

**Webinar:**  
**Comparing the American Community Survey and the Population Estimates Program**  
**(February 17, 2021)**

Coordinator: Welcome and thank you for standing by. I would like to inform all participants that your lines have been placed on a listen-only mode until the question-and-answer session of today's call. Today's call is being recorded. If anyone has any objections you may disconnect at this time. I would now like to turn the call over to Ryan Burson. Thank you, you may begin.

Ryan Burson: Good afternoon everyone or good morning to those of you on the West Coast. As stated by our operator my name is Ryan Burson. I'm a Demographer/Statistician in the Population Division at the Census Bureau.

Mary Ana McKay: And I'm Mary McKay and I'm a Survey Statistician in the American Community Survey office. We want to thank you for attending today's presentation comparing the American Community Survey or ACS and the Population Estimates Program or PEP. Hopefully we can engage you and deepen your understanding of the ACS and PEP. As noted, today's webinar is being recorded and materials including the slides and recording will be available through Census Academy in the recorded webinar section. The slides and transcript will also be available at the URL listed at the bottom of this slide.

Before we focus on the ACS and PEP let's start with an overview about the US Census Bureau. The Census Bureau is the largest of 17 primary federal government statistical agencies. During the Decennial Census which we just completed again in 2020, it is the second largest employer in the United States. When you hear the US Census Bureau more often than not you may think of that Decennial Census or the Census of Population and Housing every

10 years. But the bureau also conducts more than 100 censuses and surveys of households and businesses across the nation each year. This includes the American Community Survey and over 30 other household surveys.

Ryan Burson: Another important program at the Census Bureau is the Population Estimates Program. It disseminates annual estimates of the population and housing units for the United States, states, counties, cities and towns, the Commonwealth of Puerto Rico and its municipios and metropolitan and micropolitan statistical areas.

The Census Bureau's mission is to serve as the nation's leading provider of quality data about its people and economy. And our goal is to provide the best mix of timeliness, relevancy, quality and cost for the data we collect and the services we provide. If you'd like to know more about the Census Bureau, please visit [www.census.gov](http://www.census.gov) and explore the About Us tab.

Mary Ana McKay: Today we will go through a few things. The first part of today's webinar I will be going over the basics of the American Community Survey including the history, how data are collected, topics and geographies included and tools to access. Next Ryan will go over the basics of the Population Estimates Program including a summary of what estimates the program disseminates, how the estimates are made, also when and where you can access them.

Then we will share similarities and differences in the estimates released by our areas followed by a general overview of when to use what with some examples. And finally before questions Ryan and I will cover some resources available for learning more about the ACS and PEP and how to engage with us.

If you have any questions during the presentation please feel free to use the chat feature on WebEx. We will do our best to answer them in the chat or bring them up during the question portion at the end.

To begin the ACS is on the leading edge of survey design, continuous improvement and data quality. It is the nation's most current, reliable and accessible data source for local statistics on critical planning topics. The survey samples approximately 3.5 million addresses each year. These data are collected continuously throughout the year to produce annual social, economic, housing and demographic estimates.

The data collected through ACS along with other census programs such as PEP are used to help inform over \$675 billion of federal government spending each year. Our estimates covering more than 40 topics support more than 300 known federal uses and countless non-federal uses.

Examples of some programs that use Census Bureau data to determine funding include the US Department of Agriculture's Supplemental Nutrition Assistance Program, the Department of Housing and Urban Development's Public Housing Capital Fund and the Department of Transportation's Highway Planning and Construction just to name a few. The Census Bureau releases three different sets of data estimates from the ACS each year in the form of one-year and five-year period datasets as well as one-year supplemental estimates.

In order to understand what the ACS is and why it exists we need to discuss a bit of census history. The first census of the United States was conducted in 1790 and occurred every 10 years with one form being used to collect data from all households until 1930.

From 1940 to 2000 the Decennial Census which is the name for the census conducted every 10 years contained a short form used to collect data from all households and a long form that was used to collect data from the sample of households. The long form approach worked well initially but the data became less and less current as the decade progressed after each Decennial Census.

In the early 1990s demand from a wide variety of users for current nationally consistent data led federal government policymakers to consider the feasibility of collecting social, economic and housing data continuously throughout the decade. In 2000 a large-scale demonstration of the American Community Survey was conducted. The ACS was then fully implemented in 2005 and began collecting data for all of America's communities each year. There's also the Puerto Rico Community Survey which is the equivalent of the ACS in Puerto Rico.

In 2010 and moving forward the Decennial Census is only a short form sent to all households because the ACS now collects information each year that was once collected by the long form each decade.

You may be wondering what method does the Census Bureau use to collect ACS data. The American Community Survey data collection operation uses three modes that take place over a three-month period - Internet, mail and personal visits. For most housing units the first phase of data collection includes an invitation for the household to respond via Internet which is mailed to the sample address. Internet data collection started in 2013.

If the household does not respond via Internet, a paper questionnaire is sent to the sample address to the household to complete and return by mail. If the Census Bureau is unable to reach an occupant of the address via Internet paper

questionnaire or the unit had an unmailable address, the address may be selected for Computer Assisted Personal Interviewing known as CAPI.

At any point in this process receipt of an Internet response or a completed paper questionnaire from the sampled address results in the address being removed from the data collection workload. Also respondents are always able to call the telephone questionnaire assistance line at any point during the three-month data collection cycle if they have questions about the survey or prefer to complete the survey over the phone.

The content collected by the American Community Survey can be grouped into four main types of characteristics - social, demographic, economic and housing. Social characteristics include topics such as education, marital status, fertility, veterans, disability status, place of birth and others. The American Community Survey also collects basic demographic characteristics such as sex, age, race and Hispanic origin. This is the same information collected on the Decennial Census.

Economic characteristics include such topics as employment status, income, commuting to work, occupation, industry, health insurance and others. And housing characteristics include topics such as tenure, information about occupancy and the structure itself which includes home value, housing costs such as mortgages, taxes and insurance, utilities, plumbing or kitchen facilities and others. Each question on the ACS is used for federal and state government programs. These topics are used to produce more than 1,000 tables for local communities.

The ACS provides data for more geographies on an annual basis than any other household survey. The image on this slide shows some of the geographies for which ACS data are produced and the relationship between

them. Lower geographic areas fit neatly within larger areas directly connected with lines.

For example school, congressional and state legislative districts fit neatly within states and do not cross state boundaries. However they may cross boundaries of counties or metropolitan areas. In this visualization you also see the smallest geographic building block is the block group. The ACS' unique ability to report on a wide range of geographies is what gives it such a broad appeal.

Now getting back to the ACS data products I referenced earlier. These products are released about one year after the data are collected. The first year of data collection with a full sample was in 2005. We plan to release the 2020 ACS one-year estimates in September 2021. ACS one-year estimates which combine data collected over 12 months are available for geographic areas with a population of 65,000 or more.

ACS one-year supplemental estimates are a subset of detailed tables that are available for geographic areas with populations of 20,000 or more. They are simplified versions of popular ACS tables and provide the most current data to almost twice as many geographies as compared to the standard one-year release. We plan to release the one-year supplemental estimates for 2020 in October 2021.

And finally ACS five-year estimates which combine data collected over 60 months are available for geographic areas of all sizes down to the census tract and block group level. We plan to release the 2016-2020 ACS five-year estimates in December 2021.

We cater to a variety of data users just like you with unique needs so we have a variety of data access tools. This is a list of a few of those tools. I will describe two quick facts in data.census.gov in more detail in the next two slides. All data tools are available from census.gov. Choose the explore data tab from the blue ribbon at the top of the screen then click on the data tool and apps tab to view a comprehensive of census tools and apps.

QuickFacts is a quick, easy way to access facts about people, business and geography. QuickFacts provides statistics for all states, counties, cities and towns with a population of 5,000 or more. It's great for making quick comparisons between two geographies. It includes data from the ACS, PEP as well as other Census Bureau programs. Some topics to compare are population, age and sex, housing, health, economy, transportation, business and others. You can compare up to five geographies at once.

Data.census.gov is the Census Bureau's main data dissemination system and it is the primary way to access data from the American Community Survey, Decennial Census and more including PEP which you will see shortly. The vision for data.census.gov is based on overwhelming feedback to streamline the way you get data and digital content from the Census Bureau. Since 2016 we have made data.census.gov available as a public site while continuously releasing new improvements every few months based on user feedback. These updates will continue as we are committed to giving you the functionality you want and need in a dissemination system. To learn more please visit the links at the bottom of the slide.

While we're talking about ways to access data through data tools, it's helpful to know more about the types of data products available in the ACS. The data products fall broadly into two categories - profiles or tables. The letters in parentheses next to the profile and table types as you can see here on this slide

which will discuss data profiles and the next slide which will cover data tables corresponds to the beginning of the table I.D.

First let's focus on data profiles. They offer a broad look at a community's social, economic, housing and demographic characteristics. They generally include many different variables and the geography or population group is at the center. The ACS includes the following types of profiles - data profiles which provide broad social, economic, housing and demographic profiles; comparison profiles that offer comparisons of data profile estimates across ACS years and selected population profiles which provide broad social, economic and housing profiles for a large number of race, ethnic, ancestry and country or region of birth groups.

Tables are the other type of data product available in the ACS. Tables provide a precise or detailed view of a subject and the subject matter is at the center of the table. Some examples of tables included by the ACS are detail tables which provide access to the most detailed ACS data down to the block group and cross tabulations of ACS variables, supplemental tables which are simplified tables that provide ACS statistics at a lower population threshold than the standard one-year data table and subject tables which are similar to data profiles but include more detailed ACS data classified by subject.

I am now going to turn it over to Ryan to go over the Population Estimates Program.

Ryan Burson: Thank you Mary. I'd like to provide now an overview with the basics of the Population Estimates Program for you. The Population Estimates Program disseminates official measures of population and housing units between the Decennial Censuses. The estimates are mandated by federal law and along with other census programs such as the ACS as Mary pointed out are used to allocate over \$675 billion in federal government spending each year.

Recently the estimates from the Population Estimates Program were used to distribute over \$100 billion to states and cities for the 2020 CARES Act. The estimates include basic population and housing topics supporting the ACS and other federal surveys in the form of population controls and denominators for rates, for academic and business research and of course for program planning in the public and private sectors.

Our most current estimates are for July 2020 and we have historical estimates extending back to 1900 for some areas. Ongoing data releases occur annually for over 80,000 areas in the United States and Puerto Rico.

The range of PEP estimates is considerably less than that disseminated by the ACS. PEP estimates are given for demographic and housing subjects but do not include social and economic subjects.

With regard to population data PEP disseminates demographic estimates for total population and population characteristics including age, Hispanic origin, race and sex, also components. These include births, deaths and net migration, also group quarter's population totals. PEP also disseminates total population for what we call "universes". These include the resident population, the resident population plus armed forces overseas, the civilian population, the civilian non-institutionalized population and the household population. With regard to housing data PEP disseminates estimates of total housing units only. There are no housing characteristics.

Here are the geographies which PEP data are disseminated and the hierarchical relationship between them. Most of the estimates are for legal entities like states and counties and incorporated places. But we also disseminate estimates for metropolitan and micropolitan statistical areas.

Estimates are disseminated by the Population Estimates Program annually for over 40,000 incorporated places in minor civil divisions. There are also estimates for the unincorporated parts of counties.

This table summarizes all of our estimate products by geography and type. The levels of available estimate geography are listed in the columns across the top and the available demographic types of estimates are listed in the rows down the side. Reviewing the table we see that total resident population estimates are disseminated for the US, states, metropolitan and micropolitan statistical areas, counties, places and Puerto Rico and its municipios.

Note that we use the term places to include incorporated places and minor civil divisions which we also sometimes term as subcounty areas. Components of change that are births, deaths and net migration are disseminated for all of these areas except for places and municipios. Age, sex, race and Hispanic origin characteristics estimates are disseminated for all areas except metro and micro areas and places.

Note that characteristics estimates for Puerto Rico are given only by age and sex and do not include the other demographic characteristics. Monthly estimates for the five estimates universes that I just mentioned are disseminated for the US only. Housing unit estimates are disseminated for the United States, states and counties.

This may seem a little bit daunting but I think it's very important to illustrate that our Population Estimates Program estimates are actually created through the use of administrative data and estimates model and are not collected per se. The methods we use to create the estimates vary by level of geography. For national, state and county estimates we use what we call the cohort component method. The population estimate at any given time starts with a

population base. It could be the last Decennial Census or the previous point in the time series. Births are added and deaths are subtracted then net migration is added and that would include both international and domestic net migration.

Birth and death records are supplied each year by the National Center for Health Statistics and by our partners in the federal state cooperative for population estimates. Net international migration is estimated using data from the ACS, the Puerto Rico Community Survey and the Defense Manpower Data Center. Net domestic migration is factored in by incorporating data from the Internal Revenue Service, the Centers for Medicare and Medicaid Services, the Social Security Administration, the ACS and our estimates cooperative partners.

Now for subcounty population estimates we use what we call a distributive housing unit method where county population is distributed to subcounty areas based on updated estimates of housing units. We multiply housing occupancy rates and persons per household rates times updated estimates of the housing units for subcounty areas to produce uncontrolled population estimates.

We then control these subcounty estimates so that they sum to the county household population estimates produced with the cohort component method. To produce the final subcounty population estimates we add the controlled household population estimates to estimates of the total group quarter's population. Input data for the housing unit estimates come from the Census Bureau's building permit survey, the survey of construction, the manufactured home survey and from our estimates' cooperative partners.

Each year PEP disseminates a new set of what we call vintage estimates. The estimates are released on a rolling basis beginning in December and ending in

June of the following year. This table shows our vintage 2020 estimate release schedule by type of product. The first vintage 2020 estimates of total and voting age population for the nation and states were released last December. Upcoming releases include in early May we will release the total population and components of change estimates for the nation, states, counties, Puerto Rico Commonwealth and municipios and also for metropolitan and micropolitan statistical areas.

Also in early May we will release a special dataset that includes the population for the United States by single year of age up to 100 and over and also by sex. Later in May we will come out and disseminate total population estimates for cities and towns—that is incorporated places and minor civil divisions. Also at that time we will disseminate total estimates of total housing units for the nation, states and county.

In June we have a very large release. We'll disseminate population by age, sex, race and Hispanic origin for the nation, states and all of its counties. In addition we'll release population estimates by age and sex for Puerto Rico Commonwealth and its municipios.

Now at the end of each decade when Decennial Census information is released PEP has the opportunity to evaluate its estimates against the census. And that is what we'll do with the 2020 Census. We will use our estimates methods to create April 1, 2020, estimates without knowledge of the 2020 Census results and then compare the estimates against the census results. The evaluation estimates are published in the research and evaluation area of the PEP webpage which is given here. As 2020 results become available we will follow up with additional evaluation estimates, evaluation products later this year and into next year.

Like ACS, PEP also caters to a variety of data users with unique needs. So we have a variety of that data access tools as well. This is a list of those tools. The PEP webpage highlighted here is the primary way to access all of PEP's estimates products including a large array of historical estimates, publications and media reports. Since the only vintage 2020 estimates available right now are population totals for the United States and States, you can access vintage 2019 estimates for other areas here.

Mary mentioned [data.census.gov](https://data.census.gov)—the Census Bureau's main dissemination platform. This platform is not yet the primary way to access PEP data but we have begun to post vintage 2019 estimates here. PEP estimates also are available on QuickFacts as Mary described. And PEP estimates are also available on the Application Programming Interface or API. It lets developers create custom apps to reach new users and makes key demographic, socioeconomic and housing statistics more accessible than ever before. PEP estimates on the API extend back to 1990.

Recently we were able to make our first release of vintage 2019 estimates on [data.census.gov](https://data.census.gov). At this time the only PEP estimates available on the site are of total resident population. But these estimates are on the site and they're available for all of our estimates' geographies. We are currently working with the Census Bureau's Center for Enterprise Dissemination to post our other vintage 2019 estimates' products on [data.census.gov](https://data.census.gov).

Now let's go over some of the similarities and differences between the ACS and PEP.

Mary Ana McKay: Thanks Ryan. Hopefully from the introduction of both Census Bureau programs you are starting to see where there are similarities and differences. There are many ways where the ACS and PEP are different. For example the

ACS provides estimates from samples collected every year whereas PEP provides annual estimates of current population and total housing units by calculating change since the last census. Further, the ACS collects data on numerous social, economic, housing and demographic characteristics whereas PEP does not collect survey data to create estimates but rather it uses administrative records and other data sources to calculate annual change in population and housing.

The content for the ACS includes population and housing characteristics. But the PEP has no social or economic detail and only has population characteristics by age, Hispanic origin, race and sex only as well as housing unit totals.

Ryan Burson: Both the ACS and PEP release new data every year but the ACS data reflect two different time periods - one year and five year. And PEP data reflects specific points in time typically on July 1 each year. PEP data also reflect estimate intervals such as months, years and decades—chiefly for the components' estimates.

There are other differences. The ACS releases data across numerous geographies. First, one-year estimates for populations of 65,000 or more and second five-year estimates going down to the block group level. PEP has data down to the place level only, although we do also disseminate the estimates for metropolitan and micropolitan statistical areas.

Finally the ACS calculates a margin of error at the 90% confidence level but no statistical confidence intervals are averages for time periods are calculated for PEP.

While they are different in many ways the ACS and PEP share some similarities. In fact the two programs often work together to produce estimates. Both disseminate total population and housing unit estimates, also population characteristics by age, Hispanic origin, race and sex. One important area where these two programs work together involves certain ACS estimates.

Mary Ana McKay: The PEP estimates are actually used as controls for ACS population and housing unit data. The one-year estimates for larger areas are consistent. You will see this when you are using [data.census.gov](http://data.census.gov). If you see five asterisks in the margins of error column as you see indicated here in this table, that is an indication that the estimate has used population estimates or PEP as a control.

Now let's walk through some basic rules for when to use what.

Ryan Burson: Both the ACS and PEP are useful for different reasons and for different purposes. If you want to examine population totals and demographic characteristics, generally speaking, you would use PEP.

Mary Ana McKay: For social and economic characteristics use the ACS.

Ryan Burson: For estimate percents, means, medians and rates, use PEP estimates unless you intend to use these measures in comparison with social and/or economic estimates from the ACS.

Mary Ana McKay: If you want to conduct statistical tests to compare estimates between two time periods or for similar geography use the ACS and if you want to collect a mixture of estimates we recommend using either the ACS or the PEP. For example if you just want to discuss population or housing totals for the State of Michigan, you can use PEP. However if you want to also discuss income,

educational attainment or other economic and social characteristics in addition to the population and housing totals for Michigan, you should use all ACS estimates.

Ryan Burson: We put together some examples to show you of applied uses of the ACS and PEP if you want to use a population total use PEP. Likewise population by age and sex for state at a point in time, for example the number of children under age one in Delaware on July 1, 2019, PEP estimates are what you should use.

Mary Ana McKay: What about if you want a population by age and sex for educational attainment for a state? For example you're curious about these estimates in 2019 for the state of Ohio use the ACS. And more specifically if you're interested in the most current data, use the one-year estimate. But if you want precision use the five-year estimate. If you want an estimate of income such as the mean household income for a small geography such as a town or any area with a population of less than 65,000 such as a smaller county or place, use the ACS five-year estimate.

If you want to compare the mean household income in a small place to its respective county, use the ACS five-year estimate. The county may have data available for the one-year estimate if it meets the population threshold but the small geography might not. So you should use the same data product from both figures to compare.

Similarly if you want to compare the difference in married couple families in the same county between two time periods, make sure you use the same ACS data product. That is comparing the one year with the one year or five year with five year.

We hope you've enjoyed our presentation comparing the ACS and PEP. We wanted to finally share some resources for learning more about both before opening the floor for questions.

For the American Community Survey a great place to start to learn more is the ACS main webpage which can be found at [census.gov/acs](https://census.gov/acs). The American Community Survey website contains a lot of information about the survey, data products, tools for data users and other helpful information. If you're interested in accessing materials from this webinar, visit the News and Updates' tab along the left side and navigate through events to find today's presentation.

Ryan Burson: To learn more about the Population Estimates Program, start with the main PEP webpage. Here you can access all of PEP's estimates products including a large array of historical estimates, method statements, publications and media reports. You can also find information about our partners in the Federal-State cooperative for Population Estimates who can help to provide insights into local demographic trends in their states.

Mary Ana McKay: As we wrap up we encourage you to connect with us directly. You can sign up for and manage email alerts on various census topics and updates via GovDelivery. Also sign up if you want the slides from this presentation or any other presentations we provide. We'll send out a message when materials are available. You can visit our websites [census.gov/acs](https://census.gov/acs) or [census.gov/popest](https://census.gov/popest) or connect on the various social media platforms. We also have emails to help support data users who may have questions. [acso.users.support@census.gov](mailto:acso.users.support@census.gov) for the ACS and [pop.cdob@census.gov](mailto:pop.cdob@census.gov) for PEP.

And one last thing before we open the line for questions. If you're using our estimates make sure to source the Census Bureau, American Community Survey or population estimates as to where you receive the data. It helps

people know that the information they're using is powered by the Census Bureau and its programs.

Ryan Burson: This concludes today's presentation on comparing the American Community Survey and population estimates. Mary and I thank you for attending and having an interest in the important data that the Census Bureau collection disseminates. We will now open the floor for questions. Operator do we have some questions on the line?

Coordinator: Thank you. We will now begin our question-and-answer session. If you'd like to ask a question please press Star 1. Please unmute your phone and record your name slowly and clearly when prompted. Your name is required to introduce your question. One moment please. Our first question, your line is open.

(Caller 1): Oh, good afternoon. I thought I heard you say that for PEP that you get information from Defense Manpower Datacenter. And I was wondering what type of data do you get? Do you get demographic data and how often do you get it?

Ryan Burson: Thank you that's a good question. This is Ryan. And I'll answer that. Yes we do get demographic information from them and it involves of course the military population. We get annual - in fact monthly data on an annual basis. We use that information to estimate the military movement internationally from overseas to the United States, so we can add those movements to our international migration estimate.

(Caller 1): Okay thank you for that. The reason why I was asking is because we were trying to get census data - administrative data to do the 2020 census and we had a lot of problems.

Ryan Burson: I understand...

(Caller 1): Okay maybe...

Ryan Burson: ...that there may be a public access site at the Defense Manpower Data Center for the general public to access those data.

(Caller 1): Okay, all right. Well thank you very much.

Coordinator: Thank you and as a reminder if you'd like to ask a question please press Star 1, one moment. Your line is open.

(Caller 2): Thank you. I placed this question on the chat box but perhaps we'd get a little bit more discussion of the question. I think everyone is aware that the census data for 2020 will not be available for state and local governments until September of this year, you know, a few months late. It'd be time to build consensus amongst elected officials and community leaders in the redistricting process. Some states require local governments to complete the redistricting process during the odd numbered year when the 2020 census for example was released.

And so my question is population data -- age, race, sex, Hispanic origin - those sorts of things either from the ACS or the PEP sufficiently accurate for this 2021 process? And if that type of data's not yet available in this year for 2020, perhaps the 2019 data would be available.

Mark Asiala: Yes this is Mark Asiala. I'm the Assistant Division Chief in charge of the Statistical Design for the ACS. And I just wanted to say that the redistricting data is due to be released from the 2020 census - the PL94-171 data by

September 30. That data comes out at the block level that is fairly detailed and is more detailed geographically than what you could expect from a survey, like, the ACS.

So we would continue to recommend using the official product for that. There is a Citizens of Voting Age population file that the ACS produces on an annual basis that was released February 1. But that goes down to tract and block group only and is used mainly for evaluation and enforcement purposes.

Ryan Burson: And this is Ryan from the PEP Program. And I would echo what Mark just said. In fact, for PEP estimates even for vintage 2020 they extend down geographically only to the place level. And I think that most states if not all states and other jurisdictions require more detailed geographical information in their laws to redraw districts.

Coordinator: And at this time we have no further questions on the audio line.

Mark Asiala: This is Mark Asiala. I have seen a number of questions regarding the use of the population estimates in combination with the ACS. Can I address a general response for people to that? So the way how we produce estimates from the ACS is we initially assign a weight that reflects the chance or probability that a person is in sample. And once we do that we do a number of steps—that include adjustments for non-response and also adjustments to what we call control the ACS estimates to the Population Estimates Program. When we use the estimates from the PEP we create our own race, Hispanic, age and sex groups. But because of sort of how many people we have in each of those groups we may have to collapse some of them together. And so what you'll tend to see is that the ACS and the PEP particularly on the one year will tend to agree for total population and sometimes the Hispanic -- not Hispanic split - but we tend not to agree on race.

For example, there was a question about White Alone population. And that's because when we formed those groups we take all Hispanics together regardless of race. And then we break out the non-Hispanic race component - sorry the non-Hispanic component out by race. So, race groups themselves will tend to never be directly controlled. So, you'll tend to see some differences when you compare the PEP and the ACS on that.

There was also a question with regard to looking at the five-year ACS versus the PEP. You should know that when we do this process for controlling the five-year estimates we use the average of five years of the PEP. So for example the 2015 to 2019 ACS five-year product takes the average of the years 2015, 2016 and so on through 2019 population estimates. And so we use that average to be comparable to the period for which we collected the data. So if you looked at just the 2019 PEP estimate those would be different. So that explains some of the changes there.

There were also a series of questions about what about for the estimates that the ACS produces for areas that the PEP does not produce estimates for. So for example zip (codes) for tracts. Since we ascribe an individual weight to every respondent that we get in the ACS, we form estimates by summing up the weights for all the people in a geographic area.

So if we had 10 people in a zip code area or a tract, we will sum the weights of those 10 people and that's how we come up with that estimate. The only place where the PEP plays a role is let's take for example tracts. All the tracts that come up into a county we may control to a county total coming from the PEP. But how the individual tract level estimates will just come from the distribution in the ACS itself. So, we'll agree where we make use of the PEP

potentially on total population. But for other areas it's really driven by the ACS.

I hope that helps some of your questions. Thank you.

Gretchen Gooding: It sounds like we have no further questions on the phone. We had a very, very lively chat session. And Mary if you can go back to the slide with our email addresses and contact info. We encourage you if you still have questions for us, we have our email addresses on there from ACS our American Community Survey questions. You can reach out to us at [acso.users.support@census.gov](mailto:acso.users.support@census.gov) and for Pop Estimates Program it's [pop.cdob@census.gov](mailto:pop.cdob@census.gov). If you still want to get in touch with us with your questions, please feel free to reach out and we'll follow up with you.

Thank you everyone for joining. This was a very energetic and very active webinar and we thank you for joining us.

Coordinator: That concludes today's conference. Thank you for participating. You may disconnect at this time.

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