the 5 mile buffer spreadsheet.

b) Give each set of columns appropriate names (5 Mile Buffer Area, etc.). The resulting spreadsheet provides a “concentric ring report” and allows side-by-side comparisons of user-defined buffered areas.

	A	B	C	D	E	F	G
1	Redbird One-Stop Career Center Concentric Ring Work Area Profile Report						
2							
3	Total Primary Jobs	5 Mile Buffer Area		10 Mile Buffer Area		15 Mile Buffer Area	
4		2008		2008		2008	
5		Count	Share	Count	Share	Count	Share
6	Total Primary Jobs	48,122	100.0%	238,747	100.0%	789,398	100.0%
7							
8	Jobs by Worker Age						
9		2008		2008		2008	
10		Count	Share	Count	Share	Count	Share
11	Age 30 or younger	13,406	27.9%	58,705	24.6%	202,940	25.7%
12	Age 31 to 54	26,405	54.9%	138,619	58.1%	457,171	57.9%
13	Age 55 or older	8,311	17.3%	41,423	17.4%	129,286	16.4%
14							
15	Jobs by Earnings Paid						
16		2008		2008		2008	
17		Count	Share	Count	Share	Count	Share
18	\$1,250 per month or less	12,256	25.5%	43,803	18.3%	142,893	18.1%
19	\$1,251 to \$3,333 per month	21,284	44.2%	90,039	37.7%	293,006	37.1%
20	More than \$3,333 per month	14,582	30.3%	104,905	43.9%	353,499	44.8%
21							
22	Jobs by Industry Type (2-digit NAICS)						
23		2008		2008		2008	
24		Count	Share	Count	Share	Count	Share
25	Agriculture, Forestry, Fishing and Hunting	2	0.0%	134	0.1%	368	0.0%
26	Mining, Quarrying, and Oil and Gas Extraction	34	0.1%	1,687	0.7%	3,705	0.5%
27	Utilities	41	0.1%	4,233	1.8%	7,889	1.0%
28	Construction	1,802	3.7%	11,682	4.9%	44,661	5.7%
29	Manufacturing	7,799	16.2%	29,391	12.3%	78,038	9.9%
30	Wholesale Trade	4,235	8.8%	14,302	6.0%	51,546	6.5%
31	Retail Trade	7,673	15.9%	23,205	9.7%	75,727	9.6%
32	Transportation and Warehousing	2,707	5.6%	15,404	6.5%	46,102	5.8%
33	Information	914	1.9%	9,086	3.8%	26,293	3.3%
34	Finance and Insurance	1,256	2.6%	14,181	5.9%	49,029	6.2%
35	Real Estate and Rental and Leasing	1,172	2.4%	4,136	1.7%	20,044	2.5%
36	Professional, Scientific, and Technical Services	1,068	2.2%	17,534	7.3%	61,759	7.8%
37	Management of Companies and Enterprises	658	1.4%	1,977	0.8%	6,963	0.9%
38	Administration & Support, Waste Management and Remediation	2,261	4.7%	9,892	4.1%	59,117	7.5%
39	Educational Services	3,858	8.0%	20,150	8.4%	70,158	8.9%
40	Health Care and Social Assistance	6,686	13.9%	19,287	8.1%	77,417	9.8%
41	Arts, Entertainment, and Recreation	328	0.7%	3,677	1.5%	11,255	1.4%
42	Accommodation and Food Services	3,692	7.7%	16,737	7.0%	57,544	7.3%
43	Other Services (excluding Public Administration)	1,439	3.0%	5,528	2.3%	19,123	2.4%
44	Public Administration	497	1.0%	16,524	6.9%	22,659	2.9%

In the spreadsheet above, all three reports have been combined to allow comparison between the three different buffered areas. Note the high percentage of manufacturing workers employed within five miles of the One-Step Center, as well as the difference in earnings per month between the smallest and the two biggest areas.

7. Going Forward

- a) For a companion Concentric Ring Analysis, follow these same steps while generating a *Labor Shed Analysis*. The resulting report will allow comparisons of residential locations for workers employed within the selected buffered areas.
- b) Additionally, users should follow these same steps while analyzing the buffered area around the One-Stop Center as a Home/Residential area. The resulting report will allow comparisons of the characteristics of workers living within 5, 10, and 15 miles of the *Redbird WorkForce Center*.