# OnTheMap

Sample Distance/Direction Analysis

Local Employment Dynamics

#### From what distances and directions do Albany workers\* commute?

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

### Analysis Steps

1. From the list of applications on <u>lehd.ces.census.gov</u>, choose **OnTheMap** (or go directly to <u>onthemap.ces.census.gov</u>).

2. Enter Albany in the Search text box of the Start tab and click Search.

3. Select **Albany city**, **NY** by clicking on the name under the Places (Cities, CDPs, etc.) heading.

4. After the map of Albany appears, click **Perform Analysis on Selection Area** in the Selection Popup Window.

Analysis Settings			
Distance/Direction Analysis Home/Work Area Determines whether the selection area is analyzed on where workers are employed ("Work"). Home Work	in 2021 by Private Primary Jobs Analysis Type Determines the type of results that will be generated for the selected area. Area Profile Labor Market Segment: All Workers Places (Cities, CDPs, etc.) Destination Destination Destination Destination Destination Note: Home/Work choice does not affect results	Year        ▲         Determines the year(s) of data that will be processed in the analysis.       ▲         2021       2020         2019       2018         2017       2016         2015       2011         2012       2011         2011       2010         2012       2011         2010       2009         2000       2009         2000       2000         2000       2000         2000       2000         2000       2000         2000       2000         2000       2000	Job Type ) Determines the scope of jobs that will be processed in the analysis. All Jobs Primary Jobs All Private Jobs Private Primary Jobs

5. In the Analysis Settings popup (shown above), select **Distance/Direction** as the Analysis Type. Keep the defaults for the Home/Work Area, Year, and Job Type options (Note: At the time of writing, 2021 was the default year). Click **Go!** at the bottom right corner of the popup window to generate the analysis.



### <u>Results</u>



1. When the application finishes processing, overlays of points, thermals, and a selection outline will appear on top of the base map in the map viewer. The Results tab will become active in the control panel, containing Display Settings, Map Controls, Report/Map Outputs, Legends, and Analysis Settings sections. To the right of the map viewer is radar chart and summary report.

2. In the map above, residential patterns of workers employed in Albany, NY in 2021 are represented by the blue thermal density overlay showing jobs per square mile. Resident locations are also aggregated into census blocks in the Points Overlay – each block represented by one blue dot. A blue dot will not appear for census blocks if no workers employed in Albany reside there. Refer to the Legends section in the Results tab to see the count of Albany workers living in each block for the selected year.

3. The summary report at the bottom of the panel on the right contains the count of workers employed in Albany, followed by job counts broken out by four distance categories. The chart above the report presents the four distance categories on a compass rose, displaying the relative distance **and** direction Albany workers commute from.

## Examining the Map, Chart, and Report

1. The title at the top of the Results tab reads "Distance/Direction Analysis; Workers: Employed in Albany city, NY; Showing: Residential locations," which means the analysis highlights the movement of workers from their workplaces (in the selection area - Albany, NY) to their homeplaces (symbolized by the Points and Thermals in the map viewer). Alternatively, if Albany would have been selected as a home area in the Analysis Settings popup, the Distance/Direction results would show workplaces indicating the movement of workers from their homeplaces in Albany to wherever their workplaces may be.



2. The two dropdowns in the Display Settings section of the Results tab, Labor Market Segment and Year, offer the ability to change the data shown in each component of the Results tab. Using the Labor Market Segment Filter dropdown menu, click **All Workers** and select **Worker Age**, then arrow over to **Age: 29 or younger.** The map overlays, radar chart, and summary report update to display the commute distance and direction of Albany's young workers. In addition to age segments, the Labor Market Segment Filter dropdown includes options for earnings and industry groups. If more than one year was selected in the Analysis Settings popup, other years of data can be activated using the Year dropdown. Turn the segment filter back to **All Workers**.

3. The Map Controls section of the Results tab contains a variety of tools for changing the overlay colors, turning overlays on/off, clearing all overlays, and overlay animation (if more

than one year of data is processed). Click one of the blue dots in the map to display an **Identify** popup. The popup shows the 15-character census block identifier and the count of workers living in that block for the active year. If more than one block appears in the popup, zoom in and click the point again. The Identify popup example to the right shows that 79 workers live in block *360010004011012* and work in Albany as of 2021.



4. At the current zoom level only a small portion of Albany's "commute shed" is visible. Click the minus symbol at the bottom of the Scale Ladder tool (top left corner of the map

viewer) several times to zoom out to a regional level. Click the **Points Overlay** checkbox in the Map Controls section to remove the point overlay. The density of worker residences is symbolized by the varying darkness of the thermal overlay. As you can see, residences are concentrated primarily within the city of Albany, but also grouped around the nearby cities of Schenectady and Troy.

5. The distance and direction information shown in the panel on the right are calculated between every home/work census block pair involved in the analysis. The green and yellow colored boxes next to the four distance categories in the summary report serve as the legend for the radar chart. Home and Work blocks that are close to each other (i.e. Less than 10 miles) are the darkest shade of green, and occupy the most central section of the radar chart. The other distance break totals stack on top of each other with the longest commutes stacked as the outmost ring. As shown in the chart to the right, a significant number of workers





commute from all distances from the northwest and north. Additionally, a majority of commutes from the south are coming from over 50 miles away, most likely from the New York City area.

6. Each distance group in the summary report can be clicked in order to filter the analysis results to show only those jobs with home/work census block pairs falling within the selected distance range. Click **10 to 24 miles** to remove jobs outside of that distance range from the map overlays, chart, and report. Click **Total Private Primary Jobs** to remove the distance filter.

7. In the Results tab on the left, the Report/Map Outputs section contains three options for exporting the analysis results to a variety of formats. Click **Detailed Report** to display the full report results for the analysis. The Detailed Report (shown below) provides nine sections of data – a section displaying the four distance breaks regardless of the direction, and a section showing the four distance breaks for each of the eight cardinal directions (North, Northeast, East, Southeast, South, Southwest, West, and Northwest). Adding the eight direction totals will equal the total at the top of the report. The Detailed Report also includes data for every year selected in the Analysis Settings popup. Export this report to PDF, Excel (XLS), or HTML by clicking one of the links at the top of the window. Click **Close** to exit out the Detailed Report view.

Detailed Rep	ort View			
Export to PDF	Export to XLS	Export to HTI	<u>//L</u>	
Distance	/Direction	Analysis		
Workers: E	mployed in Al	bany city, N	/	
Showing: R	esidential loc	ations		
Job Counts in	Home Blocks by	Distance Only		
	-	20	21	
		Count	Share	
Total Private Pri	mary Jobs	63,193	100.0%	
Less than 10 mil	es	30,486	48.2%	
25 to 50 miles		14,583	23.1%	
Greater than 50	miles	13 307	21.1%	
-		10,007	21.170	
UJob Count	s in Home Block	s to the North o	of Work E	locks by Distance
-			20	21
		Co	unt	Share
Total Private Pri	mary Jobs		11,188	100.0%
Less than 10 mil	es		4,495	40.2%
25 to 50 miles			3,978	30.6%
Greater than 50	miles		2,237	4.3%
-			410	4.070
Job Count	s in Home Block	s to the Northe	ast of Wo	ork Blocks by Dist
				2021
Total Private Priv	mary Jobs	C	ount 7 פו	58 100
Less than 10 miles			5.523	
10 to 24 miles			1.43	38 19
25 to 50 miles			25	52 3
Greater than 50	miles		14	45 2
Job Count	s in Home Block	s to the East of	Work Bl	ocks by Distance
$\overline{\mathbf{v}}$			202	21
		Co	unt	Share
Total Private Primary Jobs			4,268	100.0%
Less than 10 mil	es		3,184	74.6%



8. The Report/Map Outputs section of the Results tab contains two more export options. The map overlays (including the selection area) can be exported to KML, Shapefile, or CSV (census blocks in the Selection Area) file by clicking **Export Geography**. Additionally, the map overlays and chart can be saved as a composite PDF or as a collection of high-quality PNG images by clicking the **Print Chart/Map** button at the bottom of the section.

### **Further Analysis**

1. The analysis results often prompt further labor force questions. OnTheMap is designed to allow users to quickly revise and resubmit a new analysis. Click **Change Settings** to return to the Analysis Settings popup. Change the Analysis Type to view other types of information on Albany's workers, and/or change the Home/Work parameter to view information on where Albany's residents are working. A complete list of sample walkthroughs for each analysis type is available <u>here</u>.

2. Alternatively, resubmit a new analysis by clicking the Start tab and searching for a new area or clicking the Selection tab to change the selection area using the available selection tools. For more information on using the Selection tab, click <u>here</u>.

