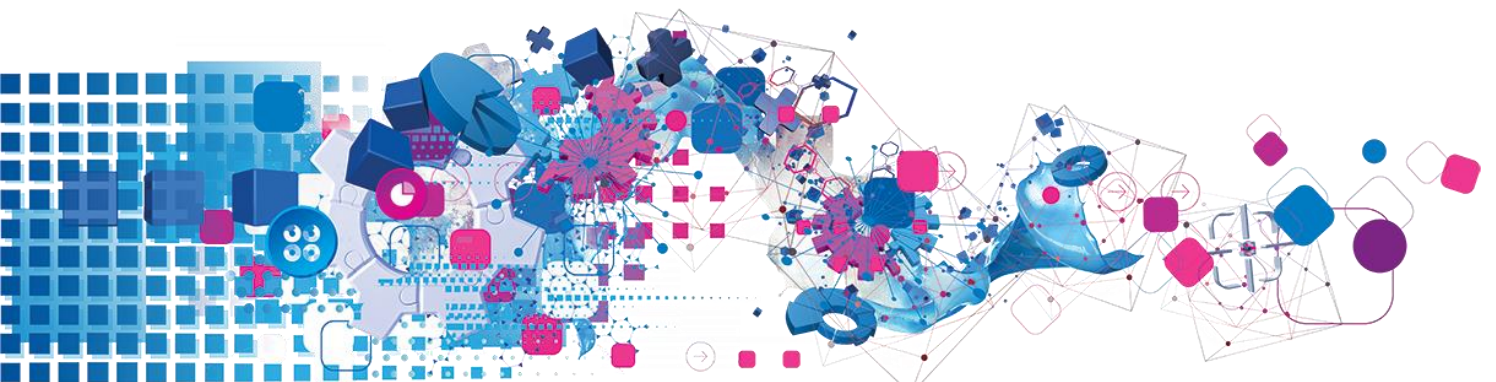




CAPE Technical Overview

April 2018



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Introduction

This document provides an overview of key points relating to the April 2018 release of Experian's Census Area Projections & Estimates (CAPE) databases. This release updates estimates and projections from the previous release and replaces all previous CAPE releases.

The work to produce all the CAPE databases utilizes several decades of experience in building such databases worldwide. It also leverages the wealth of input data that is available for small area estimation within the USA.

The CAPE databases updated for this release are:

- Demographics – Census Day Estimates (CDE)
- Demographics – Current Year Estimates (CYE)
- Demographics – Five Year Projections (FYP)
- Consumer Expenditure– Current Year Estimates (CYE)
- Consumer Expenditure– Five Year Projections (FYP)
- Retail Demand/Supply

The CAPE databases are made available at Census Block Group level. The Block Group list that the CAPE counts are provided on contains 217,182 Block Groups, which nest into 72,739 Tracts, which in turn nest into 3,142 Counties. This is the **Census 2010 Block Group list without Water Block Groups**. It is exactly the same list as used for all CAPE releases following the 2010 Census, with the exception of a change of Bedford, VA (Bedford city, Virginia (51-515): Changed to town status and added to Bedford County (51-019) effective July 1, 2013).

The Block Group level **Demographics** databases relate to three points in time:

- April 01, 2010 for Census Day Estimates (CDE)
- January 01, 2018 for Current Year Estimates (CYE)
- January 01, 2023 for Five-Year Projections (FYP)

Within each of the above three 'data views', income figures relate to income received during a 12-month time period. The relevant time periods are as follows:

Census Day Estimates: Income estimated to have been received during Calendar Year 2010 (that is, between January 2010-December 2010)

Current Year Estimates: Income estimated to have been received during Calendar Year 2017 (that is, between January 2017-December 2017)

Five-Year Projections: Income projected to be received during Calendar Year 2022 (that is, between January 2022-December 2022)

Block Group level **Consumer Expenditure** databases relate to the following two time periods:

Consumer Expenditure - Current Year Estimates: Estimates of various categories of expenditure (\$) spent during Calendar Year 2017

Consumer Expenditure - Five-Year Projections: Projections of various categories of expenditure (\$) expected to be spent during Calendar Year 2022

The **Retail Demand** database is created from the **Consumer Expenditure – Current Year Estimates** database. It presents these expenditure (\$) figures in terms of estimated spend by Merchandise Line and

Retail Store Types. The figures (\$) presented in Retail Demand therefore relate to expenditure (\$) spent during Calendar Year 2017

For a listing of variables added, modified or removed, see appendix B.

CAPE Outputs: 2018 Release (April 2018)

Demographics

Demographics – Current Year Estimates (CYE)

The CAPE counts data portfolio of Demographics – Current Year Estimates (CYE) contains 91 tables covering the 4 subject areas of (a) Population (b) Households & Housing Units (c) Income & Poverty and (d) Education & Employment. Puerto Rico data has been included for 30 of these tables. The list of tables, and of variables within these tables, is exactly the same for this release as for the previous ‘Spring Release’ of CAPE (see Appendix A).

The CAPE Ratio and Percentage file provide the Current Year Estimates is categorized by Population, Households & Housing Units, Income & Poverty and Education & Employment. Provided by block group as a default but also available on ZIP level.

Demographics – Five Year Projections (FYP)

The CAPE counts data portfolio of Demographics – Five Year Projections (FYP) contains 78 tables covering the 4 subject areas of (a) Population (b) Households & Housing Units (c) Income & Poverty and (d) Education & Employment. These 78 tables are a subset of the 91 tables featured for the Demographics - CYE. The lists of tables and of variables within these tables are exactly the same for the April 2018 CAPE release of Demographics - FYP as for the previous CAPE release (see Appendix A).

Demographics – Census Day Estimates (CDE)

The CAPE counts data portfolio of Demographics – Census Day Estimates (CDE) contains 78 tables covering the 4 subject areas of (a) Population (b) Households & Housing Units (c) Income & Poverty and (d) Education & Employment. These 78 tables are a subset of the 91 tables featured for the Demographics - CYE. The lists of tables and of variables within these tables are exactly the same for the April 2018 CAPE release of Demographics – CDE as for the previous CAPE release. The **values** of the variables, for the April 2018 CAPE release, of Demographics – CDE are also exactly the same as for the previous CAPE release.

Appendix A at the end of this document provides a listing of the CAPE Demographics tables. It highlights which tables are available as Census Day Estimates (CDE), which are available as Current Year Estimates (CYE) - with and without Puerto Rico data, and which are available as Five Year Projections (FYP).

Consumer Expenditure

Consumer Expenditure – Current Year Estimates (CYE)

The Block Group-level **Consumer Expenditure – Current Year Estimates (CYE)** database contains much of the same variables for this April 2018 version of CAPE as those featured in the April 2017 release.

Appendix B provides listings of added/deleted variable occurrences in the Consumer Expenditure databases for the April 2018 release.

Consumer Expenditure – Five Year Projections (FYP)

The Block Group-level **Consumer Expenditure – Five-Year Projections (FYP)** database provides future five-year spending estimates out to January 1, 2023. Specifically, the values reported are US Dollar amounts projected to be spent during Calendar Year 2022. The variables reported should match those reported in the **Consumer Expenditure – Current Year Estimates**, unless otherwise noted.

Major expenditure categories represented in the database include:

Food and Non-alcoholic Beverages
Alcoholic Beverages
Housing
Apparel and Services
Transportation
Healthcare
Entertainment
Personal Care Products and Services
Reading
Education
Tobacco Products and Smoking Supplies
Miscellaneous
Cash Contributions
Personal Insurance and Pensions

The categories above are comprised of detailed variables that can nest into several levels. For example:

- Food and Non-alcoholic Beverages
- Food at Home
 - Processed Fruits
 - Frozen Orange Juice

The CAPE **Consumer Expenditure – Five-Year Projections** database should be of use to anyone wanting insight into the spending levels of an area’s residents in approximately five years’ time. The database complements the existing **CAPE Consumer Expenditure (Current Year Estimates)** database and provides information that should be useful input for store network location and refurbishment decisions.

Retail Demand/Retail Supply (RDRS)

The estimates for Retail Demand/Retail Supply (RDRS) Current Year Estimates relate to demand (expenditure) and supply (sales) in \$ for the whole of Calendar Year 2017. The **Retail Demand/Retail Supply (RDRS)** estimates use several data sources to create Block Group level estimates of:

- Retail Demand presented in terms of (a) Merchandise Lines and (b) Store Types
- Retail Supply presented in terms of both (a) Store Types and (b) Merchandise Lines – see above

The product allows comparison of Retail Supply to Retail Demand for trade areas in terms of both (a) Store Types and (b) Merchandise Lines. It allows areas where sales are greater than demand and where sales are less than demand to be easily identified in order to help inform decisions regarding store locations and merchandise lines stocked.

Merchandise Lines covered by Retail Demand include the following:

Groceries and Other Foods

Meals, Snacks and Beverages for Immediate Consumption

Alcoholic Beverages

Packaged Alcoholic Beverages

Cigars and Smokers' Accessories

Drugs, Health Aids, and Beauty Aids

Soaps, Detergents, and Household Cleaners

Men's Wear including Accessories

Women's, Juniors' & Misses' Wear including Accessories

Children's Wear

Footwear

Sewing, Knitting and Needlework Goods and Supplies

Curtains, Bed and Table Coverings

Major Household Appliances

Small Electric Appliances

Televisions, Video Recorders, Video Cameras

Audio Equipment, Musical Instruments, and Supplies

Furniture, Sleep Equipment and Outdoor Furniture

Flooring and Floor Coverings

Computer Hardware, Software & Supplies

Kitchenware and Home Furnishings

Photographic Equipment and Supplies

Jewelry

Books

Toys, Hobby Goods, and Games

Optical Goods

Sporting Goods

Hardware Tools, Plumbing and Electrical Supplies

Lumber and Building Materials

Lawn, Garden and Farm equipment and Supplies

Paint & Sundries

Cars, Trucks, Other Powered Transportation

RVs, Camping and Travel Trailers

Automotive Fuels

Automotive Lubricants

Automotive Tires and Accessories

Household Fuels

Pets, Pet Foods & Pet Supplies

All Other Merchandise

Major Store Categories covered by Retail Demand are:

Motor Vehicle & Parts Dealers

Furniture & Home Furnishings Stores

Electronics & Appliances Stores

Building Material & Garden Equipment & Supplies Dealers

Food & Beverage Stores

Health & Personal Care Stores

Gasoline Stations

Clothing & Clothing Accessories Stores

Sporting Goods, Hobby, Book, & Music Stores

General Merchandise Stores

Miscellaneous Store Retailers

Nonstore Retailers

Food Services & Drinking Places

Each Major Store Category listed above is then typically split into sub-categories. For example, Clothing and Clothing Accessories stores are split into the following sub-categories:

Clothing and Clothing Accessories stores (448)

- Clothing Stores (4481)
 - Men's Clothing Stores (44811)
 - Women's Clothing Stores (44812)
 - Children's and Infant's Clothing Stores (44813)
 - Family Clothing Stores (44814)
 - Clothing Accessories Stores (44815)
 - Other Clothing Stores (44819)

- Shoe Stores (4482)
- Jewelry, Luggage and Leather Goods Stores (4483)

CAPE Inputs

A key process in the development and construction of CAPE estimates and projections has been the acquisition and use of an extensive range of high quality input data from a wide variety of sources. This has included data from the following:

US Census Bureau: Census

US Census Bureau: Annual Population Estimates

US Census Bureau: Annual Housing Unit Estimates

US Census Bureau: American Community Survey (ACS)

US Census Bureau: Current Population Survey (CPS)

US Census Bureau: Census of Retail Trade (part of the Economic Census)

US Census Bureau: Population Projections

US Bureau of Labor Statistics: Local Area Unemployment Statistics (LAUS) program information

US Bureau of Labor Statistics: Consumer Price Index: All Items CPI for all Urban Consumers (CPI-U)

US Bureau of Labor Statistics: Consumer Expenditure Survey

Federal Emergency Management Agency (FEMA): Declared disaster and emergency statistics

Experian: Household-level ConsumerView database statistics for small areas

IHS Global Insight: Economic Estimates and Projections

Maonics: Carrier Route level counts of Active USPS Residential Delivery Points

Valassis Lists: Block Group level counts of addresses

Methodology

Demographics

Demographics – Current Year Estimates (CYE)

The CAPE Demographics – Current Year Estimates (CYE) (April 2018) release uses the previous version of CAPE estimates as a starting point.

The first phase of processing uses a variety of sophisticated demographic methods to update key demographics such as Housing Units, Households, Families, Total Population, and Population split by Age, Sex, Ethnicity and Race. These methods take the previous CAPE release estimates as a starting point and update them to the CAPE (April 2018) release CYE date of January 01, 2018. The methods utilize various data sources such as Experian - ConsumerView, Maponics, Valassis Lists, US Census Bureau 2010 Census data, and US Census Bureau Annual Population Estimates data. Updated US Census Bureau County-level post-Census estimates of population by age by sex by race by ethnicity, from the latter source, have been used to create appropriate calibration targets for the population figures. Methods used within the first phase processing include 'ratio-change' methods to track localized change in the Housing stock, the use of a 'Housing Unit Component Model' at higher geographic levels to track the impact of new builds and demolitions and set high-level calibration targets for the number of Housing Units, and the use of a cohort-survival model to estimate the change in the age by sex distribution of the population since the previous CAPE estimate date. April 2018 CAPE release makes use of County level US Census Bureau Housing Unit estimates that account for 2010 Census results **and also use** the traditional US Census Bureau 'components of housing change' method in their construction. The result of using this improved feed of post-2010 Census data is **a complete re-basing (or re-estimation)** of the Experian CAPE Housing Unit estimates. The result of the first phase of processing is a set of Current Year Estimate demographics variables that form the relevant 'table base populations' for the remaining CAPE tables.

The second phase of processing then typically uses localized propensities for the detailed characteristics of each table. It is based upon sources such as Census 2010, the American Community Survey (ACS), and the Current Population Survey (CPS). Trends in these propensities over time are used to update them to the CAPE 'Current Year Estimates' date (January 01, 2018). These updated propensities are then applied to the relevant table base population (or sub-populations) resulting from the first phase of processing. Within this phase of processing, some variables have their own specialized methods. For example, the creation of Household Income estimates by various characteristics (e.g., Race) includes the use of an 'inflation adjustment algorithm' and also multi-dimensional Iterative Proportional Fitting (IPF). These methods differ from the typical second phase methods outlined above. Some key tables, including Household Income, Housing Value, and Employment Status by Sex, are also subject to calibration, so that they agree as closely as possible with targets set from sources of data that are only available for geographic areas much larger than Block Groups.

Within the final phase of CYE processing, routines are used to derive means, medians, aggregates, and other appropriate variables, from the CAPE tables of CYE counts created in the early phases of processing.

CAPE Ratio and Percentages Current Year Estimates (CYE) is based on subset from CAPE Counts – Current Year Estimates (CYE).

Demographics – Five Year Projections (FYP)

The vast majority of tables produced above as Current Year Estimates (CYE) have also been projected forward 5 years to form the Demographics – Five Year Projections (FYP) dataset.

There are many similarities between the methods to produce the projections and those described above to produce the estimates.

Use of high geographic level calibration figures:

- High level (e.g., County, State, or National) calibration or guideline figures are produced and used wherever possible. Thus, for example, US Census Bureau high-level Population Projections are used to inform the final values set for CAPE Block Group level Five Year Projections (FYP) of population.

At Block Group level:

The set of key base counts (Housing Units, Households, Households split by Family Households and Nonfamily Households, and Total Population split by Population in Households and Group Quarters Population) is produced first.

The cohort-survival model used for the CYE is used to project age & gender distributions

Distributions of 'Other Population & Household' characteristics are then calculated and applied to the relevant base count(s).

Special care is taken when applying the above methods to areas affected by major disasters.

However, there are also a couple of key differences between the methods used for the CAPE Five Year Projections and those used for the Current Year Estimates. The main differences are as follows:

It is far more difficult to source calibration statistics for the projections than for the estimates. As such, calibration routines are used for less FYP tables than for CYE tables. FYP tables where detailed calibration routines have been used for this release include those relating to Housing Value (Table B17), Household Income (Table C01), and Employment Status by Sex (Table D04).

Block Group level projected distributions of 'Other Population & Household Characteristics' have generally been produced by

- Reviewing trends between the Census 2010 distributions and CYE distributions
- Then applying these trends forward 5 years.

A combination of linear and non-linear methods has been used in this process.

Consumer Expenditure

Consumer Expenditure – Current Year Estimates (CYE)

Consumer Expenditure estimates are created based on Experian analysis of individual-level respondent data from the Consumer Expenditure Survey. This survey is conducted by the U.S. Census Bureau on behalf of the U.S. Bureau of Labor Statistics (BLS). For the April 2018 release, the estimates include those recorded for Calendar Year 2016 and the first quarter of 2017 (January– March).

This respondent information is analyzed to determine relationships between household consumer spending, the number of items purchased, and key demographic factors. Example variables shown to drive variation in average household spending include:

Age of Head of Household

Household Income

Family size

These relationships are then used to push CYE spending estimates down to the full Block Group list. Initial Block Group level results are then adjusted to correspond with target spending values seen in the latest Consumer Expenditure Survey results and the most recent Consumer Price Index (CPI-U) statistics.

Consumer Expenditure – Five Year Projections (FYP)

The methodology for the Consumer Expenditure – Five-Year Projections (FYP) database builds upon the methodology for the Consumer Expenditure – Current Year Estimates (CYE). The final output produces estimates for the same variables as the CYE version of Consumer Expenditure, but for five years ahead.

The following input data sources are used to create the Consumer Expenditure – Five-Year Projections:

US Bureau of Labor Statistics (BLS) – Consumer Expenditure Survey

US Bureau of Labor Statistics (BLS) - Consumer Price Index (CPI-U) statistics.

Congressional Budget Office (CBO) – Economic Macrodata: Historic Time-series

Congressional Budget Office (CBO) – Economic Macrodata: Projections

CAPE: Consumer Expenditure – Current Year Estimates (CYE)

CAPE: Demographics – Five-Year Projections (FYP)

These forecasts are created with economic forecasting models, incorporating historic time-series data from the Congressional Budget Office's (CBO) Economic Macrodata and the CBO's own macroeconomic projections. Future inflation rates are also calculated via the Consumer Price Index (CPI-U) and are then used to convert the results into nominal terms. In other words, the final estimates and eventual Block Group results are presented in terms of projected actual spending (in USD) in Calendar Year 2022.

Once these national household spending projections have been created, the figures are then pushed down to the regional level based on analysis of household spending variations evident in the Consumer Expenditure Survey. These regional targets are then broken out from high-level "parent" products to more detailed "child" products based on historical proportions (e.g., the high-level "parent" FOOD is proportionally broken out into its "children" DAIRY and MEAT).

After regional targets are set, initial Block Group-level estimates are created. These use **Consumer Expenditure – Current Year Estimates (CYE)** figures as a base, and are amended to allow for anticipated changes in underlying Block Group-level spending and demographics over time. These estimates are coupled with **CAPE Demographics – Five-Year Projections (FYP)** to predict the number of households in each combination of the key predictor categories.

The resulting spending estimates in each Block Group are then adjusted to align with the regional targets previously created. And to further ensure consistency, a hierarchical count-adjustment algorithm ensures that all child products (e.g., DAIRY and MEAT) sum exactly into their parent products (e.g., FOOD).

Retail Demand/Retail Supply (RDRS)

The Retail Demand/Retail Supply (RDRS) database is built using information from five main data sources:

1. The Consumer Expenditure Survey conducted by the U.S. Census Bureau on behalf of the U.S. Bureau of Labor Statistics. Please see above for a description of the Consumer Expenditure survey.
2. The Census of Retail Trade (CRT - part of the US Census Bureau Economic Census). This is conducted every 5 years with the most recent Census for which results are currently available having been undertaken in 2012. The Census collects information on sales, employment, and wages, by retail establishment (for example, a single store) for establishments of firms with payroll. Two types of information from the CRT are used in the creation of RDRS estimates:
 - a) Firstly, Geographic area reports (e.g. County reports) from the CRT showing the number of establishments, sales, annual payroll, and number of employees split by the NAICs (North American Classification System, 2012) classification. (Note: For many areas detailed figures for sales, annual

payroll, and number of employees are not shown in order to adhere to the US Census Bureau's disclosure control policy).

- b) Secondly, information is used on the proportion of sales of each Merchandise line that occur by Store type (NAICs category).
3. Quarterly Census of Employment and Wages: This data set comes from the Department of Labor and is updated every quarter. We take the most current 2 years of data at county level and use the reported employment numbers as well as reported estimated sales.
4. US Census Bureau: Monthly and Annual Retail Trade reports. These reports show the latest monthly and annual retail sales by NAICs code. They have been used to create national calibration figures of estimated retail sales for calendar year 2017.
5. InfoGroup: National Business Database (NBD) Statistics: This database provides surveyed and estimated establishment level information regarding number of employees and sales volumes. The majority of records are geo-coded down to Block Group level.

The RDRS methodology is then as follows:

Demand-side estimates

The Demand-side estimates of RDRS are created using information from the Consumer Expenditure Survey conducted by the U.S. Census Bureau on behalf of the U.S. Bureau of Labor Statistics.

Firstly, the Experian Consumer Expenditure estimates are converted (or mapped) from the Product Line level shown in the Consumer Expenditure database, to the Merchandise Line level required in RDRS.

Secondly, Census of Retail Trade information on the proportion of sales of each Merchandise line that occurs by NAICs (North American Industry Classification) category is then used to transfer the Merchandise Line Demand-side expenditures into NAICS categories. Results by NAICs categories then map to Retail Store Types.

The above two processes create un-scaled estimates of Retail Demand.

We then scale the Retail Demand estimates used in RDRS to ensure that national ratios of Retail Supply to Retail Demand are as close to 1.0 as possible. This is achieved by calibrating the Demand-side estimates to agree as closely as possible with NAICs code level national calendar year 2017 retail sales estimates created from analysis of US Census Bureau: Monthly and Annual Retail Trade reports.

Supply-side estimates

The Supply-side estimates of RDRS are initially created using information on number of establishments, sales, employment, and wages from the 2012 Census of Retail Trade (part of the US Census Bureau Economic Census).

In order to produce current year estimates by store type for the Supply-side, the results above are combined with more recent employment and wage statistics from the Bureau of Labor statistics. This creates updated County-level estimates of sales by NAICs code that are then calibrated to agree with our national estimates of retail sales created from the US Census Bureau: Monthly and Annual Retail Trade reports.

Results of the above analysis are then distributed down from higher geographies to Block Group level using information from the InfoGroup National Business Database (NBD). The result of this processing is a set of sales estimates by store type (NAICs code).

Finally, in a reverse manner to the processing undertaken for Demand-side estimates, the Census of Retail Trade cross-tabulation of Merchandise Line sales by NAICs code is then used to convert sales by store type into sales by Merchandise Line.

Appendix A: CAPE Demographic Table availability as Census Day Estimates, Current Year Estimates, and Five-Year Projections

Table Code	Table Name	Census Day Estimates (CDE)	Current Year Estimates (CYE)	Five-Year Projections (FYP)
Category A: Population				
A01	Total Population	Yes	Yes	Yes
A02	Group Quarters Population	Yes	Yes	Yes
A03	Total Population by Urban/Rural Classification	Yes	Yes	Yes
A04	Total Population by Sex by Age	Yes	Yes	Yes
A05	Total Population by Sex by Single Year of Age for the Population aged under 20	Yes	Yes	Yes
A06	Total Population by Sex, Age, and Ethnicity	Yes	Yes	Yes
A07	Total Population by Sex, Age and Race	Yes	Yes	Yes
A08	Total Population by Single Race and Ethnicity	Yes	Yes	Yes
A09	Total Population by Ancestry (First Ancestry Reported)	Yes	Yes	Yes
A10	Language spoken at home for Population 5 Years and over	Yes	Yes	Yes
A11	Total Population by Household Type by Relationship	Yes	Yes	Yes
A12	Sex by Marital Status for the Population 15 Years and over	Yes	Yes	Yes
A13	Sex by Age by Veteran Status for the Civilian Population Aged 18 Years and over	No	Yes	No
A14	Group Quarters Population by Group Quarters Type	Yes	Yes	Yes
A15	Male/Female ratio	Yes	Yes	Yes
A16	Average (Mean) Age by Sex and Ethnicity	Yes	Yes	Yes
A17	Average (Mean) Age by Sex and Race	Yes	Yes	Yes
A18	Median Age by Sex and Ethnicity	Yes	Yes	Yes
A19	Median Age by Sex and Race	Yes	Yes	Yes
A20	Population Density Percentiles	Yes	Yes	Yes
A21	Land Area (Square Miles)	Yes	Yes	Yes
Category B: Households and Housing Units				
B01	Housing Units by Occupancy Status	Yes	Yes	Yes
B02	Households (Occupied Housing Units)	Yes	Yes	Yes

Table Code	Table Name	Census Day Estimates (CDE)	Current Year Estimates (CYE)	Five-Year Projections (FYP)
B03	Family Households (Families)	Yes	Yes	Yes
B04	Households by Ethnicity	Yes	Yes	Yes
B05	Households by Single Race and Ethnicity	Yes	Yes	Yes
B06	Households by Age of Householder	Yes	Yes	Yes
B07	Households by Detailed Household Type and Ethnicity	Yes	Yes	Yes
B08	Households by Detailed Household Type and Single Race	Yes	Yes	Yes
B09	Households by Household Type and Age of Householder	Yes	Yes	Yes
B10	White Alone, Not Hispanic/Latino Householders by Detailed Household Type	No	Yes	No
B11	Household Size by Household Type (Households)	Yes	Yes	Yes
B12	Household Size, Household Type and Presence of Own Children (Households)	Yes	Yes	Yes
B13	Presence of People under 18 Years of Age by Household Type by Age of People under 18 years	Yes	Yes	Yes
B14	Occupied Housing Units by Tenure	Yes	Yes	Yes
B15	Occupied Housing Units by Tenure, Race, and Ethnicity	Yes	Yes	Yes
B16	Owner-Occupied Housing Units by Mortgage Status	No	Yes	No
B17	Owner-Occupied Housing Units by Housing Value	Yes	Yes	Yes
B18	Renter-Occupied Housing Units by Contract Rent	No	Yes	No
B19	Aggregate Contract Rent	No	Yes	No
B20	Housing Units by Units in Structure	Yes	Yes	Yes
B21	Housing Units by Year Structure Built	Yes	Yes	Yes
B22	Occupied Housing Units by Year Householder Moved Into Unit	Yes	Yes	Yes
B23	Occupied Housing Units by Number of Vehicles Available	Yes	Yes	Yes
B24	Occupied Housing Units by House Heating Fuel	No	Yes	No
B25	Household Language by Linguistic Isolation	No	Yes	No
B26	Average (Mean) Household Size by Household Type	Yes	Yes	Yes
B27	Average (Mean) Length of Residence	Yes	Yes	Yes
B28	Average (Mean) Number of Vehicles Available	Yes	Yes	Yes
B29	Median Age of Householder	Yes	Yes	Yes

Table Code	Table Name	Census Day Estimates (CDE)	Current Year Estimates (CYE)	Five-Year Projections (FYP)
B30	Median Year Structure Built	Yes	Yes	Yes
Category C: Income and Poverty				
C01	Household Income	Yes	Yes	Yes
C02	Family Household Income	Yes	Yes	Yes
C03	Households by Age of Householder and Household Income	Yes	Yes	Yes
C04	Household Income by Ethnicity (Households)	Yes	Yes	Yes
C05	Household Income by Race of Householder	Yes	Yes	Yes
C06	Households by Type of Income	No	Yes	No
C07	Aggregate Income (for the Population 15 Years and over)	Yes	Yes	Yes
C08	Aggregate Household Income	Yes	Yes	Yes
C09	Aggregate Family Household Income	Yes	Yes	Yes
C10	Aggregate Income for Households by Type of Income	Yes	Yes	Yes
C11	Aggregate Household Income by Ethnicity	Yes	Yes	Yes
C12	Aggregate Household Income by Race of Householder	Yes	Yes	Yes
C13	Per Capita Income (based on Total Population)	Yes	Yes	Yes
C14	Average (Mean) Household Income	Yes	Yes	Yes
C15	Average (Mean) Family Household Income	Yes	Yes	Yes
C16	Average (Mean) Household Income by Ethnicity	Yes	Yes	Yes
C17	Median Household Income	Yes	Yes	Yes
C18	Median Family Household Income	Yes	Yes	Yes
C19	Median Nonfamily Household Income	Yes	Yes	Yes
C20	Median Household Income by Age of Householder	Yes	Yes	Yes
C21	Median Household Income by Ethnicity	Yes	Yes	Yes
C22	Median Household Income by Race of Householder	Yes	Yes	Yes
C23	Ratio of Income to Poverty Level	No	Yes	No
C24	Poverty Status of Families by Family Type by Presence of Own Children under 18 Years of Age	Yes	Yes	Yes
C25	Population by Race by Poverty Status	No	Yes	No
C26	Population by Ethnicity by Poverty Status	No	Yes	No
C27	White, Non-Hispanic Population by Poverty Status	No	Yes	No

Table Code	Table Name	Census Day Estimates (CDE)	Current Year Estimates (CYE)	Five-Year Projections (FYP)
Category D: Education and Employment				
D01	School Enrollment by Sex by Level and Type of School for the Population Aged 3 years and over	Yes	Yes	Yes
D02	Educational Attainment by Sex for the Population 25 Years and over	Yes	Yes	Yes
D03	Educational Attainment for the Hispanic/Latino Population 25 Years and over	Yes	Yes	Yes
D04	Employment Status by Sex for the Population 16 Years and over	Yes	Yes	Yes
D05	Industry by Sex for the Employed Civilian Population 16 Years and over	Yes	Yes	Yes
D06	Occupation by Sex for the Employed Civilian Population 16 Years and over	Yes	Yes	Yes
D07	Occupation Type for the Employed Civilian Population 16 Years and over	Yes	Yes	Yes
D08	Method of Transport to Work for Workers 16 Years and over	Yes	Yes	Yes
D09	Travel Time to Work for Workers 16 Years and over	Yes	Yes	Yes
D10	Time Leaving Home to go to work for Workers Aged 16 Years and over who travel to work	No	Yes	No
D11	Aggregate Travel Time to Work for Workers Age 16 Years and over who travel to work	Yes	Yes	Yes
D12	Average (Mean) Travel Time to Work for Workers Age 16 Years and over who travel to work	Yes	Yes	Yes
D13	Percentage of the Civilian Labor Force Unemployed	Yes	Yes	Yes

Appendix B: Listing of variables modified, deleted from, or added for the April 2018 release of CAPE

Consumer Expenditure:

Variables dropped or replaced:

1. CEX_X01V09819 (Materials for landscaping maintenance)
2. CEX_X01V100 (Parking)
3. CEX_X02V156 (Newsletters)

Variables added for this release:

1. CEX_X01V067 (Vitamin supplements)
2. CEX_X02V186 (Interest paid, home equity line of credit (other property))

Consolidated Variable Changes:

None

Retail Demand/Supply:

Variables dropped or replaced:

None

Variables added for this release:

None

Consolidated Variable Changes:

None