Speaker Notes:
Geographic Areas and Concepts for the American Community Survey
Updated February 2013

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This presentation is designed to give data users a quick overview of the kinds of geographic areas that are used to present data from the Census Bureau's American Community Survey.

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This presentation will familiarize data users with the basic geographic area concepts they are likely to use or encounter while using American Community Survey products.

We will concentrate on the geographic areas for which American Community Survey data are available, and the concepts and definition issues you should be aware of when using ACS data.

This presentation is not a complete review of Census Bureau geographic products. Information about other products, such as maps, shapefiles, and geographic area codes, are available on the Census Bureau webpage.

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Census geographic areas fall into two categories: legal/administrative areas and statistical areas.

Legal/administrative areas generally originate in legal actions, treaties, and ordinances. The most familiar legal areas are political entities, such as states, counties, and municipalities, and have elected officials. Administrative areas are best described as service areas, where the boundaries are the limits of the service. The most familiar examples of administrative areas are wards, school districts, and ZIP codes.

Statistical geographic areas are defined primarily for data tabulation and presentation purposes. They may relate to other kinds of geography. For instance, the boundaries of census tracts in urban and suburban areas usually follow streets and resemble neighborhoods. Census designated places represent locally recognized unincorporated areas that may be identified by name on street signs, business names, and so forth, but do not have legally defined boundaries. Other statistical areas represent geographic concepts, such as urbanization. Urban statistical areas represent discernible urbanization patterns on the land, while metropolitan and micropolitan statistical areas characterize less visible processes of social and economic interaction between an urban center and its surrounding region.

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Examples of legal and administrative entities include: the nation, states, counties, minor civil divisions, incorporated places, congressional districts, school districts, voting districts, and ZIP code tabulation areas.

Examples of statistical areas include: regions and divisions, census county divisions, Census designated places, metropolitan and micropolitan statistical areas, urban and rural areas, Census tracts, block groups, and Public Use Microdata Areas.

Some legal/administrative areas have statistical counterparts. For instance, census county divisions are the statistical equivalents of minor civil divisions, with both types referred to generically as "county subdivisions." Census designated places are the statistical counterparts of incorporated places; both are referred to generically as "places" in Census Bureau products.

Additionally, American Indian and Alaska Native areas include both legal and statistical areas.

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The table on this slide shows how many of some commonly used geographic areas are available in one and three-year American Community Survey estimates. Population determines what areas receive estimates: an area of more than 65,000 persons or more is included in the one-year data release, and areas of more than 20,000 are included in the three-year data release.

For example, the second row shows that there are a total of 3,221 counties and equivalents in the United States. 26 percent of those areas received one-year estimates from the 2011 American Community Survey. The 2009-2011 American Community Survey 3-year estimates produced data for 59 percent of those areas. Five-year estimates include data for all 3,221 county and equivalent areas.

Complete lists of geographic areas published for one and three-year estimates are available on the census's website at the URL on the bottom of the slide.

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This diagram depicts the Census geographic hierarchy as a series of relationships following the legal, administrative, or areal relationships of the entities. For example, the line joining the lower-level entity "places" and the higher-level entity "state" means that places do not cross state boundaries.

Census Bureau geographers refer to these as "nesting" relationships between geographic areas. By this, we mean that one type of geographic area is located entirely within another geographic area. The central axis in this diagram ranks the geographic areas in the order of their hierarchical relationships: From the bottom, block groups aggregate to tracts; tracts to counties; counties to states; and so on up to the nation. Nesting means that a block group will never cross a tract boundary; a tract will never cross a county boundary; counties never cross state boundaries. By extension of these nesting relationships, a block group never crosses county or state boundaries.

To either side of the central axis are geographic areas that do not nest within the levels of the geographic hierarchy below where the line connects them to the central axis. For instance, a place boundary may split a block group, a tract, or a county, but will never cross a state boundary. A metropolitan area may cross all other geographic area below the Nation. As an example, the El Paso, TX-NM urbanized area is in both the South and the West regions. However, we would never define an urban area that crosses from the U.S. into Canada or Mexico. The vast urban area that encompasses Ciudad Juarez in Mexico and El Paso, Texas is in both nations, but the Census Bureau only defines geographies and publishes data for the portion in the U.S., just as Mexico only produces data for the portion in the State of Chihuahua.

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Now, let's take a look at selected geographic areas for which American Community Survey data are available.

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Census tracts are small, relatively permanent of a county or county equivalent. Census tracts generally have a minimum population of 1,200, or 480 housing units, and a maximum population of 8,000 people or 3,200 housing units. Tracts have an optimum size of 4,000 people or 1,600 housing units.

Block groups are statistical divisions of census tracts and are defined to contain a minimum of 600 persons or 240 housing units and a maximum of 3,000 people or 1,200 housing units. In the American Community Survey, block groups are the lowest level of geography published.

These statistical areas are designed to have stable boundaries. Boundary changes to existing census tracts, as well as newly defined census tracts, may occur at the time of each decennial census.

Estimates for block groups are available only in the ACS 5-year Summary File. You can learn more about the Summary File in the presentation titled "Data-Products from the American Community Survey" Compass Point presentation. Like block groups, tracts are available only in the ACS 5-year estimates. Unlike block groups, tract-level estimates are available in both the ACS Summary File and American FactFinder.

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This slide shows the 2010 census tabulation tract boundaries of Kalamazoo County, Michigan. These are the same census tract boundaries used for the 2010 American Community Survey. In this example, we're looking at census tract 30.04 which is highlighted in green.

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In this slide, we're looking at block groups in Kalamazoo County, Michigan. Tract 30.04 from the previous slide splits into 3 block groups—Block Group 1, Block Group 2, and Block Group 3. Because the block groups nest within tract 30.04, their combined populations equal that of tract 30.04, as shown on the slide.

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The American Community Survey released ZCTA level estimates for the first time in 2012 as part of the 2007-2011 ACS 5-year estimates.

ZIP code tabulation areas, or ZCTAs, are statistical areas that generally correspond to the U.S. Postal Service's ZIP codes. These are not ZIP code maps, but instead represent the most frequently occurring five-digit ZIP code found in a given area. Each ZCTA is created by

aggregating 2010 Census blocks, where most addresses in the blocks use a given ZIP code. This most frequently occurring ZIP Code becomes the ZCTA code for this statistical area.

For more information about ZCTAs and how they are created, please visit the Census Bureau's ZCTA webpage at the link given at the bottom of the slide.

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The Census Bureau tabulates and presents data for two types of county subdivisions: minor civil divisions or MCDs and census county divisions or CCDs. States contain either MCDs or CCDs, but never a mix of MCDs and CCDs.

An MCD is the primary governmental or administrative division of a county or statistically equivalent entity in many states and statistically equivalent entities. An MCD is created to govern or administer an area rather than a specific population. Examples of MCDs include Towns, Townships, and Districts.

A CCD is a statistical subdivision of a county, delineated by the Census Bureau in cooperation with state and local government officials for data presentation purposes. If a state does not have MCDs, typically CCDs will be defined for that state. A CCD usually represents one or more communities, trading centers or, in some instances, major land uses. CCDs are designed to be stable from census to census, and correspond to more obvious physical boundaries.

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MCD and CCD distinctions are important because a wider range of Census Bureau data are available for governmentally active MCDs. Less data are available for non-functioning MCDs. It's also important to understand that 1-year and 3-year estimates from the American Community Survey are not available for CCDs, as only a small number have populations that meet those thresholds.

On this map, MCDs exist in the states shaded either purple or lavender. States shaded dark purple, such as Pennsylvania, are considered "strong MCD" states. The MCDs in these states have actively functioning governments, such as towns, townships, cities, or boroughs. These types of MCDs receive the fullest range of data from the Census Bureau, including 1-year and 3-year ACS estimates.

The states shaded a lighter purple color, such as Indiana, also contain MCDs with active governments. However, the MCDs in these states do not necessarily provide as many services and functions as provided by the "strong MCDs." These types of MCDs receive data from the decennial census, Population Estimates, and the American Community Survey, including ACS 1-year and 3-year estimates.

The states shaded lavender, such as West Virginia, contain non-functioning MCDs, such as election districts or election precincts. These types of MCDs only receive data from the decennial census and the American Community Survey 5-year estimates. ACS 1-year and 3-year estimates are not available. Additionally, please note a change to the map depicted above, Tennessee became an MCD state in 2008 with non-functioning MCDs.

The states with cross-hatching contain a mix of functioning and non-functioning MCDs.

The states shaded green, such as Texas, contain CCDs, which receive data from the decennial census and the American Community Survey, however, only ACS 5-year estimates are available.

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The Census Bureau tabulates and presents data for two kinds of places– incorporated places and census designated places or CDPs. Incorporated places are recognized legally according to laws of their respective states, and generally have active, functioning governments providing a variety of services for their residents. CDPs on the other hand represent unincorporated communities that typically do not have a legally specified boundary. The Census Bureau works with local and tribal officials to identify CDPs and their boundaries for use in presenting Census Bureau data.

Two examples of CDPs are Columbia, Maryland and Paradise, Nevada. Columbia, Maryland is a large, planned community located approximately halfway between Baltimore and Washington. Even though Columbia has no legal status in the state of Maryland, the 2010 Census and 2011 ACS estimate identifies Columbia as the second most populous place in the state, after Baltimore City. Paradise CDP is located in Clark County, Nevada and contains most of the hotels and casinos along the “Vegas Strip,” as well as the airport. Paradise CDP is separate from Las Vegas city.

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This slide further illustrates the "Places" concept. Salem County in New Jersey has a mix of CDPs and incorporated places. Salem and Woodstown are two of the four incorporated places in Salem County, while Pennsville and Alloway are two of the seven CDPs in Salem County.

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It is important to note that not all unincorporated communities are defined as CDPs.
This is the case in Mendocino County in California. The maps on the screen highlight two nearby communities in Mendocino County – Westport, on the left side of the map, and Cleone, on the right side of the map. The community of Cleone is defined as a CDP; however, the community of Westport is not defined as a CDP.

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The Census Bureau defines two kinds of urban areas: urbanized areas and urban clusters. Urbanized areas have 50,000 or more people and urban clusters have at least 2,500 people but less than 50,000 people. Both areas are defined primarily on the basis of population density at the census block and block group levels, starting with a core area with a density of at least 1,000 people per square mile. Urban classification cuts across other hierarchies and can be in metropolitan or non-metropolitan areas.

2011 ACS estimates and all previous ACS estimate years reflect the Urban Areas defined using the Census 2000 results. 2012 ACS estimates, released in calendar 2013, will reflect the Urban Areas defined using the 2010 Census results, as will subsequent ACS estimates years.

Newly defined and updated urban areas are released following each census. The 2011 ACS estimates released in calendar 2012, and all previous ACS estimates use urban areas based on Census 2000 results. This means that ACS urban area estimates do not reflect any new urbanization that occurred after Census 2000. Beginning with the 2012 ACS estimates release in calendar 2013 and for the next decade, ACS estimates for urban areas will reflect the new definitions based on the 2010 Census results.

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Rural areas are defined as the remainder of territory not within territory classified as urban. The urban/rural classification cuts across other hierarchies and can be in metropolitan or non-metropolitan areas. Because urban and rural areas do not nest within other geographic entities, these areas are often split between urban and rural statistical areas. This means that the population and housing units in many places, counties, and metropolitan areas are classified as part urban and part rural.

As an example of how these areas represent different populations, consider that while every resident of the state of Connecticut lives within a metropolitan or micropolitan area, 13.4 percent (+/- 0.38 percent) of the state's population also live in areas classified as rural (based on ACS 2011 1-year estimates).

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This map depicts urbanized areas and urban clusters in central Tennessee, with the Nashville-Davidson urbanized area at the center. The boundaries of the Nashville-Davidson urbanized area cross several county boundaries, however no one county is entirely contained within the urbanized area.

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Metropolitan and micropolitan statistical areas are geographic entities defined by the U.S. Office of Management and Budget for use by Federal statistical agencies in collecting, tabulating, and publishing Federal statistics. They are collectively referred to as Core Based Statistical Areas or CBSAs.

A metropolitan statistical area contains a core urban area of 50,000 or more population, and a micropolitan statistical area contains an urban core of at least 10,000, but less than 50,000, population.

Each metropolitan or micropolitan statistical area consists of one or more counties and includes the county containing the core urban area. It also includes any adjacent counties that have a high degree of social and economic integration with the urban core. The degree of social and economic integration is measured by commuting to work patterns.

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The largest city in each metropolitan or micropolitan statistical area is designated as a principal city. Additional cities qualify if specified requirements are met concerning population size and employment. CDPs can be principal cities.

The title of each metropolitan or micropolitan statistical area consists of the names of up to three of its principal cities and the name of each state into which the metropolitan or micropolitan statistical area extends. Titles of metropolitan divisions are also typically based on principal city names, but in certain cases consist of county names.

ACS currently uses the CBSAs defined after Census 2000. Like urban areas, Metropolitan/Micropolitan areas are redefined after each census. The 2013 ACS estimates will use the updated CBSAs definitions based on the 2010 Census results, and are scheduled for release in 2014 and thereafter.

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The dark green areas on the above map are two neighboring Metropolitan Statistical Areas in western Virginia– the Harrisonburg MSA and the Charlottesville MSA. The Harrisonburg MSA is comprised of Rockingham County and the independent city of Harrisonburg, which is a county equivalent entirely encircled by Rockingham County. The Harrisonburg Virginia Urbanized Area encompasses much of Harrisonburg city territory and some of the surrounding area. The Charlottesville MSA differs in that it includes four counties – Greene, Albemarle, Fluvanna, and Nelson – and the independent city of Charlottesville.

Bordering these two Metropolitan areas is the Staunton-Waynesboro Micropolitan Statistical Area, encompassing Augusta County and the independent cities of Staunton and Waynesboro. Inside the micropolitan area is the Waynesboro Urban Cluster, which is composed of parts of the Independent City of Waynesboro, but also includes densely populated areas in Augusta County adjacent to the city.

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Public Use Microdata Areas or PUMAs are special, non-overlapping areas that partition a state. Defined by state governments after each decennial census, each PUMA was designed to have a population of at least 100,000 and cannot cross a state line. PUMAs are the geographic entities for which the Census Bureau provides specially selected extracts of raw data from a sample of American Community Survey records. All personal identifying information, such as name and address, has been removed from these records. The extract files are referred to as Public Use Microdata Sample or PUMS files. Learn more about PUMS in the “Introduction to the Public Use Microdata Sample (PUMS) File from the American Community Survey” training presentation.

The 2011 ACS estimates and all previous ACS estimate releases use the PUMA definitions based on the results of Census 2000.

Like Urban Areas, new PUMA definitions based on the results of the 2010 Census will be used for the 2012 ACS Estimates, released in calendar 2013 and thereafter. Additionally, a change to the geographic areas used to compose the new PUMAs was instituted, with Places no longer used.

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The American Community Survey also uses PUMAs to present summary data. Because each PUMA has a population of at least 100,000, annual estimates are available for each PUMA. This is of value for data users interested in data for sub-state areas, particularly in states with large sections of predominantly rural areas, and otherwise would only have access to ACS 5-year period estimates for these areas.

Take West Virginia, for example, which has 55 counties. Only seven of these 55 counties are large enough to receive estimates from the 1-year American Community Survey. However, because West Virginia is partitioned into 12 PUMAs, each of these areas will receive 1-year American Community Survey estimates.

Like the other geographies discussed in this presentation, a more detailed discussion of PUMAs and the ACS is available on the ACS webpage: www.census.gov/acs. In addition, you can access maps of the PUMAs from the Geography Division's web page under Reference Maps at http://www.census.gov/geo/maps-data/maps/reference.html.

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Finally, let's discuss concept and definition issues you should be aware of when using American Community Survey data.

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The ACS accounts for geographic boundary changes that may occur for legal areas published in the multiyear estimates.

The ACS uses the boundaries as of January 1 of the last year of the period for legal areas to produce the multiyear estimates. Boundary changes for legal areas are collected through the Boundary and Annexation Survey, a voluntary survey conducted by the Census Bureau.

Boundaries for statistical areas, including urbanized areas, Public Use Microdata Areas, census tracts, and block groups are updated every decade in conjunction with the decennial census.

The American Community Survey does not update previously released estimates to reflect subsequent boundary changes.

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For example, in 2008, the Census Bureau tabulated one-year estimates for 2007 and 3-year estimates based on data collected from 2005, 2006, and 2007. These estimates were tabulated using the boundaries that were in effect on January 1, 2007.

Looking at this slide, the area outlined in blue shows the boundaries for Amarillo city, Texas that were in effect on January 1, 2007. The estimates published in 2008 reflect these boundaries.

However, Amarillo city annexed some territory in both 2005 and 2006, as noted by the orange and red portions of the map, respectively. The 2005 and 2006 1-year estimates were published

using the 2005 and 2006 boundaries, respectively. The 2007 and the 2005-2007 three-year estimates were published using the 2007 boundaries.

Please note that the American Community Survey did not update the published 2005 and 2006 1-year estimates using the January 1, 2007 boundaries.

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Geography release notes are available on the American Community Survey's website for each year. From the ACS homepage, select the "Data and Documentation" tab, then "Geography" from the drop down menu. The link to the Geography webpage is also available in the slide. These release notes keep data users up to date with geography changes in the survey. The Geography webpage also includes links to reference maps and other mapping resources.

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In addition to the ACS website at census.gov/acs, here are some other American Community Survey resources.

American Community Survey data products are available through American FactFinder at factfinder2.census.gov.

Quick, easy access to facts about people, business, and geography are available through QuickFacts at quickfacts.census.gov.

DataFerrett, the Census Bureau's free online tool that can analyze and extract data from the American Community Survey, is available at dataferrett.census.gov.

Finally, frequently asked questions specific to the American Community Survey are available at ask.census.gov by selecting "American Community Survey" in the left navigation bar.

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-The U.S. Census Bureau measures the nation's People, Places and Economy

The Census Bureau is the leading source of statistical information about the nation's people, providing not only snapshots of the nation's population size and growth, but also detailed portraits of the changing characteristics of our communities. The Census Bureau is often the only source of statistics at the local level every year, giving even the smallest communities accurate, timely information that is essential for decision-making. The Census Bureau provides critical, timely information on the health of the U.S. and local economy.

-Census Bureau statistics are how America knows what America needs

More than $400 billion in federal funds are distributed every year to states and communities based in part on demographic, socioeconomic and geographic information generated by the Census Bureau. Census Bureau statistics provide a clear and detailed picture of the entire population. For example, census and American Community Survey (ACS) estimates reflect the growth of the population as well as the changing socioeconomic and demographic

characteristics of the American people. State and local governments use census and ACS statistics to plan new roads, new schools and new emergency services. Businesses use the statistics to develop new economic opportunities. Congress has also passed many laws that depend on census and ACS statistics. These include the Voting Rights Act, the Age Discrimination and Employment Act, the National Affordable Housing Act, and the Veterans' Benefit Program. Each of these laws needs comparable measures of relevant attributes to implement the laws.

-The Census Bureau is the leading source of quality, timely and relevant information about our nation’s people and economy

With the innovation of the American Community Survey, every community, every year receives detailed statistics about their social, economic and housing characteristics. We listen to Congress, federal programs and other data users to make sure we’re measuring information that’s relevant for decision-making.

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This presentation gave you an overview of the Geographic Areas and Concepts for the American Community Survey.

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Please feel free to contact the Census Bureau if you have questions or need further information. If you have questions that are not answered by the Web site, please call 1-800-923-8282 or submit a question at https://ask.census.gov.