**QWI and Job-to-Job Flow Shapefile Data**

Shapefiles used to provide mapping functionality in QWI Explorer and Job-to-Job Explorer are created by transforming input shapefiles sourced from TIGER/Line. Text below describes the inputs, transformations, and the output shapefiles.

INPUTS

Source: TIGER/Line 2015 shapefiles (<https://www.census.gov/geo/maps-data/data/tiger-line.html>).

Input shapefiles:

* [tl\_2015\_us\_state](ftp://ftp2.census.gov/geo/tiger/TIGER2015/STATE/)
* [tl\_2015\_us\_county](ftp://ftp2.census.gov/geo/tiger/TIGER2015/COUNTY/)
* [tl\_2015\_us\_cbsa](ftp://ftp2.census.gov/geo/tiger/TIGER2015/CBSA/)
* [tl\_2015\_[ST]\_place](ftp://ftp2.census.gov/geo/tiger/TIGER2015/PLACE/) (for creation of WIA/WIB shapefile)
* [tl\_2015\_[ST]\_cousub](ftp://ftp2.census.gov/geo/tiger/TIGER2015/COUSUB/) (for creation of WIA/WIB shapefile)

TRANSFORMATIONS

The following major transformations are applied to the input files:

* All geographies are reprojected to WGS-1984 Geographic Coordinate System (<http://spatialreference.org/ref/epsg/wgs-84/>).
* Shoreline water has been clipped out to provide a more recognizable depiction of the coastlines.
* Each layer is given internal point coordinates (stored as double) based on the WGS-1984 projection (decimal degrees).
* Each layer is run through a “simplify polygon” procedure to remove unnecessary complexity from the features.
* Features from Guam, American Samoa, and the Northern Mariana Islands have been removed because they are not used current LEHD tabulations.
* Each shapefile’s attribute table has been updated to conform to the standard LEHD output format ([variables\_shp.csv](http://lehd.ces.census.gov/data/schema/latest/variables_shp.csv)), which consists of the following six fields: STUSPS, GEOGRAPHY, NAME, LABEL, INTPTLAT and INTPTLON. Legal values for STUSPS can be found in [label\_stusps.csv](http://lehd.ces.census.gov/data/schema/latest/label_stusps.csv).

OUTPUTS

Output shapefiles – grouped by paired products – are listed below. Each shapefile includes specific notes on its preparation.

**QWI Geographies**

State (lehd\_state.shp)

* No transformations occur to this layer other than those listed above.

County (lehd\_county.shp)

* STUSPS is added to the NAME field so that county names read: "Cook, IL" for example.

CBSA - within State (lehd\_stcbsa.shp)

* All features are split into state-specific CBSA features by intersecting each feature with the state shapefile features.
* The STUSPS field is added during the intersect with the state shapefile.
* STFIPS (i.e. numeric nationally unique state code) is prepended to the GEOGRAPHY field to distinguish state-parts of the same CBSA (i.e. make them nationally unique).
* “([STUSPS] part)” is added to the end of the NAME field only for those CBSA features that are split by state lines.

Workforce Investment Board Areas (lehd\_wib.shp)

* The WIA/WIB shapefiles are built from the Place, County Subdivision, and County shapefiles from TIGER/Line based on definitions provided by the LED state partners.

**Job-to-Job Flow Geographies**

State (lehd\_state.shp)

* No transformations occur to this layer (the same state file is used for QWI and J2J applications).

CBSA - National (lehd\_cbsa.shp)

* The state remainder areas are added to the shapefile as new features. They are assigned unique codes ([STUSPS]+999) and names (“Not in metro/micro area, [STUSPS]”).