2015-2019 ACS Migration Flow Files Documentation

Introduction:

Each year the U.S. Census Bureau releases migration flow tables for selected geographic summary levels based on the American Community Survey (ACS) 5-year dataset.[1] County-to-county and county/minor civil division (MCD)-to-county/MCD migration flow estimates have been produced for every 5-year ACS dataset beginning with the ACS 5-year 2005-2009 estimates.[2] Flows between metropolitan statistical areas (MSAs) were introduced with the 2009-2013 dataset and have been produced for each subsequent dataset. The 2008-2012 table package was the first in the series to include migration flows from Puerto Rico municipios to U.S. counties.[3] In addition, the county-to-county flows going back to 2006-2010 dataset are available through the Census Flows Mapper.[4] As of 2016, all ACS migration flows data for counties, MCDs, and MSAs were made available in the Census application programming interface (API) through the Census Developers site.[5] Several early migration flow table packages include flows with a limited set of sociodemographic characteristics. The 2012-2016 and later migration flows packages only include basic flow counts.

Collection Years	Geographic Summary Levels	Characteristics
2005-2009	County, MCD*	None
2006-2010	County, MCD*	Age, sex, race, or Hispanic origin
2007-2011	County, MCD*	Educational attainment, household income, or individual income
2008-2012	County, MCD*	Employment status, work status, or occupation
2009-2013	MSA, county, MCD*	Ability to speak English, place of birth, or years in the United States (or Puerto Rico)
2010-2014	MSA, county, MCD*	Relationship to householder, household type, or housing tenure
2011-2015	MSA, county, MCD*	Age, sex, race, or Hispanic origin
2012-2016	MSA, county, MCD*	None
2013-2017	MSA, county, MCD*	None
2014-2018	MSA, county, MCD*	None
2015-2019	**MSA, county, MCD***	**None**

*Data at the MCD level are only available for the strong-MCD states of Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

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[1] For additional background information about historical migration flows, see <http://www.census.gov/library/working-papers/2012/demo/benetsky-02.html>. For information about the various characteristics, see <http://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf>.

[2] The ACS program combines consecutive yearly datasets to increase the sample size and provide reliable estimates for smaller areas. Even though estimates are produced for 1-year datasets, they are limited to geographic areas of at least 65,000 population. Only the 5-year datasets provide estimates for all counties and county equivalents in the United States.

[3] The MSA delineations are based on the U.S. Office of Management and Budget delineation from September 2018. See <http://www.census.gov/programs-surveys/metro-micro.html> for more information.

[4] The Census Flows Mapper <http://flowsmapper.geo.census.gov/> is an interactive, online mapping application.

[5] The Census Developers site is located at <http://www.census.gov/developers/>.

The 2015-2019 Release:

Similar to the 2014-2018 previous release, the 2015-2019 migration flow release does not include characteristics and only includes counts.

Disclosure Avoidance:

Any data products that the Census Bureau releases must be reviewed and approved by the Disclosure Review Board based on disclosure avoidance rules to assure confidentiality of the respondents is protected according to Section 9 of Title 13 of the United States Code.[6] For migration flow releases that include characteristics, flows with fewer than three cases were suppressed as an additional disclosure avoidance measure.[7] Flow counts and mover counts without characteristics, however, are not suppressed. The exact disclosure measures are determined by the Disclosure Review Board before each product is released.[8]

For years that included characteristics (up to 2011-2015), complementary suppression was applied to the MSA flows by characteristics so that suppressed county flows cannot be derived. If one and only one county-to-county flow of all the flows that aggregate up to a MSA-to-MSA flow is suppressed, then the MSA flow is suppressed. This may include flows of all sizes. If an MSA-to-MSA flow is suppressed for a particular characteristic, some information about the flow can be obtained from the MSA-to-MSA flow table without characteristics along with the county-to-county flows by that characteristic within each MSA that are not suppressed. In addition to the MSA flows, complementary suppression is applied to county/MCD-to-county/MCD flows with characteristics.

Since some flows are suppressed, summary statistics for each county, MCD, or MSA (e.g., number of nonmovers, movers to a different state) are included in the flow files. Tables crossed by selected characteristics are published annually as part of the ACS standard data products available through data.census.gov for both current residence and residence 1 year ago geography. The selected characteristics do not cover the same characteristics used in this release.[9] The Census Bureau applies separate disclosure avoidance rules to these tables containing residence 1 year ago estimates. The universe for each table must have at least 50 unweighted cases for the Census Bureau to publish the table. The same rules are applied to the county-to-county, county/MCD-to-county/MCD, and MSA-to-MSA files. If there is not a sufficient number of cases, the summary statistics for county, MCD, or MSA of residence 1 year ago by characteristics are not shown.

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[6] For more information on how Census data are protected see <https://www.census.gov/about/policies/privacy.html>.

[7] County and MCD characteristic flows containing only one or two people from different households, only one or two people in group quarters, or one person in group quarters and the rest from a single household are suppressed. People are only counted if they are in universe (e.g., population 1 year and over in households for relationship to householder).

[8] Prior to the 2010-2014 release, some suppressed county and MCD flows were summed up to the state of residence 1 year ago. Those estimates are no longer included in the tables.

[9] The tables in data.census.gov are crossed by age (B07001 and B07401), median age (B07002 and B07402), sex (B07003 and B07403), race and Hispanic origin (B07004A-I and B07404A-I), citizenship status (B07007 and B07407), marital status (B07008 and B07408), educational attainment (B07009 and B07409), individual income (B07010 and B07410), median individual income (B07011 and B07411), poverty status (B07012 and B07412), and housing tenure (B07013 and B07413). The stubs for the characteristic tables in data.census.gov refer to movement between states and counties and not MCDs or MSAs.

Blank Values:

There are blank cells within the tables. An estimate may be blank for the following reasons.

1. The estimate is out of scope for the ACS sample – such as supplemental statistics for world regions.
2. The estimate does not exist – such as movers to a different county in the same state for the District of Columbia.
3. The supplemental statistics for county of residence 1 year ago or MCD of residence 1 year ago were suppressed due to disclosure avoidance (characteristic files only).

Flows with no records in the database and suppressed flows crossed by characteristics are not included in the files. The flows with no records are considered zero count estimates. The margins of error (MOE) for these zero count estimates cannot be calculated using the standard replicate variance formula.[10] For published ACS data products, the MOE for a zero count estimate is calculated using a different method. The standard errors for the zero count estimates are calculated by taking the square root of the product of the 90th percentile k-value and the average weight for the state of residence. Estimates for previous residence use the U.S. average weight. The standard error is then multiplied by 1.645 in order to get the 90 percent MOE.[11] Before the 2012 ACS, only a single k-value was used. The methodology was changed to account for more nuanced k-values. This resulted in 6 different k-values for 5-year ACS. They are assigned based upon the total population of an area. For certain geographies, the total population is the official population estimate. If there is no official population estimate available, then the total population may be found in table B01003 through data.census.gov.

Population Thresholds	k-value	Margin of Error	
		Using Minimum Average Weight (7)	Using Maximum Average Weight (16)
Less than 5,000	4	9	13
5,000 to less than 10,000	8	12	19
10,000 to less than 20,000	10	14	21
20,000 to less than 30,000	14	16	25
30,000 to less than 50,000	18	18	28
Greater than or equal to 50,000	22	20	31

[10] For more information concerning the calculation of margins of error, see chapter 12 of *Design and Methodology: American Community Survey*. <http://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_report_2014.pdf>

[11] More on the model to compute ACS margins of error for zero-estimate counts can be found at <http://www2.census.gov/programs-surveys/acs/tech_docs/user_notes/KValueUserNote.pdf>.

The average weights are calculated for each state of current residence and the k-value for the county of current residence is used. All estimates for residence 1 year ago and current residence estimates for metro areas that cross state lines should use the average weight for the United States.

State of Current Residence	Average Weight	State of Current Residence	Average Weight	State of Current Residence	Average Weight
Alabama	13	Maryland	13	South Carolina	15
Alaska	8	Massachusetts	14	South Dakota	9
Arizona	14	Michigan	10	Tennessee	14
Arkansas	13	Minnesota	7	Texas	17
California	14	Mississippi	15	Utah	12
Colorado	13	Missouri	12	Vermont	8
Connecticut	14	Montana	10	Virginia	14
Delaware	13	Nebraska	9	Washington	14
Dist. of Columbia	14	Nevada	15	West Virginia	13
Florida	17	New Hampshire	12	Wisconsin	7
Georgia	16	New Jersey	14	Wyoming	13
Hawaii	12	New Mexico	13	Puerto Rico	18
Idaho	13	New York	13		
Illinois	12	North Carolina	14	United States	13
Indiana	13	North Dakota	8		
Iowa	9	Ohio	12		
Kansas	10	Oklahoma	9		
Kentucky	12	Oregon	14		
Louisiana	15	Pennsylvania	10		
Maine	10	Rhode Island	15		

Coverage and Group Quarters Population:

The American Community Survey covers the entire population residing in the United States and Puerto Rico, both in housing units and group quarters facilities. Each year, independent housing unit address samples are selected for each county equivalent in the United States and Puerto Rico. Samples of group quarters facilities and persons in group quarters are done at the state level, including Puerto Rico and the District of Columbia. In order to provide a better representation of group quarters estimates over smaller areas, whole person imputation into not-in-sample group quarters facility was started with the 2011 ACS, including the 2007-2011 ACS 5-year estimates.[12] To better preserve the relationship between current and previous residence for these imputed cases, a recipient's county of residence 1 year ago is changed to the current county of residence if the donor moved within the same county; otherwise, the donor's county of residence 1 year ago is used for the imputation.
The group quarters population includes people living in correctional institutions, juvenile detention facilities, nursing homes, other long-term care facilities, college dormitories, military facilities, and other noninstitutionalized facilities. The estimated group quarters population for a county can be found in detailed table B26001 on data.census.gov.

[12] For more information on ACS group quarters small area estimation, see <http://www2.census.gov/programs-surveys/acs/tech_docs/user_notes/GQSAE_User_Note.pdf>.

Application Programming Interface (API):

Beginning in 2016, all ACS migration flows data for counties, MCDs, and MSAs were made available in the Census API through the Census Developers site.[13] The API files contain the same estimates that were previously released in table form and Census Flows Mapper, but the data are provided in a different layout to allow developers to design web and mobile apps that include Census Bureau statistics. See the API website for more information.

Format of the Files:

There are separate text and Excel files for flows between counties, flows between metropolitan statistical areas (MSAs), and flows between minor civil divisions (MCDs) in some selected states. In several states, minor civil divisions are county subdivisions that are the primary governmental or administrative divisions of a county. In 12 states, the MCD governments serve as general-purpose local governments similar to incorporated municipalities.[14] In some of these states, county governments are limited or non-existent; therefore, MCDs are used as the main substate aggregate unit rather than counties. These 12 states are assigned MCD codes for residence 1 year ago during the geocoding process for ACS.

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[13] The Census Developers site is located at <http://www.census.gov/developers/>.

[14] For more information on geographic terms and concepts, see <https://www.census.gov/programs-surveys/popest/about/glossary/geo-terms.html>.

County-to-County Flow Files

The county-to-county flow files are provided in two formats. There is one fixed field length national text file sorted by current residence geography. There is also an Excel file (.xlsx) containing a worksheet for each state of current residence, including Puerto Rico and the District of Columbia, and another Excel file containing a worksheet for each state of residence 1 year ago.

Besides the county of current residence, county of residence 1 year ago, and the number of movers between the two, the files also contain additional geographical mobility estimates for each county, along with the margin of error (MOE) at the 90 percent confidence level. (For further information about the geographies used for the files see Appendix A.)

The layout of the text file is as follows:

Field Description	**Field Position**
Current Residence FIPS State Code	1-3
Current Residence FIPS County Code	4-6
Residence 1 Year Ago FIPS State Code/U.S. Island Areas Code/Foreign Region Code	7-9
Residence 1 Year Ago FIPS County Code	10-12
Current Residence State Name	14-43
Current Residence County Name	44-78
Population 1 Year and Over Current County – Estimate	80-87
Population 1 Year and Over Current County – MOE	89-96
Nonmovers Current County – Estimate	98-104
Nonmovers Current County – MOE	106-112
Movers within the United States for Current County or within Puerto Rico for Current Municipio – Estimate	114-120
Movers within the United States for Current County or within Puerto Rico for Current Municipio – MOE	122-128
Movers within the Same County for Current County – Estimates	130-136
Movers within the Same County for Current County – MOE	138-144
Movers from a Different County in the Same State for Current County – Estimate	146-152
Movers from a Different County in the Same State for Current County – MOE	154-160
Movers from a Different State for Current County – Estimate	162-168
Movers from a Different State for Current County – MOE	170-176
Movers from Abroad – Estimate	178-184
Movers from Abroad – MOE	186-192
Residence 1 Year Ago State Name/U.S. Island Areas/Foreign Region	194-223

Residence 1 Year Ago County Name	224-258
Population That Lived in County 1 Year Ago – Estimate	260-267
Population That Lived in County 1 Year Ago – MOE	269-276
Nonmovers County of Residence 1 Year Ago – Estimate	278-284
Nonmovers County of Residence 1 Year Ago– MOE	286-292
Movers within the United States for County of Residence 1 Year Ago or within Puerto Rico for Municipio of Residence 1 Year Ago – Estimate	294-300
Movers within the United States for County of Residence 1 Year Ago or within Puerto Rico for Municipio of Residence 1 Year Ago – MOE	302-308
Movers within the Same County for County of Residence 1 Year Ago – Estimates	310-316
Movers within the Same County for County of Residence 1 Year Ago – MOE	318-324
Movers to a Different County in the Same State for County of Residence 1 Year Ago – Estimate	326-332
Movers to a Different County in the Same State for County of Residence 1 Year Ago – MOE	334-340
Movers to a Different State for County of Residence 1 Year Ago – Estimate	342-348
Movers to a Different State for County of Residence 1 Year Ago – MOE	350-356
Movers to Puerto Rico – Estimate	358-364
Movers to Puerto Rico – MOE	366-372
Movers within Flow – Estimate	374-380
Movers within Flow – MOE	382-388

County-to-County Net and Gross Migration Files

There are two files, text and Excel, that contains flow, counterflow, net migration, and gross migration for all county pairs (Geography A and Geography B). The Excel file has a worksheet for each state. Both files are sorted by Geography A. The flow shows the inmigration from Geography B to Geography A. The counterflow shows the outmigration from Geography A to Geography B. The net migration is the flow minus the counterflow, and the gross migration is the flow plus the counterflow.

The layout for the text file is as follows:

Field Description	**Field Position**
State/U.S. Island Area/Foreign Region Code of Geography A (state code based on FIPS code)	1-3
FIPS County Code of Geography A	4-6
State/U.S. Island Area/Foreign Region of Geography B (state code based on FIPS code)	7-9
FIPS County Code of Geography B	10-12
State/U.S. Island Area/Foreign Region Name of Geography A	14-43
County Name of Geography A	44-78
State/U.S. Island Area/Foreign Region Name of Geography B	80-109
County Name of Geography B	110-144
Flow from Geography B to Geography A – Estimate	146-153
Flow from Geography B to Geography A – MOE	155-162
Counterflow from Geography A to Geography B – Estimate	164-171
Counterflow from Geography A to Geography B – MOE	173-180
Net Migration from Geography B to Geography A – Estimate	182-189
Net Migration from Geography B to Geography A – MOE	191-198
Gross Migration between Geography A and Geography B – Estimate	200-207
Gross Migration between Geography A and Geography B – MOE	209-216

County/MCD-to-County/MCD Flow Files

The County/MCD-to-County/MCD files are similar to the county-to-county files except that MCDs are used instead of counties for Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

There is one fixed field length national text file sorted by current residence geography. There is also an Excel file (.xlsx) containing a worksheet for each state of current residence, including Puerto Rico and the District of Columbia, and another Excel file containing a worksheet for each state of residence 1 year ago.

In addition to the county or MCD of current residence, county or MCD of residence 1 year ago, and the number of movers between the two, the files also contain additional geographical mobility estimates for each county or MCD, along with the margin of error (MOE) at the 90 percent confidence level. (For further information about the geographies used for the files see Appendix A.)

The layout of the text file is as follows:

Field Description	**Field Position**
Current Residence FIPS State Code	1-3
Current Residence FIPS County Code	4-6
Current Residence FIPS MCD Code (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	7-11
Residence 1 Year Ago FIPS State Code/U.S. Island Areas Code/Foreign Region Code	12-14
Residence 1 Year Ago FIPS County Code	15-17
Residence 1 Year Ago FIPS MCD Code (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	18-22
Current Residence State Name	24-53
Current Residence County Name	54-88
Current Residence MCD Name (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	89-133
Population 1 Year and Over Current County/MCD – Estimate	135-142
Population 1 Year and Over Current County/MCD – MOE	144-151
Nonmovers Current County/MCD – Estimate	153-159
Nonmovers Current County/MCD – MOE	161-167
Movers within the United States for Current County/MCD or within Puerto Rico for Current Municipio – Estimate	169-175
Movers within the United States for Current County/MCD or within Puerto Rico for Current Municipio – MOE	177-183

Movers within the Same County/MCD for Current County/MCD – Estimates	185-191
Movers within the Same County/MCD for Current County/MCD – MOE	193-199
Movers from a Different County/MCD in the Same State for Current County/MCD – Estimate	201-207
Movers from a Different County/MCD in the Same State for Current County/MCD – MOE	209-215
Movers from a Different State for Current County/MCD – Estimate	217-223
Movers from a Different State for Current County/MCD – MOE	225-231
Movers from Abroad – Estimate	233-239
Movers from Abroad – MOE	241-247
Residence 1 Year Ago State Name/U.S. Island Area/Foreign Region	249-278
Residence 1 Year Ago County Name	279-313
Residence 1 Year Ago MCD Name (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	314-358
Population That Lived in County/MCD 1 Year Ago – Estimate	360-367
Population That Lived in County/MCD 1 Year Ago – MOE	369-376
Nonmovers County/MCD of Residence 1 Year Ago – Estimate	378-384
Nonmovers County/MCD of Residence 1 Year Ago– MOE	386-392
Movers within the United States for County/MCD of Residence 1 Year Ago or within Puerto Rico for Municipio of Residence 1 Year Ago – Estimate	394-400
Movers within the United States for County/MCD of Residence 1 Year Ago or within Puerto Rico for Municipio of Residence 1 Year Ago – MOE	402-408
Movers within the Same County/MCD for County/MCD of Residence 1 Year Ago – Estimates	410-416
Movers within the Same County/MCD for County/MCD of Residence 1 Year Ago – MOE	418-424
Movers to a Different County/MCD in the Same State for County/MCD of Residence 1 Year Ago – Estimate	426-432
Movers to a Different County/MCD in the Same State for County/MCD of Residence 1 Year Ago – MOE	434-440
Movers to a Different State for County/MCD of Residence 1 Year Ago – Estimate	442-448
Movers to a Different State for County/MCD of Residence 1 Year Ago – MOE	450-456
Movers to Puerto Rico – Estimate	458-464
Movers to Puerto Rico – MOE	466-472
Movers within Flow – Estimate	474-480
Movers within Flow – MOE	482-488

County/MCD-to-County/MCD Net and Gross Migration Files

There are two files, text and Excel, that contains flow, counterflow, net migration, and gross migration for all county/MCD pairs (Geography A and Geography B). The Excel file has a worksheet for each state. Both files are sorted by Geography A. The flow shows the inmigration from Geography B to Geography A. The counterflow shows the outmigration from Geography A to Geography B. The net migration is the flow minus the counterflow, and the gross migration is the flow plus the counterflow.

The layout for the text file is as follows:

Field Description	**Field Position**
State/U.S. Island Area/Foreign Region Code of Geography A (state code based on FIPS code)	1-3
FIPS County Code of Geography A	4-6
FIPS MCD Code of Geography A (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	7-11
State/U.S. Island Area/Foreign Region Code of Geography B (state code based on FIPS code)	12-14
FIPS County Code of Geography B	15-17
FIPS MCD Code of Geography B (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	18-22
State/U.S. Island Area/Foreign Region Name of Geography A	24-53
County Name of Geography A	54-88
MCD Name of Geography A (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	89-133
State/U.S. Island Area/Foreign Region Name of Geography B	134-163
County Name of Geography B	164-198
MCD Name of Geography B (CT, ME, MA, MN, MI, NH, NJ, NY, PA, RI, VT, WI only)	199-243
Flow from Geography B to Geography A – Estimate	245-252
Flow from Geography B to Geography A – MOE	254-261
Counterflow from Geography A to Geography B – Estimate	263-270
Counterflow from Geography A to Geography B – MOE	272-279
Net Migration from Geography B to Geography A – Estimate	281-288
Net Migration from Geography B to Geography A – MOE	290-297
Gross Migration between Geography A and Geography B – Estimate	299-306
Gross Migration between Geography A and Geography B – MOE	308-315

MSA-to-MSA Flow Files

The MSA-to-MSA flow files are provided in two formats. There is one fixed field length national text file sorted by current residence geography. There is also an Excel file (.xlsx) containing flows between all the MSAs in the United States and Puerto Rico and the District of Columbia.

Besides the MSA of current residence, MSA of residence 1 year ago, and the number of movers between the two, the files also contain additional geographical mobility estimates for each MSA along with the margin of error (MOE) at the 90 percent confidence level. (For further information about the geographies used for the files see Appendix A.)

The layout of the text file is as follows:

Field Description	**Field Position**
Current Residence MSA Code (February 2013 delineations)	1-5
Residence 1 Year Ago MSA Code (February 2013 delineations)	6-10
Current Residence MSA Name	12-71
Population 1 Year and Over Current MSA – Estimate	73-80
Population 1 Year and Over Current MSA – MOE	82-89
Nonmovers Current MSA – Estimate	91-99
Nonmovers Current MSA – MOE	101-107
Movers within the Same MSA – Estimate	109-117
Movers within the Same MSA – MOE	119-125
Movers from a Different MSA for Current MSA – Estimate	127-133
Movers from a Different MSA for Current MSA – MOE	135-141
Movers from Elsewhere in the United States or Puerto Rico for Current MSA – Estimate	143-149
Movers from Elsewhere in the United States or Puerto Rico for Current MSA – MOE	151-157
Movers from Abroad (not including Puerto Rico) – Estimate	159-165
Movers from Abroad (not including Puerto Rico) – MOE	167-173
Residence 1 Year Ago MSA Name	175-234
Population That Lived in MSA 1 Year Ago – Estimate	236-243
Population That Lived in MSA 1 Year Ago – MOE	245-252
Nonmovers MSA of Residence 1 Year Ago – Estimate	254-262
Nonmovers MSA of Residence 1 Year Ago– MOE	264-270
Movers within the Same MSA – Estimate	272-278
Movers within the Same MSA – MOE	280-286
Movers to a Different MSA for MSA of Residence 1 Year Ago – Estimate	288-294

Movers to a Different MSA for MSA of Residence 1 Year Ago – MOE	296-302
Movers to Elsewhere in the United States or Puerto Rico for MSA of Residence 1 Year Ago – Estimate	304-310
Movers to Elsewhere in the United States or Puerto Rico for MSA of Residence 1 Year Ago – MOE	312-318
Movers within Flow – Estimate	320-326
Movers within Flow – MOE	328-334

MSA-to-MSA Net and Gross Migration Files

There are two files, text and Excel, that contains flow, counterflow, net migration, and gross migration for all msa pairs (Geography A and Geography B). The Excel file has a single worksheet for all flows. Both files are sorted by Geography A. The flow shows the inmigration from Geography B to Geography A. The counterflow shows the outmigration from Geography A to Geography B. The net migration is the flow minus the counterflow, and the gross migration is the flow plus the counterflow.

The layout for the text file is as follows:

Field Description	**Field Position**
MSA Code (February 2013 delineations) of Geography A	1-5
MSA Code (February 2013 delineations) of Geography A	6-10
MSA Name of Geography A	12-71
MSA Name of Geography A	72-131
Flow from Geography B to Geography A – Estimate	133-140
Flow from Geography B to Geography A – MOE	142-149
Counterflow from Geography A to Geography B – Estimate	151-158
Counterflow from Geography A to Geography B – MOE	160-167
Net Migration from Geography B to Geography A – Estimate	169-176
Net Migration from Geography B to Geography A – MOE	178-185
Gross Migration between Geography A and Geography B – Estimate	187-194
Gross Migration between Geography A and Geography B – MOE	196-203

Appendix A: Geography

County Equivalents

Counties are the primary legal division in most states, but a few states have equivalent divisions known by different names. In order to get a complete partition of the United States and Puerto Rico, the following divisions are treated as county equivalents in the files.

Borough (Alaska)
Census Area (Alaska)
City and Borough (Alaska)
County (All except Alaska, the District of Columbia, Louisiana, and Puerto Rico)
The District of Columbia
Independent City (Maryland, Missouri, Nevada, Virginia)[15]
Municipality (Alaska)
Municipio (Puerto Rico)
Parish (Louisiana)

Minor Civil Divisions

The county/MCD-to-county/MCD files include minor civil division estimates for the 12 states in which they also serve as general-purpose local governments. The 12 states have various names for their minor civil divisions.

Connecticut (City, Town)
Maine (City, Gore, Indian Reservation, Plantation, Town, Unorganized Territory)
Massachusetts (City, Town)
Michigan (Charter Township, City, Township)
Minnesota (City, Township, Unorganized Territory)
New Hampshire (City, Grant, Location, Town, Township)
New Jersey (Borough, City, Purchase, Town, Township, Village)
New York (Borough, City, Indian Reservation, Town)
Pennsylvania (Borough, City, Town, Township)
Rhode Island (City, Town)
Vermont (City, Gore, Grant, Town)
Wisconsin (City, Town, Village)

[15] In previous county-to-county flows products, some counties and independent cities were collapsed into single entities due to cognitive and geographic coding problems with migration data for places.

Puerto Rico

Prior to the 2008 ACS, the stateside questionnaire only requested respondents to answer "Puerto Rico" if they lived in Puerto Rico 1 year ago. The Puerto Rico questionnaire asked for a municipio or a U.S. county for movers, along with other geographic information; therefore, municipio level migration flow data from Puerto Rico to the United States are not available prior to 2008 but are available for flow from the United States to each Puerto Rico municipio.

The question was revised in 2008 to ask for the same geographic information on the Puerto Rico and stateside questionnaire allowing estimates to be calculated for both flow directions. Because of this limitation, prior ACS county-to-county migration flow files aggregated flows from Puerto Rico to the United States to "Puerto Rico" rather than individual municipios. The 2008-2012 files are the first to include flows from Puerto Rico municipios to U.S. counties. Puerto Rico municipios are treated as equivalent to U.S. counties. [16]

U.S. Island Areas and Foreign Countries

Outmigration from the United States and Puerto Rico to U.S. Island Areas or foreign countries is not available from the American Community Survey since only housing units and group quarters (e.g., college dormitories, military barracks, prisons) within the United States and Puerto Rico are sent questionnaires. The American Community Survey does collect data for U.S. Island Area or Foreign Country of residence 1 year ago. The files include inmigration from outside the United States and Puerto Rico aggregated to U.S. Island Areas and foreign region. A three-letter code is used to identify these areas.

U.S. Island Areas (ISL):
American Samoa, Baker Island, Guam, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Northern Marianas Islands, Midway Islands, Navassa Island, Palmyra Atoll, U.S. Virgin Islands, Wake Island, U.S. Island Areas not specified.

Europe (EUR):
Albania, Andorra, Austria, Azores Islands, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czechoslovakia, Czech Republic, Denmark, England, Estonia, Faroe Islands, Finland, France, Germany, Gibraltar, Greece, Guernsey, Hungary, Iceland, Ireland, Isle of Man, Italy, Jan Mayen, Jersey, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Madeira Islands, Moldova, Monaco, Montenegro, Netherlands, Northern Ireland, Norway, Poland, Portugal, Romania, Russia, San Marino, Scotland, Serbia, Slovakia, Slovenia, Spain, Svalbard, Sweden, Switzerland, Ukraine, United Kingdom, USSR, Vatican City, Wales, Yugoslavia, Europe not specified.

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[16] Hurricanes caused a disruption of data collection activities from September through December of 2017 in Puerto Rico. All 2017 1-year estimates for Puerto Rico are based on data collected prior to this disruption. For more information, see https://www.census.gov/programs-surveys/acs/technical-documentation/user-notes/2018-02.html.

Asia (ASI):
Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Cambodia, China, Cyprus, East Timor, Georgia, Hong Kong, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Korea, Kazakhstan, Kyrgystan, Kuwait, Laos, Lebanon, Macau, Malaysia, Maldives, Mongolia, Myanmar (Burma), Nepal, North Korea, Oman, Pakistan, Paracel Islands, Philippines, Qatar, Saudi Arabia, Singapore, South Korea, Spratley Islands, Sri Lanka, Syria, Taiwan, Tajikistan, Thailand, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Vietnam, Yemen, Asia not specified.

Northern America (NAM):
Bermuda, Canada, Greenland, St. Pierre & Miquelon, North American not specified

Central America (CAM):
Belize, Costa Rico, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Central America not specified

Caribbean (CAR):
Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bonaire, British Virgin Islands, Cayman Islands, Cuba, Curaçao, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Netherland Antilles, Saba, St. Barthelemy, St. Kitts-Nevis, St. Lucia, St. Vincent and the Grenadines, Sint Eustatius, Sint Maarten, Trinidad and Tobago, Turks and Caicos Islands, West Indies not specified

South America (SAM):
Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela, South American not specified

Africa (AFR):
Algeria, Angola, Benin, Botswana, British Indian Ocean Territory, Burkina Faso, Burundi, Cameroon, Cabo Verde, Central African Republic, Chad, Comoros, Congo, Democratic Republic of Congo, Djibouti, Egypt, Equatorial Guinea, Ethiopia, Eritrea, Europa Island, Gabon, Gambia, Ghana, Glorioso Islands, Guinea, Guinea-Bissau, Ivory Coast, Juan de Nova Island, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Morocco, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, St Helena, Sudan, Swaziland, Tanzania, Togo, Tromelin Island, Tunisia, Uganda, Western Sahara, Zambia, Zimbabwe, Africa not specified

Oceania and At Sea (OCE):
Australia, Christmas Island, Cook Islands, Coral Sea Islands, Heard and McDonald Islands, Fiji, French Polynesia, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Palau, Papua New Guinea, Pitcairn Islands, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands, Samoa, Oceania not specified, At sea

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