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Technical Documentation for the Fiscal Year 2020 Supplemental Nutrition Assistance Program Quality Control Database and the QC Minimodel

FINAL REPORT

June 2022

Kathryn Cronquist, Mia Monkovic, Natalie Reid, and Brett Eiffes

Acknowledgments

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I. Introduction

The Supplemental Nutrition Assistance Program (SNAP) is the largest of the domestic nutrition assistance programs administered by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture (USDA), providing millions of Americans with the means to purchase food for a nutritious diet. During fiscal year (FY) 2020, SNAP served an average of 39.9 million people monthly and paid out $74.2 billion in benefits, which includes the cost of emergency allotments to supplement SNAP benefits due to the COVID-19 public health emergency.[1]

In response to legislative adjustments to program rules and changes in economic and demographic trends, the characteristics of SNAP participants and households and the size of the SNAP caseload change over time. To quantify these changes or estimate the effect of adjustments to program rules on the current SNAP caseload, FNS relies on data from the SNAP Quality Control (QC) database. This database is an edited version of the raw data file of monthly case reviews conducted by State SNAP agencies to assess the accuracy of eligibility determinations and benefit calculations for each State's SNAP caseload.

The COVID-19 public health emergency resulted in an incomplete FY 2020 sample in the raw data file. FNS granted States temporary waivers on conducting QC reviews starting in March 2020. Very few States collected QC data from March 2020 through May 2020. Most States opted to conduct QC reviews from June 2020 through September 2020, although FNS was unable to provide its usual level of oversight of the sampling procedures. Furthermore, monthly State samples for this time period were often smaller than usual.

As a result of the limited and incongruent data, and to facilitate analyses, Mathematica developed three separate SNAP QC databases for FY 2020. The first covers the "pre-pandemic" period of October 2019 through February 2020. The second covers the "waiver" period of June 2020 through September 2020 for the 47 States and territories that provided sufficient data for at least one of those months. The third combines the pre-pandemic period and the waiver period databases.[2] March 2020 through May 2020 data are not included in any of the three databases; since very few States collected QC data during this time period, the national sample is too small to use for analyses.

This document describes how the raw data are cleaned and edited to create the three SNAP QC databases. It also describes how the QC Minimodel—one of FNS's SNAP microsimulation models—uses the pre-pandemic SNAP QC database to simulate the effect of various policy changes to SNAP on current SNAP participants.[3] This chapter provides a roadmap to the report and summarizes key program and database changes since FY 2019.

Chapter II provides an overview of the SNAP QC System, the resulting raw data file, and the creation of the three SNAP QC databases. The overview, written for a nontechnical audience, is designed to give

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[1] These estimates of 39.9 million participants and $74.2 billion in benefits come from FNS administrative records, available at https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap. They differ from the other estimates in this documentation, which come from the edited SNAP Quality Control (QC) databases, because the databases are adjusted to exclude ineligible households issued benefits in error and households that received disaster assistance (including COVID-19 emergency allotments).

[2] This report refers to the original data file as the raw data file and the three edited versions as the SNAP QC databases, including the pre-pandemic period SNAP QC database, the waiver period SNAP QC database, and the combined SNAP QC database.

[3] The waiver period SNAP QC database is not used in the SNAP QC Minimodel due to (1) missing data for 6 States and territories, and (2) a lack of oversight of the sampling procedures during that time.

analysts and new users of the data enough general information to analyze and interpret the results of SNAP QC data tabulations and policy change simulations from the QC Minimodel.

Chapter III describes the process for developing files for the SNAP QC databases. We discuss the file development programs used to transform the raw data into the SNAP QC databases, the algorithms used to edit the data for consistency, and the development of sampling weights.

Chapter IV provides a technical description of the procedures used to transform the pre-pandemic period SNAP QC database into the format required by the QC Minimodel and to document the QC-specific portions of the QC Minimodel.[4]

Chapter V contains the codebook, which pertains to all three of the FY 2020 SNAP QC databases, and explains how to use the databases. For each variable, the codebook lists the variable name, the variable origin (whether it came from the raw data file or was constructed), and a description (including all valid values of the variable).

Appendix A provides an assessment of the quality of selected variables in the FY 2020 combined SNAP QC database. Users should read this appendix before using any of the SNAP QC databases; the appendix recommends against the use of some variables and cautions against or provides a disclaimer for the use of others because of apparent miscoding, high prevalence of missing or unknown values, or small sample sizes. Appendix B describes automated edits used to improve the quality of the edited SNAP QC databases. Appendix C provides information on new and changed variables in the FY 2020 SNAP QC databases. Appendix D shows how the monthly sampling weights were derived. Appendix E lists the State and region identification codes used on the file. Appendix F contains the parameter values used to determine SNAP eligibility in FY 2020, including gross and net income eligibility thresholds, deduction amounts, and maximum benefit amounts. Appendix G presents the QC review schedule—the coding form on which the raw data are originally recorded by the State QC System reviewers.

A. Key program changes since the previous fiscal year

The Families First Coronavirus Response Act of 2020, signed on March 18, 2020, authorized emergency supplemental appropriations in response to the COVID-19 public health emergency. The legislation authorized States to provide emergency allotments to supplement SNAP benefits; the emergency allotments are not included in the regular SNAP benefit amounts. Adults age 18–49 without disabilities in childless households are normally subject to time limits on their participation; the Families First Coronavirus Response Act temporarily and partially suspended time limits beginning April 1, 2020.

In addition to the disbursement of the emergency allotments and the temporary and partial suspension of time limits, program changes in FY 2020 included the following:

- Effective December 1, 2019, Maine removed the higher $5,000 asset limit from its broad-based categorical eligibility (BBCE) policy, and Michigan increased its BBCE asset limit from $5,000 to $15,000.

- Effective April 1, 2020, Louisiana implemented a BBCE policy with no limit on assets and a gross income limit of 130 percent of the Federal poverty guidelines.

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[4] The portions of the QC Minimodel code that apply to all of FNS's SNAP microsimulation models are documented in the "2011 MATH SIPP+ Microsimulation Model: Programmer's Guide, Technical Description, and Codebook" (Schechter et al. 2014).

- Effective May 4, 2020, Kentucky increased the gross income limit of its BBCE policy from 130 percent to 200 percent of the Federal poverty guidelines.

B. Key changes to the FY 2020 SNAP QC databases

The contents of each of the FY 2020 SNAP QC databases differ in several important ways from the FY 2019 SNAP QC database.

The pre-pandemic period ("period 1") SNAP QC database contains data for all States and territories across only five months (October 2019 through February 2020). Thus, the period 1 weight (FYWGT_PER1) for households in all States is the monthly weight (HWGT) divided by five.

The waiver period ("period 2") SNAP QC database contains available data for States and territories across four months (June 2020 through September 2020). However, many States do not have samples for one or more months during this time period. Specifically, five States—California, Delaware, Maine, Maryland, and New York—and the District of Columbia do not have any data for the waiver period. Eight States—Hawaii, Idaho, Indiana, Massachusetts, Ohio, Oregon, South Dakota, and Washington— have only one month of data in the waiver period. Fourteen States and territories—Alaska, Arizona, Florida, Georgia, Louisiana, Michigan, New Hampshire, New Jersey, North Dakota, Rhode Island, Virginia, Wisconsin, Guam, and the Virgin Islands—have only two months of data in the waiver period. Four States—Illinois, New Mexico, Oklahoma, and Texas—have three months of data in the waiver period. Thus, the period 2 weight (FYWGT_PER2) for each State is the monthly weight (HWGT) divided by the number of months of data available for each individual State. Because five States and the District of Columbia do not have any data for the waiver period, the average numbers of participants and benefits do not reflect the national caseload and so should not be compared to pre-pandemic estimates.

The combined SNAP QC database contains all of the data included in the pre-pandemic period SNAP QC database and the waiver period SNAP QC database. The full-year weight (FYWGT) is the monthly weight (HWGT) divided by the number of months of data available for each individual State across both the pre-pandemic period and the waiver period.

In addition to the differences described above between the FY 2020 SNAP QC databases and prior databases, we made more revisions to disaster-adjusted participant and benefit totals by State and month than usual in response to data reporting issues.

Finally, the FY 2020 databases include two new variables and changes to the editing of the relationship (RELi) and age (AGEi) variables. The first new variable, SUPP_BEN, identifies SNAP households in June through September that appear to have qualified for an emergency allotment because they were in a State that issued the emergency allotment for the sample month and were not already receiving the maximum benefit. The second new variable, FSBENSUPP, estimates the emergency allotment amount a SNAP household received. The edits to the relationship (RELi) and age (AGEi) variables resolved the following inconsistencies: (1) children age 12 or younger coded as a spouse or parent, (2) children age 14 or younger coded as the head of the SNAP household, with someone older in SNAP household, (3) adults age 22 or older coded as a foster child, (4) adults age 98 coded as a daughter, stepdaughter, son, or stepson, and (5) SNAP households with a parent and child in which the difference between ages of the parent and the oldest child is less than 14 years. See Appendix B for details.

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II. Overview of the SNAP QC Database

The SNAP QC databases are edited versions of the raw data file generated by SNAP's QC System. The pre-pandemic period (October 2019 through February 2020) SNAP QC database contains detailed demographic, economic, and SNAP eligibility information for a nationally representative sample of 18,319 SNAP units.[5] The waiver period (June 2020 through September 2020) SNAP QC database contains the same information for a sample of 8,793 SNAP units. This sample is not nationally representative because, as noted in Chapter 1, it does not include data for five States and the District of Columbia. The combined SNAP QC database contains a total sample of 27,112 SNAP units.

The SNAP QC data, produced annually, are well suited for tabulating characteristics of SNAP units and simulating the impact on SNAP units of various policy changes to the program. Accordingly, the SNAP QC databases are the source for FNS's annual report, "Characteristics of Supplemental Nutrition Assistance Program Households" and FNS's QC Minimodel, a microsimulation model that estimates the effect of proposed changes to SNAP on currently participating units. Due to FY 2020 SNAP QC data limitations resulting from the COVID-19 public health emergency and changes in economic and program circumstances after the start of the pandemic, tabulations from the pre-pandemic period SNAP QC database and the waiver period SNAP QC database are presented separately in the FY 2020 report. FNS's 2020 QC Minimodel is based only on the pre-pandemic period SNAP QC database because that database includes data for an equal number of months (five) for all States. In this chapter, we provide an overview of the raw data file and the processing and edits that convert the data file to the SNAP QC databases.

A. The QC system

The raw data file is generated from the monthly reviews of SNAP cases conducted by State SNAP agencies as part of the QC System (SNAP-QCS). The primary objective of QC reviews is to assess the accuracy of eligibility determinations and benefit calculations in sampled cases. Participating units, or *active cases*, are reviewed to determine whether they are indeed eligible to participate and are receiving the correct benefit amount. Units that had their participation denied or terminated, or *negative cases*, are reviewed to determine whether the denial or termination was correct. The SNAP QC database is normally based on the sample of active cases drawn each month for the 50 States, the District of Columbia, Guam, and the Virgin Islands. This was the case from October 2019 through February 2020. However, because of the COVID-19 public health emergency, FNS granted States temporary waivers on conducting QC reviews starting in March 2020 and continuing beyond FY 2020. Very few States collected QC data from March 2020 through May 2020, while most States opted to conduct reviews from June 2020 through September 2020. Five States—California, Delaware, Maine, Maryland, and New York—and the District of Columbia did not collect any data for the waiver period. Many other States did not collect data in every month of the four-month waiver period. Thus, the waiver period SNAP QC database is based on a smaller sample of active cases. The sample for the combined SNAP QC database is also affected for the months following the pre-pandemic period.

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[5] In this technical documentation, "SNAP unit" or simply "unit" refers to individuals who together are certified for and receive SNAP benefits. A household may contain multiple SNAP units and/or individuals who do not receive SNAP benefits. However, since QC sampling is done at the unit level, each record contains data on only one SNAP unit.

State QC reviewers review data for the sampled cases.[6] They gather financial and demographic information from the sampled unit's case file, visit the household to re-interview the participants, and then determine whether the SNAP unit received the correct SNAP benefit amount. The review information is either uploaded or entered directly into the SNAP-QCS by State agencies. FNS regional offices conduct a Federal re-review of a subsample of each original State sample. Federal re-review data are also entered into the SNAP-QCS and are used in conjunction with the State review data to calculate the official payment error rate for each State. States can be sanctioned on the basis of their official payment error rates.

Most of the data in the raw data file are the financial and demographic information collected during the review. The issued benefit amount and eligibility status determined by the caseworker are also on the file, along with the error amount and eligibility status determined by the reviewer.[7] The reviewer-determined entries are defined as follows:

- If the SNAP unit was eligible and the authorized benefit amount determined by the reviewer equaled the issued benefit, then the error amount is zero and the case finding is "amount correct."

- If the SNAP unit was eligible and the authorized benefit amount varied from the issued benefit, then the difference between the two amounts is recorded as the error amount, and the case finding is either "overissuance" or "underissuance." In FY 2020, error amounts of $37 or less were not included in the calculation of State error rates.[8]

- If the reviewer determines that the SNAP unit was ineligible, then the issued benefit amount is recorded as the error amount and the case finding is "ineligible."

State QC reviewers also review the negative cases to decide whether proper procedures were used to deny or terminate a case. Because these cases are not participating in SNAP, they are not included in the SNAP QC databases or the QC Minimodel.

B. The raw data file

Although most participating SNAP units in the active case file are subject to sampling, certain types of units not appropriate for review are excluded. Specifically, the active case universe excludes the following types of cases:

- Dropped as a result of oversampling

- Listed in error as active cases, including but not limited to:
  - Negative cases incorrectly included in the active case file
  - Cases that did not participate in SNAP for the sample month, including suspended cases and those that were eligible for zero benefits before any recoupments were made
  - Cases receiving restored benefits that were not otherwise participating
  - Cases receiving retroactive benefits for the sample month

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[6] FNS was unable to provide its usual level of oversight of the sampling procedures beginning in March 2020 due to the waivers in place at the time.

[7] The SNAP benefit does not include the emergency allotments authorized as part of the Families First Coronavirus Response Act of 2020.

[8] This error amount, called the tolerance threshold, is adjusted each year to account for inflation. The FY 2020 tolerance threshold of $37 was unchanged from FY 2019.

- Receiving benefits solely through a Disaster SNAP program authorized by FNS

- Pending a hearing for an adverse action

- Under investigation for SNAP fraud (including those with pending fraud hearings)

- Where all members have died or moved outside the State

- Where no member could be interviewed because:

  - All members had been hospitalized, incarcerated, or placed in a mental institution and were expected to remain there for 95 days after the end of the sample month

  - Members could not be located

The sampling unit within the active case universe is the SNAP unit, as defined in an FNS-approved State manual. State sampling plans must conform to accepted principles of probability sampling. A State may use either a simple random sampling plan or a more complex sampling design that better meets its needs. FNS must approve all sampling designs, including simple random sampling.

For FY 2020, FNS reduced the required minimum sample sizes by 25 percent because reviews were not required for March, April, or May. In most years, the standard minimum annual State sample sizes range from 300 to 2,400 reviews (225 to 1,800)[9], depending primarily on the size of the monthly participating caseload. States must use the following guidelines when determining their standard annual QC sample sizes:

- If the average monthly caseload is under 10,000, the standard minimum sample size is 300 (225) cases per year.

- If the average monthly caseload is 60,000 or greater, the standard minimum sample size is 2,400 (1,800) cases per year.

- If the average monthly caseload is between 10,000 and 60,000, the standard minimum sample size is derived by the following formula:

  Standard minimum = 300 + 0.042 (N − 10,000) (multiplied by 0.75),

  where N is the average monthly caseload.

A State may choose an optional minimum sample size if it agrees not to dispute later payment error rate findings and the associated sanctions on the basis of the precision of the estimates. Optional minimum sample sizes are determined as follows:

- If the average monthly caseload is under 12,942, the optional minimum sample size is 300.

- If the average monthly caseload is 60,000 or greater, the optional minimum sample size is 1,020.

- If the average monthly caseload is between 12,942 and 60,000, the optional minimum sample size is derived by the following formula:

  Optional minimum = 300 + 0.0153 (N – 12,941),

  where N is the average monthly caseload.

In FY 2020, all States chose to use the optional minimum sample size. FNS applies adjustments to State payment error rates when the State's QC review completion rate falls below a threshold of 98 percent.

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[9] FY 2020 minimum sample sizes are provided in parenthesis.

C. Creation of the SNAP QC databases

We create the SNAP QC databases from the raw data file by following four steps: (1) preliminary processing, (2) data editing, (3) variable construction, and (4) weighting. For FY 2020, the data file was divided into (1) October 2019 through February 2020 data to create the pre-pandemic period SNAP QC database and (2) June 2020 through September 2020 data to create the waiver period SNAP QC database for the weighting step. After weighting, the two separate files were rejoined to create the combined SNAP QC database.

1.   Preliminary processing

After converting the raw data file into a SAS file, we generate and inspect a series of quality assurance counts and frequency distributions for the values of each variable on the file. We assign missing value codes to data that are illogical or out of range, missing from the file, or coded as unknown in the source file.[10] We remove records from that file that are:

- Coded as not subject to review (REVDISP = 2), incomplete (REVDISP = 3), or deselected due to oversampling (REVDISP = 4)

- Coded with review findings of ineligible (STATUS = 4)

- Missing all data except error and status information, identified as those coded with 0 case members (CERTHHSZ = 0), or have unresolved inconsistencies, as detailed in later sections

- Found by the reviewer to be eligible but not qualifying for a positive benefit or as having a benefit overissuance equal to or exceeding the recorded benefit (STATUS = 2 and RAWBEN <= AMTERR)

In Table II.1, we show the number and percentage of cases dropped from the FY 2020 edited combined SNAP QC database.

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[10] See the codebook in Chapter V for the valid values for each variable.

Table II.1. Number and percentage of cases sampled, dropped from the edited combined file, and included in the edited combined file, FY 2020

	FY 2020 SNAP QC sample	Percentage of cases sampled	Percentage of cases subject to review
Number of cases sampled[a]	34,282	100.0	n.a.
Cases not subject to review	1,623	4.7	n.a.
Cases deselected to correct for oversampling	0	0.0	n.a.
Cases subject to review	32,659	95.3	100.0
Incomplete cases	4,693	13.7	14.4
Cases completed	27,966	81.6	85.6
Not eligible for SNAP	518	1.5	1.6
Not eligible for a positive benefit	260	0.8	0.8
Eligible for a positive benefit	27,188	79.3	83.2
Dropped due to unresolved inconsistencies	76	0.2	0.2
SNAP units in the final SNAP QC database	27,112	79.1	83.0

Source: FY 2020 SNAP QC sample.

[a] This row does not include 2,002 cases dropped in March – May due to a small national sample and 273 cases dropped from June – September due to small monthly State samples. A majority of these cases (all except for 808 cases in March through May and 40 cases in June through September) would have been dropped from the combined file during editing due to issues with eligibility or other inconsistencies.

n.a. = not applicable.

2.   Data editing

Consistent measures of SNAP unit size, income, and benefit level are critical to any analysis of SNAP units. However, data for these measures are not always consistent in the raw data file. For instance, the sum of the income of each person in the unit may not equal reported unit-level gross income. Such inconsistencies may be rooted in the initial case record information or the data entry process. In the data-editing step, we resolve the inconsistencies described below. We drop the small number of SNAP units with unresolved inconsistencies from the edited file.

The overall strategy of the editing process is to ensure that certain relationships hold for all cases. The two most basic relationships are the following:

- Net income must equal gross income minus the total deductions for which the unit is eligible, and it must not be negative.

- The SNAP benefit level must equal the maximum benefit for that unit size minus 30 percent of net income (or be set to the minimum benefit if appropriate), and it must not be negative.

In addition, several important relationships must hold for some final and intermediate variables. For example:

- Gross unit income must equal the sum of all countable person-level income amounts.

- The earned income deduction must equal the specified percentage (rounded down) of countable earned income.

- The excess shelter expense deduction must equal shelter costs above 50 percent of gross income minus all other deductions up to a cap. Units with elderly members or with non-elderly individuals with disabilities are not subject to the cap. Units with a homeless household shelter deduction will not have an excess shelter expense deduction.[11]

- Total deductions must equal the sum of the following:

  – Standard deduction

  – Earned income deduction

  – Dependent care deduction

  – Medical expense deduction

  – Child support payment deduction[12]

  – Excess shelter expense deduction or homeless household shelter deduction

Households participating in the Minnesota Family Investment Program (MFIP) or an SSI Combined Application Project (SSI-CAP) are subject to different eligibility and benefit determination rules and are edited accordingly.

In Chapter III, we describe the complex process by which we determine whether a case is internally consistent and, if not, perform needed edits.

3. Variable construction

We construct several variables from the reported data once the file is edited. Some of the constructed variables (for example, unit-level gross income, net income, and unit size) are edited versions of raw variables while others (such as non-elderly individuals with disabilities) are newly created to more easily identify units and individuals with certain characteristics. The major classes of constructed variables are unit-level countable income variables, SNAP eligibility and benefit determination variables, and characteristics flags.

- **Unit-level countable income variables.** The total SNAP unit income variable for each type of income (for example, Temporary Assistance for Needy Families [TANF] or Social Security) is constructed by summing the person-level income of that type over all individuals in the SNAP unit. The total SNAP unit gross income, earned income, and unearned income variables are constructed by summing all the appropriate unit income variables.

- **SNAP eligibility and benefit determination variables.** Variables used to determine eligibility and benefits—such as SNAP unit deductions, SNAP unit net countable income, and SNAP unit benefits—are constructed on the basis of SNAP unit countable income and unit demographic characteristics.

- **Characteristics flags.** Characteristics flags identify SNAP units with certain features, such as the presence of an elderly individual or a non-elderly individual with a disability. In addition, we merge

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[11] The 2018 Farm Bill made mandatory the existing State option to provide a standard shelter deduction to homeless households that had qualifying shelter expenses and that were not claiming the excess shelter expense deduction. The 2018 Farm Bill also indexed the homeless shelter deduction to inflation. In FY 2020, the value of the mandated homeless shelter deduction was $152.06.

[12] In some cases, child support payments are excluded from gross income and are not taken as a deduction.

data from Census Bureau files to identify whether a SNAP unit resides in a metropolitan, micropolitan, or rural area. [13]

4. Weighting

We weight the observations in the raw QC file to ensure that the weighted totals match as closely as possible three adjusted SNAP Program Operations totals—the monthly number of SNAP units by State and sampling stratum, the monthly number of SNAP participants by State, and the monthly total benefits issued by State. SNAP Program Operations totals are generated from FNS's National Data Bank and reflect actual levels of participation and benefit issuance. We adjust these data to remove households that were ineligible for benefits as well as those receiving benefits issued through the SNAP disaster assistance program, as these households are not included in the SNAP QC database. FNS maintains information on the number of SNAP units and individuals receiving a disaster assistance benefit and the amount of those benefits. The rates of SNAP units receiving benefits in error are estimated from the raw QC data file.

For the FY 2020 waiver period, we further revised the disaster-adjusted values for units, individuals, or benefits when we suspected errors in the program data. Specific adjustments were as follows:

- **Units and individuals.** We made adjustments to Program Operations data for units in nine States in one or more months. In the States and months adjusted, the Program Operations data seemed to either overestimate or underestimate the total counts of units when compared to the rest of the fiscal year. This occurred in Colorado, Indiana, Kentucky, Minnesota, Montana, Nebraska, North Dakota, Oklahoma, and Utah, in one or more months during the waiver period. We also made adjustments to Program Operations data for individuals in nine States due to apparent errors. This occurred in Arkansas, Colorado, Indiana, Kentucky, Minnesota, Montana, Nebraska, North Dakota, and Utah in one or more months during the waiver period. We adjusted the counts of units and individuals in a variety of ways, including: (1) using the average values for the adjacent months for the State; (2) using the average values of consecutive months if more than one month required adjustments; or (3) using the average fiscal year value for the State.

- **Benefits.** We made adjustments to Program Operations data for benefits in nineteen States and territories in one or more months. These States included Alabama, Alaska, Colorado, Connecticut, Indiana, Kentucky, Minnesota, Montana, Nebraska, Nevada, New Hampshire, North Carolina, North Dakota, Oklahoma, South Carolina, the Virgin Islands, and Wyoming in one or more months during the waiver period.

As a result of these revisions to the adjusted totals, the totals used to weight the FY 2020 waiver period SNAP QC database in the States listed above do not match FNS administrative records. In addition, due to small samples for some States in some months of the waiver period and likely issues with the quality of the SNAP QC data and/or the adjusted Program Operations totals during this time period, the weighting program was not always able to output weights that sum up to match the intended totals. When this occurred, the weighting program matched the monthly number of participating households by State and, as closely as possible, the monthly number of participants and the monthly total benefits. In Appendix tables D.1a through D.3b, we present the weighted unit, individual, and benefit totals by State and month,

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[13] A micropolitan statistical area has at least one urban cluster of at least 10,000 but fewer than 50,000 people, and it includes adjacent territory that has a high degree of social and economic integration with the core, as measured by commuting ties.

and in Appendix tables D.4a through D.6b, we show the corresponding adjustments to the Program Operations data that yielded the target numbers for those weighted totals. In Section III.C, we describe the derivation of the sampling weights in detail. In Tables II.2.a and II.2.b, we compare the aggregate program participation data for the FY 2020 pre-pandemic period and waiver period, respectively, to the QC System sample-based estimates.

Table II.2.a. Comparison of program data to edited SNAP QC database, FY 2020 Pre-Pandemic Period

Average monthly value	Program data	Adjustments for months not included in the file[a]	Adjustments to program data for disaster assistance[b]	Adjustments to program data for ineligible SNAP units	Target numbers for edited SNAP QC database	Actual numbers in edited SNAP QC database
Number of SNAP units	18,985,988	n.a.	0	329,143	18,656,845	18,656,845
Number of participants	37,266,007	n.a.	0	902,683	36,363,324	36,363,324
Value of benefits (dollars)	4,518,237,227	n.a.	1,806,801	232,996,030	4,283,434,396	4,283,434,396
Average SNAP unit size	1.96	-	-	-	1.95	1.95
Average benefit per person (dollars)	121.24	-	-	-	117.80	117.80
Average benefit per household (dollars)	237.98	-	-	-	229.59	229.59

Sources: Fiscal year 2020 Program Operations Data for October 2019 through February 2020 and Supplemental Nutrition Assistance Program Quality Control pre-pandemic period data file.

[a] No States have missing samples in the FY 2020 pre-pandemic period database.

[b] Adjustments are made for units and individuals who only receive Disaster SNAP assistance and were not already receiving SNAP. Adjustments are made to benefits for disaster benefits issued to Disaster SNAP units as well as to replacement benefits issued to qualifying, ongoing SNAP units. As a result, the average Disaster SNAP benefit per person may not be calculated from the information in this table.

Table II.2.b. Comparison of program data to edited SNAP QC database, FY 2020 Waiver Period

Average monthly value	Program data	Adjustments for months not included in the file[a]	Adjustments to program data for disaster assistance[b]	Adjustments to program data for ineligible SNAP units	Target numbers for edited SNAP QC database	Actual numbers in edited SNAP QC database
Number of SNAP units	22,366,722	5,171,489	62,565	446,618	16,686,050	16,686,050
Number of participants	42,817,885	9,379,606	80,076	1,203,659	32,154,545	32,169,504
Value of benefits (dollars)	7,731,676,528	2,245,024,204	1,282,942,761	246,567,484	3,957,142,078	3,719,663,060
Average SNAP unit size	1.91	-	-	-	1.93	1.93
Average benefit per person (dollars)	180.57	-	-	-	123.07	115.63
Average benefit per household (dollars)	345.68	-	-	-	237.15	222.92

Sources: Fiscal year 2020 Program Operations Data for June 2020 through September 2020 and Supplemental Nutrition Assistance Program Quality Control waiver period data file.

[a] Five States—California, Delaware, Maine, Maryland, and New York—and the District of Columbia did not have any data for the FY 2020 waiver period. Eight States—Hawaii, Idaho, Indiana, Massachusetts, Ohio, Oregon, South Dakota, and Washington—had only one month of data in the waiver period. Fourteen States and territories—Alaska, Arizona, Florida, Georgia, Louisiana, Michigan, New Hampshire, New Jersey, North Dakota, Rhode Island, Virginia, Wisconsin, Guam, and the Virgin Islands—had only two months of data in the waiver period. Four States—Illinois, New Mexico, Oklahoma, and Texas—had three months of data in the waiver period.

[b] Adjustments are made for units and individuals who only receive Disaster SNAP assistance and were not already receiving SNAP. Adjustments are made to benefits for disaster benefits issued to Disaster SNAP units as well as to replacement benefits issued to qualifying, ongoing SNAP units. As a result, the average Disaster SNAP benefit per person may not be calculated from the information in this table.

D.   Final SNAP QC databases

We create two versions of each of the SNAP QC databases: a restricted-use version that includes all variables and a public use version that, for privacy reasons, excludes the QC review number (REVNUM) and four geographic variables: COUNTYCD, LOCALCOD, AK_AREA, and URBRUR. In Chapter V, we provide a more detailed explanation of the variables on the file.

After we develop the SNAP QC databases, we create SAS, Stata, and SPSS versions that may be used to tabulate characteristics of SNAP units, as well as a binary file of the pre-pandemic SNAP QC database that serves as the underlying database for FNS's QC Minimodel.

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III. FY 2020 SNAP QC File Development Process

A. Developing the SNAP QC files

In this chapter and in Figure III.1, we describe the programs and data used in the development of the FY 2020 SNAP QC files.[14]

Step 1. Obtain data

We received the data from FNS in an ASCII (or text) format.

INPUT CD	File: FY2020	(ASCII file)
	Record length 2,250	
	36,557 records	

Step 2. Read in and prepare files

We converted to SAS format the specified fields from the raw FNS file and created the unique record identifier (HHLDNO).

PROGRAM NAME	10_SASIFY.SAS	
INPUT FILE	FY2020	(ASCII; 36,557 records)
OUTPUT FILE	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)[15]

Step 3. Conduct quality assurance (QA) review of the data

We ran preliminary frequencies on the SAS file and examined them for data corruption, consistency across States and months, and the extent of missing and out-of-range data. In addition, we calculated means and compared them with means for the previous year.

PROGRAM NAMES	01_FREQS.SAS	
	02_FREQSA.SAS	
	03_FREQS_ELG.SAS	
	04_COMPARE.SAS	
	05_OBS_STATE_MONTH.SAS	
INPUT FILE	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)

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[14] Copies of the file development programs are available from FNS upon request.

[15] As specified in Chapter 1, FNS granted States temporary waivers on conducting QC reviews starting in March 2020. As a result, States often had small or missing samples for months beginning in March. When sample sizes were too small to support analyses, we removed them from the raw QC file as part of Step 2. Specifically, we dropped June 2020 cases from the FY 2020 input file in Maine and Maryland, July 2020 cases in Hawaii, August 2020 cases in Alaska, Arizona, New Jersey, Rhode Island, Guam, and the Virgin Islands, and September 2020 cases in Alaska, Illinois, and Guam. Additionally, we dropped all records from March 2020 through May 2020.

Figure III.1. FY 2020 SNAP QC file development process
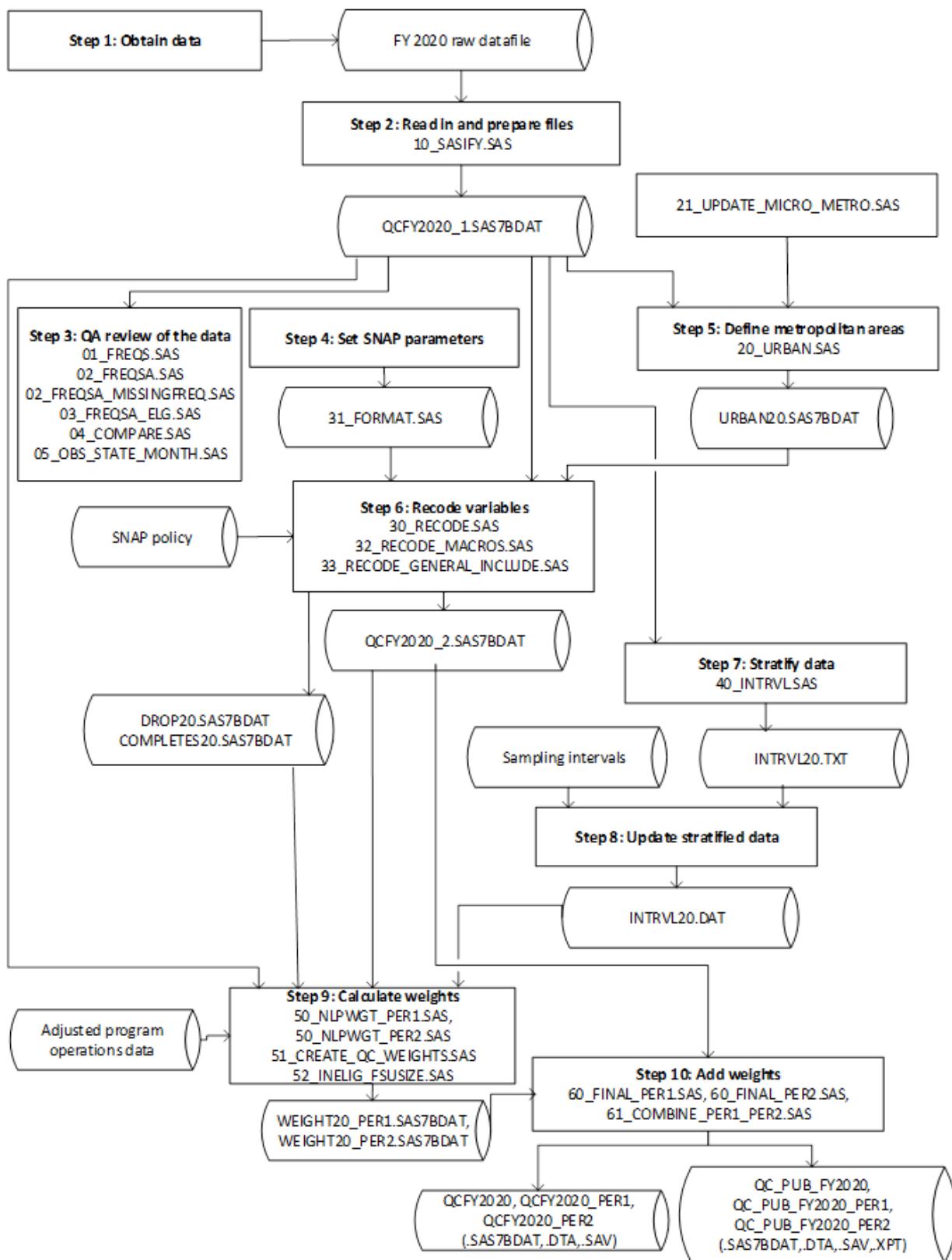
Step 4. Set SNAP parameters

We obtained relevant SNAP policy parameters, including maximum and minimum benefit amounts, income screens, Standard Utility Allowance (SUA) amounts, and values for the MFIP and SSI-CAPs by State.[16] We entered them into a SAS format library and use the formats for the program in Step 6.

        OUTPUT PROGRAM   31_FORMAT.SAS

Step 5. Define metropolitan areas

We added geographic information to the file. Using the local agency code in the raw data file, we assigned a county Federal Information Processing Standards (FIPS) code to each SNAP unit. We flagged unknown local agency codes for correction or addition to a concordance of local agency codes by county and State. We then merged each unit to the 2020 Census Bureau files of metropolitan and micropolitan areas by using State and county codes. We coded units as metropolitan or micropolitan, depending on their match to one of the Census Bureau files. Those not found in either file were coded as rural, except for those with State-wide local codes, which we coded as missing metropolitan status. Beginning in 2014, we assigned Alaska units with missing or unknown local agency codes a metropolitan status based on the unit's region (Alaska Urban, Alaska Rural I, or Alaska Rural II). We do not include cases not subject to review or incomplete cases in the output files.

PROGRAM NAME	20_URBAN.SAS	
INPUT FILES	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)
	METRO2_20.TXT	(ASCII; 1,251 records; 4 variables) (Census 2020 Metropolitan File)
	MICRO2_20.TXT	(ASCII; 665 records; 4 variables) (Census 2020 Micropolitan File)
	FIPS_LAC.TXT	(ASCII; 5,165 records; 6 variables) (Concordance of local area codes.)
OUTPUT FILE	URBAN20.SAS7BDAT	(27,966 records; 5 variables)

Step 6. Recode and standardize variables

We edited the file to resolve inconsistencies between variables within a unit and created several unit-level variables pertaining to SNAP affiliation, income deductions, the shelter limit, benefit amounts, assets, poverty status, and types of income. Unknown values (9-filled or 0 where a value should have been entered) were set to missing. The program detected inconsistencies between person-level income totals and reported totals and resolved them by using the procedure we detail below (see Section B, Obtaining file consistency). Units that met all of the following conditions were written to the output file: (1) found eligible by the QC reviewer; (2) received a benefit amount of at least $1; (3) passed the eligibility tests, flagged as categorically eligible, or identified as participating in MFIP or an SSI-CAP; and (4) were internally consistent after edits. Meeting these conditions, together with the sample reductions in Step 5, completed the sample construction for the final combined SNAP QC database (27,112 records).

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[16] SUAs are Standard Utility Allowances that States may use in place of actual utility costs to calculate a household's total shelter expenses. SUAs are mandatory in some States and optional in others.

PROGRAM NAME	30_RECODE.SAS	
INPUT FILES	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)
	31_FORMAT.SAS	(Format library)
	URBAN20.SAS7BDAT	(27,966 records; 5 variables)
OUTPUT FILES	QCFY2020_2.SAS7BDAT	(27,112 records; 1,614 variables)
	COMPLETES20.SAS7BDAT	(27,966 records; 1,616 variables)
	DROP20.SAS7BDAT	(76 records; 1,615 variables)

Step 7. Stratify data

We created a file containing State name, FIPS code, and stratum, with one record per State/stratum combination.

PROGRAM NAME	40_INTRVL.SAS	
INPUT FILE	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)
OUTPUT FILE	INTRVL20.TXT	(ASCII; 53 records, 4 variables)

Step 8. Update stratified data

No State had a stratified sample in FY 2020, so it was not necessary to edit the INTRVL20.TXT file; we simply saved it as INTRVL20.DAT.

INPUT FILE	INTRVL20.TXT	(ASCII; 53 records; 4 variables)
OUTPUT FILE	INTRVL20.DAT	(ASCII; 53 records, 4 variables)

Step 9. Calculate weights

As described in Section III.C, we calculated a weight for each SNAP unit that had a complete review, except for units that were dropped from the edited file because of unresolved inconsistencies. We weighted the FY 2020 QC file records separately for the pre-pandemic period and the waiver period.

PROGRAM NAME	50_NLPWGT_per1.SAS, 50_NLPWGT_per2.SAS	
INPUT FILES	QCFY2020_1.SAS7BDAT	(34,282 records; 721 variables)
	QCFY2020_2.SAS7BDAT	(27,112 records; 1,614 variables)
	INTRVL20.DAT	(ASCII; 53 records, 4 variables)
	FY2020_ADJUSTED.XLSX	(Excel spreadsheet containing FNS Program Operations data adjusted for disasters)
	COMPLETES20.SAS7BDAT	(27,966 records; 1,616 variables)
	DROP20.SAS7BDAT	(76 records; 1,615 variables)
OUTPUT FILE	WEIGHT20_per1.SAS7BDAT	(18,731 records; 27 variables)
	WEIGHT20_per2.SAS7BDAT	(9,159 records; 27 variables)

Step 10. Add weights

We merged the files containing weights with the edited SNAP QC file to produce the final FY 2020 SNAP QC files for each period as well as the combined file. The QCFY2020, QCFY2020_per1, and QCFY2020_per2 files are for internal use and include all variables. The QC_PUB_FY2020,

QC_PUB_FY2020_per1, and QC_PUB_FY2020_per2 files are for public use and exclude REVNUM, COUNTYCD, LOCALCOD, AK_AREA, and URBRUR for privacy reasons. The public-use files also exclude two intermediate weighting variables.

PROGRAM NAME	60_FINAL_per1.SAS, 60_FINAL_per2.SAS, 61_Combined_per1_per2.SAS	
INPUT FILES	QCFY2020_2.SAS7BDAT	(27,112 records; 1,614 variables)
	WEIGHT20_per1.SAS7BDAT	(18,731 records; 27 variables)
	WEIGHT20_per2.SAS7BDAT	(9,159 records; 27 variables)
OUTPUT FILES[17]		
SAS DATA FILES	QCFY2020.SAS7BDAT	(27,112 records; 825 variables)
	QCFY2020_per1.SAS7BDAT	(18,319 records; 823 variables)
	QCFY2020_per2.SAS7BDAT	(8,793 records; 823 variables)
	QC_PUB_FY2020.SAS7BDAT	(27,112 records; 816 variables)
	QC_PUB_FY2020_per1.SAS7BDAT	(18,319 records; 815 variables)
	QC_PUB_FY2020_per2.SAS7BDAT	(8,793 records; 815 variables)
STATA DATA FILES	QCFY2020.DTA	(27,112 records; 825 variables)
	QCFY2020_per1.DTA	(18,319 records; 823 variables)
	QCFY2020_per2.DTA	(8,793 records; 823 variables)
	QC_PUB_FY2020.DTA	(27,112 records; 816 variables)
	QC_PUB_FY2020_per1.DTA	(18,319 records; 815 variables)
	QC_PUB_FY2020_per2.DTA	(8,793 records; 815 variables)
SPSS DATA FILES	QCFY2020.SAV	(27,112 records; 824 variables)
	QCFY2020_per1.SAV	(18,319 records; 822 variables)
	QCFY2020_per2.SAV	(8,793 records; 822 variables)
	QC_PUB_FY2020.SAV	(27,112 records; 815 variables)
	QC_PUB_FY2020_per1.SAV	(18,319 records; 814 variables)
	QC_PUB_FY2020_per2.SAV	(8,793 records; 814 variables)
SAS TRANSPORT FILES	QC_PUB_FY2020.XPT	(27,112 records; 816 variables)
	QC_PUB_FY2020_per1.XPT	(18,319 records; 815 variables)
	QC_PUB_FY2020_per2.XPT	(8,793 records; 815 variables)

After developing the final QCFY2020 SNAP QC files, we created MATHPC.BIN, a hierarchical binary file generated for the QC Minimodel with SAS missing values coded to negative values.

PROGRAM NAME	MINIQC20.SAS	
INPUT FILE	QCFY2020_per1.SAS7BDAT	(18,319 records; 823 variables)
OUTPUT FILE	MATHPC.BIN	(18,319 unit records; 39,301 person records)

B.   Obtaining file consistency

As mentioned under Step 6 above, we performed selected editing of the reported data. We followed the procedures below to obtain a high degree of consistency between related variables while maintaining the integrity of the databases. Some of the procedures do not apply to SNAP units that are in MFIP or were

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[17] The SPSS version omits the variable "statename" due to inconsistencies in the way SPSS treats such variables.

participating in an SSI-CAP. We present the editing procedures for MFIP and SSI-CAP units after outlining the standard editing procedures. For details on specific data-cleaning procedures, please refer to Appendix B.

1.   Standard editing procedures

Step 1. Eliminate case records that are incomplete or are for SNAP units that do not qualify for a benefit, including those:

- With incomplete reviews (REVDISP not equal to 1)
- With no case members (CERTHHSZ = 0)
- Found ineligible by the QC reviewer (STATUS = 4)
- With an overissuance that is equal to or greater than the reported benefit (STATUS = 2 and RAWBEN <= AMTERR)
- With unknown eligibility (STATUS is missing)

Step 2. Obtain a preliminary count of the number of people in the SNAP unit

Step 3. Recode missing information to SAS missing values

- Any field coded with an out-of-range value is set to a missing value of .A (for example, a 0 in the SNAP case affiliation code).
- Any field coded as unknown (filled with 9s) is set to a missing value of .B. The one exception is the SNAP case affiliation code (FSAFILi), where the 9s remain to signify a valid person.
- Any constructed field that cannot be determined because of missing input values is set to a missing value of .C (for example, total assets).
- For units participating in months for which they are not certified, CERTMTH is set to a missing value of .D.
- For MFIP and SSI-CAP units, variables not relevant in the benefit determination are set to a missing value of .E.

Step 4. Finalize the unit size

We use the SNAP case affiliation flags for each individual in the unit to construct a measure of the number of members in the SNAP unit under review. An individual is considered a member of the SNAP unit if his or her affiliation code (FSAFILi) is equal to 1.

Step 5. Determine unit totals and indicator variables

Examples of totals include the number of elderly individuals (FSNELDER), children (FSNKID), and non-elderly individuals with disabilities (FSNDIS). Examples of indicators include citizenship status of the unit head (NONCIT_HEAD) and categorical eligibility status (CAT_ELIG) of the unit.

Step 6. Initialize FY 2020 values (for example, the standard deduction, shelter cap, and maximum benefit)

Step 7. Reconcile duplicated amounts of wages (WAGESi), Social Security income (SOCSECi), Supplemental Security Income (SSIi), and TANF (TANFi)

If a unit contains multiple individuals with equivalent WAGESi and either equivalent SOCSECi amounts or SSIi amounts, we check whether the sum of unduplicated income amounts is equal to reported gross income (RAWGROSS). If so, we assume that the QC reviewer incorrectly reported each individual's income for all members of the unit. We try to reconcile the duplicated amounts by using work registration status (WRKREGi) and age. For example, if two non-elderly members have identical WAGESi and SOCSECi, and one is coded as being exempt from work registration due to a disability and the other is not, we assign the SOCSECi income to the former (and set WAGESi to 0) and the WAGESi income to the latter (and set SOCSECi to 0). Beginning in FY 2019, if a unit includes duplicate TANF amounts (TANFi), a household head (RELi = 1), and at least one child (RELi = 4), and if the benefit calculated from the deduplicated TANF and reported deductions matches the reported benefit amount, we retain the deduplicated TANF amount for the household head and set other duplicated TANF amounts to 0.

Step 8. Calculate earned and unearned incomes for those inside the unit and others in the household by adding up person-level income amounts

- Earned income variables are wages (WAGESi), self-employment income (SLFEMPi), and other earned income (OTHERNi).

- Unearned income variables include:
  - Contributions (CONTi)
  - Court-ordered child support payments (CSUPRTi)
  - Deemed income (DEEMi)
  - State diversion payments (DIVERi)
  - Educational grants/scholarships/loans (EDLOANi)
  - Earned income tax credit income (EITCi)
  - Energy assistance income (ENERGYi)
  - Foster care income (FOSTERi)
  - State general assistance (GAi)
  - Other government benefits (OTHGOVi)
  - Other unearned income (OTHUNi)
  - Social Security income (SOCSECi)
  - Supplemental Security Income (SSIi)
  - Temporary Assistance for Needy Families (TANFi)
  - Unemployment compensation (UNEMPi)
  - Veterans' benefits (VETi)
  - Workers' compensation (WCOMPi)

–   Subsidized earned income (WGESUPi)

Step 9.   Reconcile reported person-level income amounts with reported unit-level income and deduction variables

All household members reported on the file (not just unit members) are initially considered in the process of reconciling person- and unit-level income. Any person-level income amount that is found to not count toward the benefit calculation is set to 0. To reconcile any differences between the person- and unit-level income amounts, we perform the following steps sequentially, and stop when we resolve inconsistencies:

9a.   **Does the child support income match the child support payment deduction?** For units in which child support income and child support expenses are the same, we determine whether excluding either will allow us to replicate the reported unit-level gross income or net income. We set to 0 any child support income or deductions that are not used. Beginning in FY 2018, if the child support exclusion amount is greater than the gross income amount, we set gross income to 0.[18]

9b.   **Does the sum of person-level income match the unit-level gross income?** We compare earned and unearned income for members of the unit and the household to determine whether any combination is equal to the reported unit-level gross income. We check in the following order: (1) all unit income, (2) all unit income plus unearned income from outside the unit, (3) all unit income plus earned income from outside the unit, and (4) all household income.[19] At each stage, we check to see if child support expenses have been excluded from the unit-level gross income. If person-level sums and the unit-level gross income are equal at any stage, we set any income not used to 0.

9c.   **Does the sum of person-level unearned income and earnings implied by the earned income deduction match the unit-level gross income?** We compare unearned income for members of the unit and the household plus the amount of earnings implied by the reported earned income deduction with the reported unit-level gross income to determine whether any combination is equal. We first check unit unearned income and then household unearned income. At each stage, we check to see if child support expenses have been excluded from the unit-level gross income. If we find a match, we adjust earnings to satisfy the earned income deduction (adjusting existing earnings proportionately or, if there are no person-level earnings, adding to the householder's other earned income). We set all other income to 0.

9d.   **Is gross income not recorded?** If the reported unit-level gross income is 0 and the benefit is less than the maximum benefit for a unit of this size, we set the unit-level gross income to the sum of the person-level income values for the household.

9e.   **Is the benefit consistent with having no income?** If the reported unit-level gross income is 0 and the benefit is equal to the maximum benefit for a unit of this size, we set the person-level income values for the household to 0.

9f.   **Is gross income unreasonably high?** If the reported unit-level gross income is out of range (in this case, greater than three times the net income screen for a unit of this size) and no person-level

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[18] States may exclude child support expenses from gross income rather than consider them a deduction. For units excluding it from gross income, we verify that gross income minus child support expenses is at or below 130 percent of the Federal poverty guidelines.

[19] "Unit" income is income associated with participating household members. We allow a $5 difference to account for potential rounding differences.

income value is out of range, we set the unit-level gross income to the sum of the person-level income values for the household.

9g. **Is person-level income consistent with deductions and unit-level net income?** We compare combinations of earned and unearned income for members of the unit and the household minus calculated total deductions to the reported unit-level net income. The calculated total deductions vary for each combination because the shelter deduction depends on household income while the earned income deduction depends on total earnings. We check in the following order: (1) all unit income less total deductions, (2) all unit income plus unearned income from outside the unit less total deductions, (3) all unit income plus earned income from outside the unit less total deductions, and (4) all household income less total deductions. If reconciliation is made, we set any income types not used to 0 and recalculate unit-level gross income.

9h. **Are person-level unearned income and earnings implied by the earned income deduction consistent with deductions and unit-level net income?** We check unearned income for members of the unit and the household plus the amount of earnings implied by the reported earned income deduction to determine whether any combination equals the reported unit-level net income plus calculated total deductions. We check in the following order: (1) unit unearned income and (2) household unearned income. If reconciliation is made, we adjust earnings to satisfy the earned income deduction (adjusting existing earnings proportionately or, in the event of no person-level earnings, adding to the householder's other earned income). We set any income types not used to 0.

9i. **Do unit-level income values agree with no errors reported?** If no errors are reported (AMTERR = 0) and the unit-level income values agree (gross income = net income + total deductions), we adjust the person-level income to agree with the unit-level values. We first adjust person-level earnings proportionately to agree with the earned income deductions. If any further adjustments are needed, we adjust person-level unearned income values proportionately. However, we adjust SSI values only if SSI is the only unearned income or the amount of other unearned income is not enough to reconcile the unit.

9j. **Are earnings consistent with the reported earned income deduction, but exceeding the reported unit-level gross income?** If earnings are consistent with the reported earned income deduction, but they exceed the unit-level reported gross income, we recalculate the gross income, setting to 0 any person-level income not used. Specifically, if unit earnings are consistent with the reported earned income deduction, we set all income outside the unit to 0. If household earnings are consistent, we set any unearned income outside the unit to 0. Beginning in FY 2015 (and with minor revisions in FY 2017 and FY 2018), if the unit reports no earnings or up to $1 in earnings per person in the household, has deemed income (FSDEEM), has an earned income deduction equal to 20 percent of FSDEEM (within $5), and includes an individual outside the unit, we change the deemed income to wages. If someone outside the unit reports the deemed income, then the wages remain with that person. If someone inside the unit reports the deemed income, we move the wages to someone outside the unit. If more than one individual is outside the unit, we assign wages to the first individual outside the unit who satisfies one of the following conditions (in order): individual is (1) reporting $1 in wages, (2) the household head (RELi = 1), (3) the spouse of the household head (RELi = 2), (4) the first non-elderly adult, or (5) the first individual. Beginning in FY 2019, if the unit reports $1 in earnings, has other unearned income (FSOTHUN), has an earned income deduction equal to 20 percent of FSOTHUN (within $5), and includes an individual outside the unit,

we change the other unearned income to wages, allocating the wages to an individual outside the unit by using a process similar to the one describe above for FSDEEM.

9k. **Are person- and unit-level income amounts still inconsistent?** If we still have not resolved incomes, we make the person-level incomes equal to the reported unit-level gross income by using the following approach. If the reported earned income deduction indicates zero earnings, we set any person-level earnings to 0. If the reported earned income deduction indicates earnings no greater than the reported gross income, we proportionately adjust all person-level earnings to satisfy the earned income deduction. Otherwise, we proportionately adjust all person-level earnings. If additional adjustments are needed, we proportionately adjust all person-level unearned income values.

Step 10. Calculate final SNAP unit income totals (for example, gross, net, TANF, and SSI)

Step 11. Create remaining flags and variables

Beginning in FY 2018, if the unit reports an adult age 18–49 without disabilities (DISi = 0) and includes a nonparticipating child (FSAFIL = 19) outside of the unit where RELi = 4 (daughter, stepdaughter, son, or stepson), we flag the adult as *not* an adult without disabilities in a childless unit (even though the unit does not include participating children) (NDISCAi = 2).

Step 12. Calculate the benefit

Step 13. If the calculated benefit does not match the raw benefit, adjust the dependent care deduction, excess shelter expense deduction, or medical expense deduction if doing so results in a matching benefit

In some SNAP units, we can reconcile initial differences between the calculated benefit and the raw benefit by performing the following steps sequentially and stopping when we resolve inconsistencies:

13a. **Does the calculated benefit match the raw benefit?** We define a SNAP unit as having a matching benefit if it meets one of the following conditions:

   i.   QC reviewers recorded a payment error and (1) the calculated benefit is within $5 of the raw benefit adjusted for the error amount, or (2) the calculated benefit is within $5 of the unadjusted raw benefit and the error element is not indicated to be the dependent care deduction, the shelter deduction, or the SUA.

   ii. QC reviewers recorded no payment errors and the calculated benefit is within $5 of the raw benefit.

13b. **Does adjusting the dependent care deduction result in a matching benefit?** If a unit has a dependent care deduction that is not consistent with dependent care costs, we set the deduction equal to total dependent care costs if doing so results in meeting one of the following conditions:

   i.   QC reviewers recorded a payment error and the calculated benefit is within $5 of the raw benefit adjusted for the error amount.

   ii. QC reviewers recorded no payment errors and the calculated benefit is within $5 of the raw benefit.

For each condition, we check benefit calculations with and without allotment adjustments.

13c. **Does adjusting the excess shelter expense deduction result in a matching benefit?** We try setting the amount of utility expenses equal to an SUA amount or to 0. We try different utility amounts in the following order: (1) Heating and Cooling SUA (HCSUA), (2) Limited Utility Allowance (LUA), (3) utilities equal 0, (4) telephone allowance, and (5) a single-element SUA. [20] We set the amount of utility expenses equal to an SUA amount or to 0 if doing so results in meeting one of the following conditions:

    i.   QC reviewers recorded a payment error and the calculated benefit is within $5 of the raw benefit adjusted for the error amount.

    ii.   QC reviewers recorded no payment errors and the calculated benefit is within $5 of the raw benefit.

    iii.   QC reviewers recorded no payment errors and the calculated shelter deduction is within $5 of the raw shelter deduction.

    iv.   For SNAP units in New York, QC reviewers recorded no payment errors, utilities equal the HCSUA, and the unit is coded as using an HCSUA.[21]

For each condition, we check benefit calculations with and without allotment adjustments. FY 2020 SUA values by State are provided in Appendix F, Table F.7.

13d. **Does setting the medical expense deduction to 0 for a standard medical deduction demonstration participant result in a matching benefit?** For participants in standard medical deduction demonstration States,[22] we set the medical expense deduction, medical expenses, and the standard medical deduction demonstration flag to 0 if doing so results in meeting one of the following conditions:

    i.   QC reviewers recorded a payment error and the calculated benefit is within $5 of the raw benefit adjusted for the error amount.

    ii.   QC reviewers recorded no payment errors and the calculated benefit is within $5 of the raw benefit.

13e. **Redo the income reconciliation, if necessary.** If we modified a deduction to match the computed benefit (Steps 13b, 13c, or 13d) and used deductions in the income reconciliation (Step 9), then we redo the income reconciliation with new deduction values, repeating all steps beginning with Step 9.

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[20] Many States employ more than one SUA to accommodate units with different types of utility expenses. The HCSUA generally includes all utilities, including telephone service. The LUA is used for units that do not have heating and cooling expenses separate from rent but have at least two other utility expenses. The LUA generally includes all other utilities, including telephone service. A telephone allowance is used for units with telephone expenses but without any other utility expenses. Some States also use a one-utility standard, for units with a single utility expense such as electricity. In addition, a few States use combinations of individual standards for different utility expenses. Hawaii, for example, employs individual utility standards for electricity, telephones, sewage, trash, and water.

[21] New York's computer system automatically generates an SUA for certain units. Consequently, we do not require a matching net income or a matching shelter deduction for New York SNAP units, as long as the unit is coded as using an HCSUA.

[22] By the end of FY 2020, standard medical deduction demonstrations were operating in Alabama, Arkansas, California, Colorado, Georgia, Idaho, Illinois, Iowa, Kansas, Massachusetts, Missouri, New Hampshire, North Dakota, Oregon, Rhode Island, South Carolina, South Dakota, Texas, Vermont, Virginia, and Wyoming.

Step 14. Drop units for which the calculated benefit is less than $1

Step 15. Perform automated edits to reconcile remaining inconsistencies

Appendix B provides details.

Step 16. Update categorical eligibility

A unit is categorically eligible for SNAP if any of the following is true:

- The QC reviewer recorded the unit as categorically eligible.

- The unit meets the standards for expanded categorical eligibility in its State. (See Appendix B for information on State-expanded categorical eligibility policies.)

- The unit is pure cash public assistance (PA); that is, either (1) everyone in the unit has person-level income from TANF, General Assistance (GA) benefits, or SSI; (2) the unit has TANF income and every adult has person-level income from TANF, GA, or SSI; or (3) the unit contains only children and at least one has person-level income from TANF. Because TANF income is not reported on the file for most MFIP units, we code all MFIP units as pure PA.

Step 17. Determine eligibility

For units that are not identified as categorically eligible, we assess whether each unit would pass the applicable Federal asset and income tests.

- Units without an elderly member or a non-elderly individual with a disability must have a monthly gross income at or below 130 percent of the Federal poverty guidelines (Appendix F).[23, 24] Beginning in FY 2016, if a unit's gross income exceeds the gross income limit by $1 or less and the net income and benefit amounts match the raw net income and benefit amounts, we reduce the unit's gross income by $1 so it will pass the gross income test.

- Units must have a net monthly income at or below 100 percent of the Federal poverty guidelines (Appendix F).[25]

- Units without an elderly member or an individual with a disability must have total countable assets of $2,250 or less. Units with an elderly member or an individual with a disability are allowed up to $3,500 in countable assets. (See the next section for exceptions.)

We retain on the file only units that either are categorically eligible or pass the applicable income and asset tests.

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[23] States may exclude child support expenses from gross income rather than consider them a deduction. For units that exclude it from gross income, we check that gross income minus child support expenses is at or below 130 percent of the Federal poverty guidelines.

[24] Beginning in FY 2019, if a household includes an elderly individual or an individual with a disability outside the unit who was found ineligible because of an intentional program violation, a felony drug conviction, fleeing felon status, or noncompliance with a workfare or work requirement (FSAFILi = 8, 9, 11, or 13), the household is excluded from the gross income test.

[25] This test is not performed on SNAP units identified as participating in MFIP or an SSI-CAP demonstration in a State using standard benefits.

2.   State variations to editing procedures

Below, we detail the State-specific editing procedures that we use to model State SNAP rules. These rules include higher asset limits (Section 2a), MFIP (Section 2b), SSI-CAP with standard benefits and standard shelter expenses (Section 2c), and standard medical deduction demonstrations (Section 2d).

a.   Asset limits in States with BBCE policies

Most States with a BBCE policy align their policy to a program or service that does not include an asset test. However, three States (Idaho, Indiana, and Texas) have an asset limit of $5,000 for BBCE units, Michigan increased its asset limit from $5,000 to $15,000 for BBCE units as of December 1, 2019, and Nebraska has a financial asset limit of $25,000 for BBCE units. Maine also had an asset limit of $5,000 for BBCE units until it was removed in December 2019.

b.   Minnesota Family Investment Program units

MFIP is Minnesota's TANF program, which is open to low-income families with children.[26] MFIP calculates participants' food assistance and cash assistance benefits together; consequently, the SNAP benefit calculation differs from the Federal formula. Both the maximum food assistance portion and maximum cash assistance portion of the MFIP benefit are based on unit size and are higher for families with earnings (see Appendix F, Table F.8). To calculate the benefits, countable income is subtracted from the combined maximum food portion and cash portion, or the "transitional standard." If a unit has earned income, an earnings deduction is applied, and the remaining countable income is subtracted from the "family wage level," which is 10 percent higher than the transitional standard. If the total benefit amount is less than or equal to the maximum food portion, the unit receives only food assistance. If the benefit is greater than the maximum food portion, the unit receives the remainder of the benefit as cash assistance. MFIP units receive no income deductions other than the earnings deduction. The earnings deduction rate for MFIP participants in FY 2020 was 50 percent after the exclusion of $65 from earned income per wage earner.

Because of the way the SNAP benefit is calculated under MFIP, Minnesota does not often record the full TANF benefit amount on the QC data nor do we attempt to calculate it. For some MFIP units, Minnesota records a $1 TANF benefit as an indicator that the unit received a cash TANF benefit. We code all MFIP units as pure PA regardless of whether they have a reported cash TANF benefit.

Below, we describe the calculation of the food portion of the benefit and differences in the general editing procedures that reconcile unit-level income with person-level income. (See Appendix F for FY 2020 cash and food portion values.)

Step 1. Flag units that are MFIP participants. Recognizing that not all MFIP participants receive a cash benefit, we first attempt to identify MFIP-participating units. We flag units in Minnesota as MFIP participants if they have one of the following characteristics:[27]

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[26] More information is available from Minnesota's Department of Human Services website (http://www.dhs.state.mn.us/).

[27] MFIP's unit composition rules differ from regular SNAP rules. Specifically, SSI and TANF recipients living in the same household are treated as separate SNAP units. Consequently, if a Minnesota unit of more than one person had both SSI and TANF income, we set the affiliation code of SSI recipients to unknown (99).

- The unit has person-level TANF income for SNAP unit members, unless the SNAP benefit in the raw data file is consistent with having been calculated using regular SNAP rules.

- The unit has children and the benefit, adjusted for errors, matches the MFIP table of benefits for this unit size.

- The unit has children, positive person-level earnings, and a positive reported earned income deduction equal to 50 percent of the person-level earnings.

Step 2. Reconcile reported person-level income amounts with reported unit-level income and deduction variables. The procedure for reconciling person-level income amounts with unit-level income and deductions is the same as for all other SNAP units except in the following cases:

- We begin reconciling person-level income to unit-level gross income by excluding TANF from unearned income. At each step in reconciling to unit-level gross income described above, if person-level incomes with TANF excluded do not equal the unit-level gross income, we try including TANF income to determine whether adding it allows us to reconcile to unit-level gross income.[28] The final calculated gross income includes any TANF income initially included in the raw data file.

- We do not attempt to reconcile MFIP participants' person-level income with reported unit-level net income, because net income is not used in the same way for the MFIP benefit as it is in the Federal program. We code the calculated net income variable as missing (.E) for all MFIP units.

Step 3. Calculate the earned income deduction. For MFIP units, we calculate the earned income deduction as 50 percent of earnings.

Step 4. Calculate the final deductions. We code all deductions except the earned income deduction and total deduction as missing (.E) for MFIP participants.

Step 5. Calculate the food benefit. We determine the benefit based on unit characteristics:

- If the unit has no income, then the benefit is the food portion for the unit size.

- If the unit has only earned income, the benefit is the lower of the food portion and the difference between the family wage level (the income threshold for units with earnings) and net earnings, but never less than 0.

- If the unit has only unearned income, the benefit is the lower of the food portion and the difference between the transitional standard (the income threshold for units without earnings) and net unearned income, but never less than 0.

- If the unit has both earned and unearned income, we subtract net earned income from the family wage level and compare the difference with the transitional standard. We then subtract unearned income from the smaller of the two (to ensure that the wages were high enough to merit the full increase to the family wage level). The benefit amount is the lower of this difference or the food portion, but never less than 0.

- For one- and two-person SNAP units, we set the benefit amount to the higher of the calculated benefit or the minimum Federal SNAP benefit.

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[28] With the cash portion of the benefit calculated at the same time as the food portion of the benefit, we do not expect TANF income to be included in a unit's total gross income. However, in some unit records, TANF income is included, and we accept it as confirmation that the recorded gross income is correct.

c.   SSI-Combined Application Project units

In FY 2020, 17 States—Arizona, Florida, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, South Dakota, Texas, Virginia, and Washington—had SSI-CAP demonstrations. These demonstration projects aim to streamline procedures for providing SNAP benefits to certain units eligible for both SNAP and SSI. Most provide participants with a standard benefit, while three provide a standard shelter expense deduction.

In the next two sections, we describe the 17 programs and our procedures for identifying and editing SSI-CAP units for the SNAP QC database. Most of the SSI-CAP units identified have reported data that are consistent with program rules. In some cases, however, we identify units as participating through an SSI-CAP even though some of their reported data are inconsistent with program rules. We flag SSI-CAP units with consistent data as SSI_CAP = 2 and those with some inconsistent data as SSI_CAP = 3. We model State rules that let units with high medical expenses opt-out of SSI-CAP by setting SSI_CAP = 0 for potential SSI-CAP units with reported data that are inconsistent with some SSI-CAP program rules and high reported medical expenses (FSMEDEXP > $200).

i.   *SSI-CAP programs with a standard benefit*

The States listed in Table III.1 operate programs that provide participants with a standard "high" or "low" benefit, based on whether participants' shelter expenses fall above or below a State-determined threshold. Because net income and deductions are not used in calculating benefits for SSI-CAP households, we set the final values of these variables to missing (.E).[29] More specifically, the variables set to missing for SSI-CAP participants in States with standard SSI-CAP benefits include:

- Net income (FSNETINC)
- Total deductions (FSTOTDED)
- Standard deduction (FSSTDDED)
- Medical expense deduction (FSMEDDED)
- Earned income deduction (FSERNDED)
- Dependent care deduction (FSDEPDED)
- Child support payment deduction (FSCSDED)
- Homeless household shelter deduction (HOMELESS_DED)
- Excess shelter expense deduction (FSSLTDED)
- Standard Utility Allowance (SUA1 and SUA2)

We use the following general process to identify, recode, and assign benefits to households participating in standard benefit SSI-CAP programs:

- **Identifying units.** We identify as SSI-CAP participants all individuals meeting the eligibility criteria outlined for each State in Table III.1, with a recorded benefit adjusted for errors equal to any of the SSI-CAP standard benefit amounts for that State (see Appendix F, Tables F.9–F.22).
- **Recodes for units.** In addition to setting calculated net income and all calculated deductions to missing, if the sum of individual incomes does not equal the raw gross income, we set the sum of

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[29] The raw variables indicating the actual costs are usually retained.

individual incomes equal to the (RAWGROSS) by adjusting individual incomes proportionately, as necessary.

- **Benefit calculations for units.** We set the final calculated benefit equal to the standard SSI-CAP benefit corresponding to the unit's rent/mortgage expenses (RENT) value or total shelter expenses (FSSLTEXP) and unit size.

Table III.1. SSI-CAP programs with standard benefits

State	Start date	Unit composition	Age	Allowed income	Shelter amounts	Benefit calculation
Arizona (AZSNAP)	February 2009	Living alone	65 or older	Unearned	$0 to 99; $100 to 199; $200 to 299; $300 or greater	Table F.9
Kentucky (KYSAFE)	2007	Living alone or married	60 or older	Earned and unearned	One person: Less than $200; $200 or greater Two people: Less than $108; $108 or greater	Table F.10
Louisiana (LaCAP)	2007	Living alone	60 or older	Earned and unearned	Less than $425; $425 to less than $749; $749 or greater	Table F.11
Maryland (MSNAP)	July 2010	Living alone	60 or older	Unearned	Less than $506; $506 or greater	Table F.12
Michigan (MiCAP)	April 2009	Living alone	18 or older	No income	$1,000 or less; greater than $1,000	Table F.13
Mississippi (MSCAP)	October 2001*	Living alone	No age requirement	Unearned	SSI only: $335 or less; greater than $335 SSI and other unearned income: $335 or less; greater than $335	Table F.14
New Jersey (NJ SNAS)	May 2009	Living alone	65 or older	Unearned	$563 or less; greater than $563	Table F.15
New York (NYSNIP)	March 2003*	Living alone	No age requirement	Earned and unearned	SSI only: Positive utility costs (high/low rent), no utility costs (high/low rent), no shelter costs SSI and other unearned income: Positive utility costs (high/low rent), no utility costs (high/low rent), no shelter costs	Table F.16
North Carolina (NCSNAP)	August 2005	Living alone	65 or older	Earned and unearned	Less than $200; $200 or greater	Table F.17
Pennsylvania (PACAP)	2007	Living alone	18 or older	Unearned	SSI only: Less than $196; $196 or greater SSI and other unearned income: Less than $196; $196 or greater	Table F.18
South Carolina (SCCAP)	October 1995*	Living alone	No age requirement	Unearned	SSI only: $420 or less; greater than $420 SSI and other unearned income: $420 or less; Greater than $420	Table F.19
South Dakota (SD IN)	January 2010	Living alone or married	18 or older	Earned and unearned	No earnings: Individuals or couples with shelter expenses less than $690 or $690 or greater and medical expenses $35 or less or greater than $35 Earnings: Individuals or couples with shelter expenses less than $690 or $690 or greater and medical expenses $35 or less or greater than $35	Table F.20
Texas (SNAP-CAP)	September 2002*	Living alone or married	50 or older	Earned or unearned	$440 or less; greater than $440	Table F.21
Virginia (VaCAP)	August 2006	Living alone	65 or older	Unearned	Less than $500; $500 or greater	Table F.22

* We began modeling the SSI-CAP program in FY 2004.

We use alternate or specific characteristics for identifying SSI-CAP units, recoding values, and calculating benefits in some States, as shown in Table III.2 and described below.

Table III.2. States with special rules for identifying, recoding, and calculating benefits for SSI-CAP units

State	Identifying units	Recodes for units	Benefit calculations
Arizona	X		
Kentucky	X		
Louisiana	X		
Mississippi	X	X	X
New Jersey	X		
New York	X		X
Pennsylvania			X
South Carolina	X	X	X
South Dakota	X		X
Texas	X	X	
Virginia	X		

Identifying units

In addition to the criteria listed in Table III.1, we identify as SSI-CAP participants units with a certification period of 24 months in New Jersey; 36 months in Arizona, Kentucky, and Virginia; and 36 or 39 months in Louisiana.

In New York, the certification period for NYSNIP is 48 months, with interim contact at the end of 24 months. We identify as NYSNIP participants one-person units that receive SSI benefits and belong to one of the following groups:[30, 31]

- Units with a recorded benefit adjusted for errors that matches an NYSNIP benefit, and the benefit amount is consistent with the presence of unit income other than SSI, adjusting for the New York SSI supplement of $87

- Units with a recorded benefit adjusted for errors that matches an NYSNIP benefit and with the medical expense and excess shelter expense deductions both coded as 0

- Units with a certification period exceeding 48 months

Married couples in Kentucky and South Dakota may participate in SSI-CAP, but each individual must meet the eligibility criteria and be treated as a member of the same SNAP unit. Only married couples in which both individuals are SNAP participants and report receiving SSI benefits are identified as SSI-CAP participants.

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[30] New York requires NYSNIP participants to be living alone (not just forming one-person SNAP units) and provides data on the QC data file that are sufficiently detailed for us to identify households consisting of just one person.

[31] Because so few NYSNIP eligible units have allotment adjustments, we do not check for units where the recorded benefit plus or minus the allotment adjustment would equal an NYSNIP standard benefit.

In Texas, at least one person must be age 50 or older and receive SSI benefits. SNAP-CAP treats elderly SSI participants independently of other household members. All other household members apart from the first elderly SSI participant are edited to be outside of the unit.

QC reviewers in Kentucky and Texas do not include information on SSI receipt for SSI-CAP units in the raw file. Thus, units in these States that appeared to be SSI-CAP cases based on their household composition, certification periods, and benefit amounts are identified as SSI-CAP units, even if they are not coded as receiving SSI.

QC reviewers in Mississippi and South Carolina make income and deductions consistent with the standard benefit for MSCAP and SCCAP participants. Most MSCAP and SCCAP units follow a consistent pattern in terms of income and recorded shelter expenses. (See Appendix F, Table F.14 for MSCAP benefits and income patterns and Appendix F, Table F.19 for SCCAP benefits and income patterns.) If one of the following conditions is true, we flag as MSCAP or SCCAP participants in one-person units that report receiving SSI benefits and have no reported earned income:

- The recorded benefit adjusted for errors equals an MSCAP or SCCAP standard benefit, and the recorded gross income or recorded net income is consistent with that benefit according to the pattern followed in most units (allowing the recorded utility amount for MSCAP or rent/mortgage amount for SCCAP to be inconsistent).[32]

- The recorded benefit adjusted for errors equals a standard benefit, and the recorded utility amount equals the MSCAP SUA or standard rent/mortgage amount for SCCAP (allowing the recorded gross and net income to be inconsistent).

- The recorded utility amount equals the MSCAP SUA, or the recorded rent/mortgage amount equals the standard rent/mortgage amount for SCCAP, and the recorded gross income or recorded net income equals one of the income amounts consistent with the pattern (allowing the benefit to be inconsistent).[33]

Recodes for units

In Mississippi and South Carolina, we set calculated net income and all calculated deduction variables to missing as described earlier and perform the following recodes for units identified as MSCAP or SCCAP participants:

- **Shelter expenses.** For most MSCAP participants, QC reviewers record the utility expenses as the MSCAP SUA. For units where this was not the case, we recode the utility expense values (UTIL) to the MSCAP SUA. In addition to a utility expense, some QC reviewers record a rent or mortgage value for MSCAP units. We recode this value (RENT) as 0 because the MSCAP SUA reflects combined shelter expenses, including rent/mortgage.

  For most SCCAP participants, QC reviewers record the utility expense value as the South Carolina HCSUA value and rent/mortgage as the standard SCCAP rent amount. We recode utilities (UTIL) to

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[32] If the recorded benefit equals the minimum benefit, we require both gross income and net income to be consistent with the pattern.

[33] Because so few MSCAP- and SCCAP-eligible units have allotment adjustments, we do not check for units in which the recorded benefit plus or minus the allotment adjustment would equal an MSCAP or SCCAP standard benefit.

the South Carolina HCSUA and rent/mortgage (RENT) to the standard SCCAP rent amount for SCCAP units that do not follow this pattern.

- **Income.** In most MSCAP and SCCAP units, the raw gross income equals either the maximum SSI benefit for eligible individuals or the maximum SSI benefit plus $20, reflecting the $20 unearned income disregard for SSI. We recode the raw gross income (RAWGROSS) of MSCAP and SCCAP units that do not follow this pattern to one of these values. We set the sum of individual incomes equal to the raw gross income (RAWGROSS) by adjusting individual incomes proportionately, as necessary.

In Texas, after setting calculated net income and all calculated deduction variables to missing as described earlier, we perform the following recode for units identified as SNAP-CAP participants:

- **SNAP participation and unit size.** According to SNAP-CAP rules, married couples may participate in the program but are treated as separate units. If a unit consists of a married couple, both partners are age 50 or older, and the unit is coded as SNAP participants and receives a SNAP-CAP standard benefit, we keep the first person as an eligible member of the SNAP case under review (FSAFILi = 1) and recode the other as "Eligible SNAP participant in another unit, not currently under review" (FSAFILi = 2). We adjust the variable indicating unit size accordingly (FSUSIZE).

- **Income.** In SNAP-CAP units that originally had more than one individual coded as a SNAP participant, we reset raw gross income (RAWGROSS) equal to the sum of the individual incomes assigned to the one individual who remains a SNAP participant (FSAFILi = 1). In other SNAP-CAP units, we reconcile individual incomes with the original gross income.

Benefit calculations for units

In Mississippi, we set the final calculated benefit equal to the standard SSI-CAP benefit that corresponds to the utility (UTIL) and raw gross (RAWGROSS) values in Appendix F, Table F.14.

In New York, for NYSNIP units with a recorded benefit that matches an NYSNIP benefit, we set the calculated benefit equal to the recorded benefit. For NYSNIP units with a recorded benefit that does not match an NYSNIP benefit, we calculate the benefit based on NYSNIP rules.

In Pennsylvania, we set the final calculated benefit equal to the standard SSI-CAP benefit that corresponds to the unit's rent (RENT) and presence or absence of unearned income other than SSI, as listed in Appendix F, Table F.18.

In South Carolina, we set the final calculated benefit equal to the standard SSI-CAP benefit that corresponds to the rent (RENT) and raw gross (RAWGROSS) value listed in Appendix F, Table F.19.

In South Dakota, we set the final calculated benefit equal to the standard SSI-CAP benefit that is consistent with unit size, shelter expenses (FSSLTEXP), presence or absence of earned income (FSEARN), and presence or absence of medical expenses (FSMEDEXP) as listed in Appendix F, Table F.20.

ii.   *SSI-CAP programs with a standard shelter expense*

The States listed in Table III.3 operate programs that assign participants a standard "high" or "low" shelter expense, and then calculate the unit benefit on the basis of actual income, the standard deduction, the SUA, and the standard shelter expense. Because net income and a few deductions are used to calculate

a benefit for SSI-CAP participants in these States, we retain the variables on the file. However, we do not use other deductions for the benefit calculation and set them to missing (.E). The deductions we set to missing for SSI-CAP participants in these States include:

- Medical expense deduction (FSMEDDED)

- Earned income deduction (FSERNDED)

- Dependent care deduction (FSDEPDED)

- Child support payment deduction (FSCSDED)

- Homeless household shelter deduction (HOMELESS_DED)

In addition, we recode the SUAs to differentiate SSI-CAP units from other units that received the same SUA by setting SUA1 to 9 ("Other"). Like SSI-CAP units with a standard benefit, when we set calculated deductions to missing, the raw variables indicating the actual expenses are usually retained.

Units with earnings are not eligible to enroll in SSI-CAP programs in these States. However, after a unit participates, it may have earned income for up to three consecutive months without losing eligibility.

Table III.3. SSI-CAP programs with standard shelter expenses

State	Start date	Unit composition	Age	Allowed income	Shelter amounts
Florida (SUNCAP)	April 2005	Living alone	18 or older	Earned and unearned	$305 or less; greater than $305
Massachusetts (BAYSTATE CAP)	February 2005	Living alone	18 or older	Earned and unearned	Less than $481; $481 or greater
Washington (WASHCAP)[a]	December 2001*	Living alone	18 or older	Unearned	Less than $320; $320 or greater

* We began modeling the SSI-CAP program in FY 2004.

[a] QC reviewers use a special local agency code for WASHCAP units whose applications were processed in an SSA office. We identify as WASHCAP participants all units meeting the criteria outlined in the table above and flagged with this special local agency code.

We use the following process to identify, recode, and assign benefits to households participating in SSI-CAP programs with a standard shelter expense:

Identifying units

We identify as SSI-CAP participants all individuals meeting the eligibility criteria outlined in Table III.3 who have recorded rent/mortgage amounts equal to any of the standard rent/mortgage allowances for that State.

In Massachusetts, if the recorded rent/mortgage amount is not equal to the standard allowance, we calculate the benefit assuming that the standard allowance was used. If this calculated benefit matches the raw benefit, we recode the rent/mortgage amount to be the standard allowance and flag the unit as a BAY STATE CAP participant.

Recodes for units

In addition to setting the deductions not used in the benefit calculation to missing as described above, we perform the following recode for units identified as participants:

- **Shelter expenses.** When necessary, we recode utilities of units in Massachusetts and Washington to equal the State's HCSUA or LUA for one-person units.

- **Income.** We reconcile individual incomes with gross income in SSI-CAP units by using the same process as in non-CAP units.

Benefit calculation for units

We use the regular SNAP benefit calculation. Benefits are based on actual income, the standard deduction, the standard shelter amount, and the SUA. The standard shelter amount is determined by the unit's actual monthly shelter expenses, excluding utilities. Appendix F, Table F.23 lists benefit calculations for all States with a standard shelter expense SSI-CAP program.

d.   Standard medical deduction demonstration programs

In FY 2020, twenty-one States have programs to standardize medical expense deduction amounts when units' medical expenses are greater than $35 but fall below a State-specific threshold (see Appendix F, Table F.4). In these States, if a unit with an elderly member or a non-elderly individual with a disability incurs medical expenses less than or equal to the State threshold, the unit receives a medical expense deduction equal to the threshold minus $35. Units with medical expenses greater than the threshold receive a medical expense deduction equal to actual medical expenses, minus $35. To achieve cost neutrality, as required by FNS to operate a medical deduction demonstration program, most States reduced the HCSUA for the entire caseload. The HCSUA modeled for these States in the SNAP QC database reflects the adjustments. Table III.4 lists the States.

The standard medical deduction demonstration flag (MED_DED_DEMO) identifies households in States with standard medical deduction demonstration programs in place during the sample month that have positive countable medical expenses, indicating households eligible for a standard medical deduction.

Table III.4. States with standard medical deduction demonstrations

State	Start date (of current waiver)	Cost neutrality adjustment
Alabama	October 2019	HCSUA was reduced by $8.
Arkansas	September 2016	HCSUA was reduced by $4.
California	October 2017	HCSUA was reduced by $5.
Colorado	October 2016	HCSUA was reduced by $7.
Georgia	April 2020	HCSUA was reduced by $7.
Idaho	November 2018	HCSUA was reduced by $8.
Illinois	June 2017	The standard deduction was reduced by $7.
Iowa	October 2017	HCSUA and limited utility allowance were reduced by $5.
Kansas	January 2016	HCSUA was reduced by $8.
Massachusetts	April 2018	HCSUA was reduced by $6.
Missouri	October 2016	HCSUA was reduced by $14.
New Hampshire	October 2019	HCSUA was reduced by $7.
North Dakota	April 2018	HCSUA was reduced by $10.
Oregon	February 2017	HCSUA was reduced by $6.
Rhode Island	October 2017	HCSUA was reduced by $9.
South Carolina	October 2019	HCSUA was reduced by $10.
South Dakota	May 2018	HCSUA was reduced by $14.
Texas	October 2017	HCSUA and limited utility allowance were reduced by $4.
Vermont	December 2018	HCSUA was reduced by $9.
Virginia	April 2017	HCSUA was reduced by $7.
Wyoming	January 2017	HCSUA was reduced by $7.

C. Derivation of sampling weights

The SNAP QC file's sampling weights are derived to reflect State and national caseload totals from SNAP Program Operations data after adjustments for receipt of disaster assistance benefits and benefits issued in error. They are intended to match monthly target levels of SNAP units, individuals, and benefits.

To derive monthly weights, we first calculate preliminary weights that sum to the monthly number of SNAP units by State and stratum, as reflected in the adjusted SNAP Program Operations data. The tables in Appendix D list the preliminary monthly weights (HWGT) and their derivation for each State and stratum. We create the preliminary weights using these six major steps, presented in Tables D.7–D.18:

1. In States that distributed Disaster SNAP benefits, we lower the Program Operations counts in the months of the disaster by the number of SNAP units receiving benefits because of the disaster (but not already participating SNAP units who receive additional benefits) (Column e).

2. For the States with stratified samples, we apportion the adjusted Program Operations counts across the strata according to the percentage of the sample that is in that stratum in that month (Column f).[34] (No State had a stratified sample in FY 2020.)

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[34] Column omitted from Appendix D tables due to space limitations but available upon request.

3. We calculate the disqualification rate by State and stratum by first identifying all disqualified SNAP units, which are those that the reviewers found ineligible (coded as STATUS = 4) or eligible but not qualifying for a benefit (coded as STATUS = 2 with the error amount at least as large as the full benefit). The number of disqualified SNAP units divided by the number of SNAP units with completed reviews is the disqualification rate[35] (Column i).

4. We lower the Program Operations counts of SNAP units by the disqualification rate calculated in Step 3 to derive the final adjusted Program Operations totals (Column j).

5. We remove from the SNAP QC file any additional SNAP units that do not appear to be eligible for SNAP either because they do not pass the asset or income tests and are not categorically eligible or because they do not qualify for a positive benefit. Removing these units does not affect disqualification rates or the total number of weighted units (Column k).

6. We calculate a preliminary weight for each SNAP unit by State and stratum by dividing the final adjusted Program Operations count by the remaining number of SNAP units on the file (Column m).

After deriving the preliminary weights, we create final weights using a nonlinear programming (NLP) technique that produces estimates that match adjusted Program Operation monthly totals of units, individuals, and benefits as closely as possible. Participant totals are adjusted by the number of individuals in units removed in Steps 1 and 4 above. Benefit totals are adjusted by benefits issued to units that were removed in Steps 1 and 4 and by additional disaster benefits issued to units receiving regular SNAP benefits. The NLP algorithm incrementally changes the original weight until the three adjusted Program Operation monthly totals are matched, with the additional restriction that the final weights will not be less than 10 percent of the preliminary weights. The resulting monthly weights are no longer identical to the preliminary weights or identical among units sampled in the same month, State, and stratum.

For the FY 2020 files, weights for individuals and benefits did not match target levels for some States and months in the waiver period. The average monthly number of individuals for the 47 States and territories included in the waiver period file was 1.24 percent higher than the target and average monthly total benefits were 0.55 percent higher than the target.

To calculate standard errors, we first create 500 sets of replicate weights by drawing 500 random samples from the SNAP QC data and repeating the weighting methodology described above. Because the replicate weights are based on a random sample of raw SNAP QC data, there are occasionally instances when the NLP algorithm cannot find weights that match all three Program Operations totals within a certain State and month. When this happens, the algorithm attempts to match only the unit and individuals control totals for that particular State and month. If the algorithm cannot find weights that match both control totals, the replicate weights are set equal to the preliminary weights (calculated in Step 6, described above) for that particular State and month. We use the 500 replicate weights to calculate standard errors.

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[35] The numerator of FNS's error rate includes units that received too much or too little in benefits in addition to the units included in the disqualification rate numerator.

The combined SNAP QC file contains four weight variables: (1) the monthly weight (HWGT), (2) the full-year weight (FYWGT), and (3) the pre-pandemic period-specific weight (FYWGT_PER1) and (4) the waiver period-specific weight (FYWGT_PER2). The pre-pandemic period SNAP QC file and the waiver period SNAP QC file each contain HWGT, FYWGT, and the appropriate period-specific weight (FYWGT_PER1 or FYWGT_PER2, respectively). HWGT is used for tabulations in specific months. If a tabulation is for a period longer than one calendar month, the average monthly value for the time period can be obtained by dividing HWGT by the number of months being analyzed. National tabulations of average monthly values for the entire fiscal year can be obtained by using FYWGT, which is typically HWGT divided by 12. However, due to States having missing sample months in FY 2020, FYWGT equals HWGT divided by the number of months of data available for that State in the file.

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IV. Development of the 2020 QC Minimodel

The QC Minimodel—one of FNS's SNAP microsimulation models—uses the SNAP QC database to simulate the impact of various policy changes to SNAP on current SNAP participants. The model uses a series of algorithms, written in ISO/IEC standard Fortran 95 and organized in the SNAP Module (FSTAMP), to simulate eligibility, benefits, and participation in SNAP. Some of the FSTAMP routines are specific to the SNAP QC database while others are database-independent.

Due to FY 2020 SNAP QC data limitations resulting from the COVID-19 public health emergency, the FY 2020 QC Minimodel is based only on the pre-pandemic SNAP QC database because that database includes data for an equal number of months (five) for all States. This chapter provides a technical description of the procedures specific to the pre-pandemic SNAP QC database that are used to transform characteristics of SNAP units in that database into the data elements that conform with inputs used with the database-independent algorithms of FSTAMP. The database-independent algorithms are documented in the "2011 MATH SIPP+ Microsimulation Model: Programmer's Guide, Technical Description and Codebook" (Schechter et al. 2014).

A. Create MATH-style version of pre-pandemic SNAP QC database

1. Introduction

The QC Minimodel requires a binary file in a particular format (MATH™ style)[36] as input. This section describes the procedure used to create the binary file from the SAS version of the pre-pandemic SNAP QC database. A two-step process is required to generate the final binary file in the MATH format: (1) create a binary file from the SAS dataset, and (2) run a tally using the binary file from Step 1 to finalize the binary file for use with the QC Minimodel.

2. User parameters

None.

3. Programmer's guide

3a. Input file for Step 1

QCFY2020_per1.SAS7BDAT	Final pre-pandemic SNAP QC database, in SAS format

3b. Output files from Step 1

MATHPC.HDR	ASCII header file that describes the record layout of the database file, MATHPC.BIN
MATHPC.BIN	QC database file in a hierarchical format (household record and then person records for individuals in the household)

3c. Program for Step 1

sas2bin.SAS

---

[36] MATH stands for Micro Analysis of Transfers to Households.

3d. Output variables for Step 1

The variables are the same as those in the final pre-pandemic SNAP QC database.

3e. Input files for Step 2

MATHPC.HDR	From Step 1
MATHPC.BIN	From Step 1

3f. Output files from Step 2

MATHPC.HDR	ASCII header file that describes the record layout of the database file, MATHPC.BIN, in final MATH format
MATHPC.BIN	QC database file, in a hierarchical format (household record then person records for individuals in the household), in final MATH format

3g. Program for Step 2

The QC Minimodel TALLY subroutine creates:

- Person-level seeds SEEDP to be used with the random number generator.

- Variables FSDEPDED, FSNDIS, FSNONCIT, FSNABAWD, FSALLPA, and FSASTEST.

3h. Output variables for Step 2

The variables are the same as those in the pre-pandemic SNAP QC database, plus the newly created variables.

4. Technical description of procedures

The following is a brief description of the procedures used to create a MATH-style version of the pre-pandemic SNAP QC database.

4a. Create preliminary binary file

We create a hierarchical file in standard binary format that contains one household-record per household in the pre-pandemic SNAP QC database. Within each household, we create one person-record for each person represented in the pre-pandemic SNAP QC database and then convert proprietary SAS missing data codes as follows:

SAS	Recode	
.	-1	(blank on raw QC file)
.A	-2	(coded by Mathematica as out of range)
.B	-3	(coded by QC reviewer as unknown)
.C	-4	(unable to construct variable)
.D	-5	(household participating in month not certified)
.E	-6	(MFIP and SSI-CAP units, variable not relevant in benefit determination

4b. Create preliminary header file

We edit by hand the MATHPC.HDR file so that its record layout matches the output statement in SAS2BIN.SAS.

4c. Create final binary and header files

The model tracks, updates, and writes out the final header file, illustrated below.

```
        MATHPC.BIN       FILE NAME
        03/21/2022       CREATION DATE
        15:48:53.36      CREATION TIME
            FY2020       BASE YEAR
            FY2020       YEAR AGED TO
 10/2019 – 2/2020 avg    SIMULATION MONTH
             18319       HOUSEHOLD COUNT
           QC MINI       MODEL LABEL
           2020.00       MODEL VERSION
```

Using the output database from SAS2BIN.SAS, we run a QC Minimodel TALLY subroutine to generate the final version of the QC Minimodel database. This program:

- Renames unit-level variable FSDEPDED to HDEPDED (because FSDEPDED is reserved as a MATH model variable name)

- Deletes the variable SEEDP and generates a new person-level SEEDP that is compatible with the MATH model random number generator MATHRAND

- Creates a person-level variable FSNDIS (the number of non-elderly individuals with disabilities in the unit) on the unit head's record, by summing over individuals in the unit with $DIS_i = 1$; and sets FSNDIS to 0 for all other individuals

- Creates a person-level variable FSNONCIT (the number of noncitizens in the unit) on the unit head's record, by summing over individuals in the unit with $CTZN > 2$; and sets FSNONCIT to 0 for all other individuals

- Creates a person-level variable FSNABAWD (the number of adults without disabilities age 18–49 in childless units) on the unit head's record, by summing over individuals in the unit with $NDISCA = 1$; and sets FSNABAWD to 0 for all other individuals

- Creates a person-level variable FSALLPA from the unit-level variable PURE_PA and sets it to 0 for all, or 1 for the unit head if PURE_PA = 1

- Creates a person-level variable FSNONGR on the unit head's record that flags units that should not be subject to the gross income test because the household includes an elderly individual or an individual with a disability outside of the unit who was found ineligible because of an intentional program violation, a felony drug conviction, fleeing felon status, or noncompliance with a workfare or work requirement ($FSAFIL_i = 8, 9, 11,$ or 13); and sets FSNONGR to 0 for all other individuals

- Ensures the asset test result FSASTEST = 1 for all units

B. QC-specific portion of the QC Minimodel

1. Introduction

The QC Minimodel software is segregated into database-independent (generic) and database-specific components. In this section, we document the QC-specific portion of the model.

2. User parameters

The QC Minimodel contains the following model-specific user parameters:

- SHELCAP1 is the shelter limit for the contiguous United States, Alaska, Hawaii, Guam, and the Virgin Islands.

- MN_BEN is a table by SNAP unit size with entries for the food portion amounts and the cash portion amounts required for calculating the benefit for MFIP participants.

- MNERNDED is the value used for calculating the earnings deduction for MFIP participants.

- The following flags allow users to exclude the specified participants from a policy change simulation:
    - XMN_FIP excludes MFIP participants.
    - XSCAP_AZ excludes AZSNAP participants.
    - XSCAP_FL excludes SUNCAP participants.
    - XSCAP_KY excludes KYSAFE participants.
    - XSCAP_LA excludes LaCAP participants.
    - XSCAP_MA excludes BAYSTATECAP participants.
    - XSCAP_MD excludes MSNAP participants.
    - XSCAP_MI excludes MiCAP participants.
    - XSCAP_MS excludes MSCAP participants.
    - XSCAP_NC excludes NCSNAP participants.
    - XSCAP_NJ excludes NJSNAS participants.
    - XSCAP_NY excludes NYSNIP participants.
    - XSCAP_PA excludes PACAP participants.
    - XSCAP_SC excludes SCCAP participants.
    - XSCAP_SD excludes SD IN participants.
    - XSCAP_TX excludes SNAP-CAP participants.
    - XSCAP_VA excludes VaCAP participants.
    - XSCAP_WA excludes WASHCAP participants.
- DOSTAT allows users to include or exclude table statistics in a set of standard summary tables.

For a list of generic FSTAMP user parameters, see documentation for the database-independent portion of the SNAP model (FSTAMP) in the "2011 MATH SIPP+ Microsimulation Model: Programmer's Guide, Technical Description and Codebook" (Schechter et al. 2014).

3.   Programmer's guide

3a.   Input files

MATHPC.PRM	User parameter file (text file)
MATHPC.HDR	ASCII header file that describes the record layout of the database file, MATHPC.BIN
MATHPC.BIN	Pre-pandemic SNAP QC database file in standard binary form, in a hierarchical format: household record, and then person records for individuals in the household[37]

3b.   Output files

MATHPC.HDR[38]	ASCII header file that describes the record layout of the output database file, MATHPC.BIN
MATHPC.BIN	Pre-pandemic SNAP QC database file in standard binary form, in a hierarchical format (unit record, and then person records for individuals in the unit)
MATHPC.TAB	Summary tables (text file)
tables.json	Summary tables (JSON[39] format text file)
MATHPC.OUT	Output file to debug programming code

3c.   Programs

i.   *Subroutines*

db_fs_counts	Increments debug counters and prints totals to MATHPC.OUT file.
db_fs_hh_definers	Creates variables that describe fixed characteristics of the SNAP household, such as the geographic indices used in the income screens and benefit calculations; if standard errors are desired, the replicate weight file is opened, the replicate weight array is allocated, and the weights are read.
db_fs_display_partic_debug	Dummy routine for generic code compatibility.
db_fs_asset	Counts database-specific assets for SNAP units; since the SNAP QC database contains a reported value for unit countable assets, the routine only computes the asset limit.
db_fs_unit	Identifies which household members belong to which SNAP unit and determines whether a person is categorically excluded from any SNAP unit.
db_fs_locate_vars	Locates the database-specific input variables.
db_fs_parm_array_sizes	Sets the size of database-specific arrays.
db_fs_readparm	Reads database-specific user parameters from parameter file.
db_fs_validate_parm	Validates the user parameters using database-specific criteria.
db_fs_participation	Determines whether or not eligible units participate.
db_fs_display_debug	Prints database-specific debug about SNAP units and their eligibility determination

---

[37] Individuals on the file include SNAP participants plus nonparticipating household members whose income was considered in the eligibility and benefit determinations of the SNAP unit under review.

[38] Note that MATHPC.HDR and MATHPC.BIN are created only when the WRFILE is set to T (true).

[39] JSON stands for JavaScript Object Notation, and is defined and documented in ECMA-404 The JSON Data Interchange Syntax.

db_fs_vars	Creates SNAP unit summary variables (for example, FSGRINC, which is the final gross countable unit income, or FSNETINC, which is the final net countable unit income).
db_fs_calc_benefit	Computes the benefit for participants in State programs with nonstandard benefit calculations.
db_fs_calc_pure_pa	Calculates FSALLPA, the pure PA flag.
db_fs_set_fsgrtest	Recomputes gross income test for units with child support expenses or units with elderly and disabled household members with certain SNAP case affiliation codes who have been removed from the unit.
db_fs_save_generic_vars	Dummy routine for generic code compatibility.
db_fs_calc_liheap	Dummy routine for generic code compatibility.
db_fs_display_summ_debug	Dummy routine for generic code compatibility.
db_fs_table_b	Dummy routine for generic code compatibility.
db_fs_prob_distr_tab	Dummy routine for generic code compatibility.
db_fs_calc_categ_elig	Dummy routine for generic code compatibility. Placeholder for any new BBCE coding.
db_fs_display_partic_debug	Dummy routine for generic code compatibility. Placeholder for any new participation algorithm debug.
db_fs_calc_ben_post	Dummy routine for generic code compatibility.

ii.   Modules

fs_dbdefine	Common storage for database-specific household definer variables.
fs_dblocs	Common storage for database-specific variable locations.
fs_dbparm	Common storage for model-specific parameters; also storage for the standard medical deduction demonstration program parameters
fs_dbwork	Common storage for some working variables.

3d.   Output variables

None. The database-independent portion of the FSTAMP model creates all output variables.

4.   Technical description of procedures

The primary purpose of the SNAP QC-specific model algorithms is to use SNAP QC-specific data elements to construct the variables needed by the database-independent portion of FSTAMP. Sections a, b, and c refer to code that is executed in the initialization phase (KEOF = 1). The remaining sections refer to code executed in the processing phase (KEOF = 2).

4a.   Set parameter array sizes

i.   Purpose

Certain parameters or features of FNS's microsimulation models are generic across the models, but vary in form or shape from model to model. In this section, we set the database-specific elements. For example, all models use the maximum benefit parameters, but the number of regions where the maximum benefit is specified varies from model to model (seven regions in the QC Minimodel).

ii.   Specification

Deflation parameters. These are usually set to 1.0 (no deflation parameters) in the QC Minimodel:

```
defl_gen = 1.0
defl_VEH = 1.0
```

State loops. There is no looping over States in the QC Minimodel. These parameters control looping:

```
start_kist = 1
end_kist = 1
gen_array_size = 1
```

Database-specific parameter dimensions for the QC Minimodel:

```
num_benmax_region   = 7
num_benmin_region   = 7
num_depmax_region   = 5
num_screen_region   = 3
num_shelcap_region  = 5
num_standded_region = 5
```

4b. Validate user parameters

i. *Purpose*

Although not SNAP QC-specific, two of the generic FSTAMP user parameters must have certain values for the QC Minimodel: BASELAW and FS_VARS.

ii. *Specification*

The QC Minimodel does not support BASELAW = ' ' (baselaw eligibility simulation), because the baselaw simulation is determined by the SNAP QC file editing process rather than by FSTAMP (although the results of the SNAP QC file editing algorithms match the results of the FSTAMP algorithms exactly). For new baselaw runs, a new file created with WRFILE = T should be saved, and policy change simulations can be run off this baselaw by setting BASELAW = the suffix of the variables from the new baseline and setting FS_VARS = BASELAW+1. For example, if baselaw variables have a suffix of 1 a new policy change simulation is created with FS_VARS = 2 and saved as a new baseline. The new file now has two sets of variables, one with suffix = 1 and the other with suffix = 2. To use the new baseline in a policy change simulation, point INDIR to the new file and set BASELAW = 2 and FS_VARS = 3.

FS_VARS = 1 is not allowed, because the variables with a suffix of 1 are always on the file. The original suffix 1 variables are always needed by the DBVARS routine for imputing medical, shelter, and child support expenses, and countable assets (when the unit composition is not that of the original unit). Users who change the suffix 1 set of variables on the file should make sure that they understand the impact on the DBLOCS, DBDEFINE, and DBVARS calculations.

Certain parameters must stay constant from simulation to simulation in a multisimulation run. These include:

```
DOSTATS
XMN_FIP
XSCAP_xx, where xx is the State abbreviation of a State with an SSI_CAP program.
```

A fatal error will be issued if the model detects a variation in any of these parameters from simulation to simulation.

4c. Locate the input variables used and the output variables created

i.   Purpose

During KEOF = 1, before processing household records, obtain pointers to variables needed as input to the database-specific model algorithms.

ii.   Specification

Use the LOCVAR supervisor routine to obtain and store locations for the following variables:

AGE	FOSTER	HOMEDED	SOCSEC
AK_AREA	FSAFIL	HOMELSDED	SSI
CAT_ELIG	FSASSET 1	MED_DED_DEMO	SSI_CAP
CONT	FSCSDED	MINIMUM_BEN	STATE
CSUPRT	FSMEDEXP	MN_FIP	TANF
CTZN	FSNDIS 1	NDISCA	UNEMP
DEEM	FSNELDER 1	OTHERN	VET
DIS	FSNKID 1	OTHGOV	WAGES
DIVER	FSSLTEXP	OTHUN	WCOMP
DPCOST	FSUN 1	PURE_PA	WGESUP
EDLOAN	FSUSIZE 1	RACETH	WRKREG
EITC	FSVEHAST	RCNTACTN	YRMONTH
EMPRG	FYWGT_PER1	REL	
ENERGY	GA	SEX	
EXFSCSDED	HDEPDED	SLFEMP	

4d. Construct household definer variables

i.   Purpose

For each household, we create household definer variables that are used in subsequent calculations.

ii.   Specification

If indicators of statistical significance are selected, we open the replicate weight file and read in the weights for each household. We set WGT to FYWGT_PER1. We set geographic indicators for the 48 contiguous United States plus the District of Columbia, Alaska, Hawaii, Guam, and Virgin Islands. GEOG_DED indexes the standard deduction, dependent care deduction, and shelter deduction arrays; GEOG_SCRN indexes the gross and net income screen arrays; GEOG_BEN indexes the maximum benefit array; and GEOG_POV indexes the POVMONTH array.

```
select case (l_state%ihhld)
   case(15)                              !! hawaii
           geog_ded = 3
           geog_scrn = 3
           geog_ben = 5
           case(2)!! alaska
           geog_ded = 2
           geog_scrn = 2

select case(l_ak_area%ihhld)
   case(1)                              !! alaska rural i
           geog_ben = 3
   case(2)                              !! alaska rural ii
           geog_ben = 4
   case default                                      !! alaska urban is default
           geog_ben = 2
end select
   case(66)                             !! guam
           geog_ded = 4
           geog_scrn = 1
           geog_ben = 6
   case(78)                             !! virgin islands
           geog_ded = 5
           geog_scrn = 1
           geog_ben = 7
   case default
           geog_ded = 1
           geog_scrn = 1
           geog_ben = 1
end select

geog_pov = geog_scrn
region = region_lookup(state%ihhld)
```

We set skip_hh_flags for MN_FIP and SSI_CAP units according to the skip parameters, which vary by State.

We assign SNAP reporting status, FS_REPORTER, and set it to true for all units.

We assign the household's dependent care and child support payment deductions and shelter and medical expenses to a set of working variables that are used in policy change simulations that change the original household composition. Note that when imputing these expenses and dependent care deductions within a simulation, the values for the original household must be used even if a new baselaw has been previously constructed. Also, we set original assets and original unit counts and flags.

```
orig_fsmedexp = l_original_fsmedexp%ihhld
orig_fssltexp = l_original_fssltexp%ihhld
orig_fsdepded = l_original_fsdepded%ihhld
orig_fscsded  = l_original_fscsded %ihhld
orig_fsuhead = 0
hhtanf = 0
orig_kids_lt15 = 0
do ip = 1, ctprhh
   if (l_original_fsun%iper(ip) == ip) orig_fsuhead = ip
   if (l_tanf%iper(ip) > 0) hhtanf = hhtanf + l_tanf%iper(ip)
   if (l_original_fsun%iper(ip) == 0) cycle
   if (l_age%iper(ip) >= 0 .and. l_age%iper(ip) < 15) &
         orig_kids_lt15 = orig_kids_lt15 + 1
enddo
orig_fsusize  = l_original_fsusize %iper(orig_fsuhead)
orig_fsnkid   = l_original_fsnkid  %iper(orig_fsuhead)
orig_fsnelder = l_original_fsnelder%iper(orig_fsuhead)
orig_fsndis   = l_original_fsndis  %iper(orig_fsuhead)
orig_fsasset  = l_original_fsasset %iper(orig_fsuhead)
```

4e. Construct SNAP unit

i. *Purpose*

We use the FSUN 1 code to construct the SNAP unit. We make sure that every SNAP unit has a head.

ii. *Specification*

We assign FSUN (SNAP unit number) to each person in the household:

```
do ip = 1, ctprhh
   fsun(ip) = l_original_fsun%iper(ip)
end do
```

We identify units that no longer have a head due to a policy change simulation and assign them a new head:

```
do ip = 1,ctprhh
   if (fsun(ip) == 0) cycle
   if (fsun(fsun(ip)) /= fsun(ip)) then
         do jp = ip+1,ctprhh
               if (fsun(jp) == fsun(ip)) fsun(jp) = ip
         end do
         fsun(ip) = ip
   end if
end do
```

4f. Create SNAP unit summary variables

i. *Purpose*

We summarize characteristics of each SNAP unit by adding the countable income of all household members and counting various types of people in the unit (such as the number of elderly members and number of children).

ii. Specification

For each unit, we aggregate the countable income of all members in the household. Gross income is the sum of all earned and unearned income. When appropriate, we exclude child support expenses from the gross income. (There are separate values that indicate expenses to be subtracted before the gross income test [EXFSCSDED] and expenses to be subtracted before the net income test [FSCSDED].)

We loop over all individuals in the household:[40]

```
do iunit = 1, ctprhh
   do ip = 1, ctprhh
           if (l_dpcost%iper(ip) > 0) depexp(iunit) = depexp(iunit) + l_dpcost%iper(ip)
           !--------  WELFARE Support  (Note: missing income values are coded as < 0)
           if (l_tanf%iper(ip) > 0) fstanf(iunit)  = fstanf(iunit) + l_tanf%iper(ip)
           if (l_ssi %iper(ip) > 0) then
                   fsssi (iunit)  = fsssi (iunit) + l_ssi %iper(ip)
                   nssi = nssi + 1
           endif
           if (l_ga  %iper(ip) > 0) fsga  (iunit)  = fsga  (iunit) + l_ga  %iper(ip)
           !---- Earned income
           if (l_wages %iper(ip) >0) fsearn(iunit) = fsearn(iunit) + l_wages %iper(ip)
           if (l_othern%iper(ip) >0) fsearn(iunit) = fsearn(iunit) + l_othern%iper(ip)
           if (l_slfemp%iper(ip) >0) fsearn(iunit) = fsearn(iunit) + l_slfemp%iper(ip)
           !---- Other unearned income
           if (l_othgov%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_othgov%iper(ip)
           if (l_socsec%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_socsec%iper(ip)
           if (l_unemp %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_unemp %iper(ip)
           if (l_vet   %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_vet   %iper(ip)
           if (l_wcomp %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_wcomp %iper(ip)
           if (l_edloan%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_edloan%iper(ip)
           if (l_csuprt%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_csuprt%iper(ip)
           if (l_deem  %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_deem  %iper(ip)
           if (l_cont  %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_cont  %iper(ip)
           if (l_othun %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_othun %iper(ip)
           if (l_diver %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_diver %iper(ip)
           if (l_wgesup%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_wgesup%iper(ip)
           if (l_energy%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_energy%iper(ip)
           if (l_eitc  %iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_eitc  %iper(ip)
           if (l_foster%iper(ip) > 0)  fsgrinc(iunit) = fsgrinc(iunit) + l_foster%iper(ip)
      end do ! end of person loop
      fsgrinc(iunit) = fsgrinc(iunit) + fsearn(iunit)  + fsssi(iunit)  &
                                      + fstanf(iunit)  + fsga(iunit)
      fsgrinc(iunit) = fsgrinc(iunit) - l_exfscsded%ihhld
   end do ! end of unit loop
```

For each unit, we loop over individuals and count members with various characteristics:

- Total members

- Number of adults and number of female adults (those with missing age are included as adults)

- Number of children, number of school-age children (children age 5–17), number of toddlers (children under age 2), and number of children older than toddlers

- Number of elderly members

- Number of noncitizens

---

[40]All individuals in the household include all individuals in the SNAP unit under review, plus individuals outside the unit who contribute income to the unit.

- Number of able-bodied adults without dependents (ABAWDs)

- Number of members with a disability

- Number of female members and number of male members

```
do iunit = 1, ctprhh
        do ip = 1, ctprhh
                if (fsun(ip) /= iunit) cycle  ! cycle if person not in the SNAP unit
                fsusize(iunit) = fsusize(iunit) + 1
                if (l_age%iper(ip) > max_kid_age .or. l_age%iper(ip) < 0) then
                        fsnadult(iunit)  = fsnadult(iunit) + 1
                        if (l_sex%iper(ip) == 2) femadults = femadults + 1
                else
                        fsnkid(iunit)  = fsnkid(iunit) + 1
                        if (l_age%iper(ip) >= min_school_age)  fsnk5t17(iunit) =
        fsnk5t17(iunit) + 1
                        if (l_age%iper(ip) < max_toddler_age) then
                                fndeplt2(iunit) = fndeplt2(iunit) + 1
                        else
                                fndepge2(iunit) = fndepge2(iunit) + 1
                        end if
                end if
                if (l_age%iper(ip) >= min_elderly_age) fsnelder(iunit) = fsnelder(iunit)
        + 1
                if (l_ctzn%iper(ip) > 2) fsnoncit(iunit) = fsnoncit(iunit) + 1
                if (l_NDISCA%iper(ip) == 1 .AND. l_fsafil%iper(ip) == 1) &
                        fsnabawd(iunit) = fsnabawd(iunit) + 1
                if (l_dis%iper(ip) == 1) fsndis(iunit) = fsndis(iunit) + 1
                if (l_sex%iper(ip) == 2) then
                        fsnfemale(iunit) = fsnfemale(iunit) + 1
                else
                        fsnmale(iunit) = fsnmale(iunit) + 1
                end if

        end do ! end of person loop
end do ! end of loop over all fs units in the household
```

We identify SNAP units headed by a single female. This is not used for any eligibility determination. It is used for summary counts only.

```
if (fsnadult(iunit) == 1 .and. femadults==1 .and. fsnkid(iunit) >0) fsngmom(iunit) = 1
```

4g. Impute assets, shelter expenses, medical expenses, homeless household shelter deduction, and child support expenses when the SNAP unit is not the original SNAP unit

i. *Purpose*

Asset and expense data recorded on the pre-pandemic SNAP QC database pertain to the actual SNAP unit sampled by the QC System. However, the QC Minimodel has the capability to simulate SNAP units with compositions that are different from the composition of the original SNAP unit by removing individuals with certain characteristics from the original SNAP unit.

The QC system records countable income at the person-level for every household member whose income is used to determine the SNAP unit's eligibility. However, asset and expense data are recorded only at the unit level for the original SNAP unit. Thus, the QC Minimodel uses the original SNAP unit's asset and expense data, along with algorithms described below, to impute expenses and assets for any simulated SNAP unit that has a composition different from that of the original SNAP unit.

Many different algorithms could be used to impute assets and expenses in simulations that involve changes to SNAP unit composition. The best algorithm to use depends on the type of policy change to be simulated. The algorithms described below have been incorporated into the QC Minimodel because they have been used for numerous policy change simulations requested by FNS. These algorithms will work well for many types of simulations, but they are not designed to be generally applicable.

ii.   Specification

Countable assets. For all simulated SNAP units, the QC Minimodel assigns the countable assets of the original SNAP unit:

```
fsasset (iunit) = orig_fsasset
```

While the value of countable assets is kept constant when the unit composition changes, the removal of certain individuals from the SNAP unit may mean that a different asset limit is applicable, thus resulting in some units losing asset eligibility. For example, the removal of elderly members or non-elderly individuals with disabilities from the SNAP unit would lead to a lower asset limit.

Shelter expenses. For all simulated SNAP units, the QC Minimodel assigns shelter expenses equal to the product of the number of individuals in the unit and the per-capita shelter expenses of the original SNAP unit:

```
fssltexp(iunit) = nint( orig_fssltexp * float(fsusize(iunit)) / orig_fsusize )
```

In reality, a household's shelter expenses are assigned to each SNAP unit in the household, based on the share of shelter expenses actually paid by each member of each SNAP unit. Although the SNAP QC data contain no information regarding which individuals are responsible for paying shelter expenses, one could impute payment responsibility based on income; a person with 65 percent of a household's income would be assumed to be responsible for paying 65 percent of the household's shelter expenses. Again, the best imputation depends on the type of policy change to be simulated.

Medical expenses. The QC Minimodel imputes medical expenses based either on the number of elderly members or non-elderly individuals with disabilities in the original unit. If the original unit contains no elderly individuals and no non-elderly individuals with disabilities, then a medical expense deduction is not allowed—either in the original SNAP QC file editing process or in any QC Minimodel simulations. However, under certain circumstances, such as an elderly individual outside the unit, the medical expense may be applied to the head of household. In policy change simulations, the medical expense is prorated by the ratio of elderly individuals and non-elderly individuals with disabilities in the policy change simulation relative to the number of elderly individuals and non-elderly individuals with disabilities in baselaw:

```
    if (orig_fsmedexp > 0) then
       if (orig_fsnelder + orig_fsndis > 0) then
            fsmedexp(iunit) = &
                  nint (real (orig_fsmedexp * (fsnelder(iunit) + fsndis(iunit)) ) &
                  / (orig_fsnelder + orig_fsndis))
       else if (orig_fsnelder == 0 .and. orig_fsndis == 0) then
            if (nssi > 0) then
                  ! The unit is allowed a medical deduction based on an elderly or
                  ! disabled person outside the unit (if there are none in the unit).
                  ! The medical deduction goes to whomever in the unit has SSI
                  ! income.
                  do ip = 1, ctprhh
                        !--- Cycle if person not in the fsu
                        if (fsun(ip) /= iunit) cycle
                        fsmedexp(ip) = nint(real(orig_fsmedexp) / nssi)
                  end do
            else
                  ! The unit is allowed a medical deduction based on an elderly or
                  ! disabled person outside the unit, but nobody has SSI income,
                  ! so assign the medical deduction to the unit head.
                  fsmedexp(iunit) = orig_fsmedexp
            end if
       end if
    else
       fsmedexp(iunit) = 0
    end if
```

In addition, we identify units participating in standard medical deduction demonstration programs in the 21 States with such demonstrations. Certain States have a reduction to the standard deduction or HCSUA to maintain cost neutrality. See Appendix F, Table F.4 for more detail on the standard medical deduction amounts for these States:

```
do i = 1, num_med_demo
   if (fstate == med_demo_state(i) .and. fsmedexp(iunit) > 0 .and. l_yrmonth%ihhld >=
                     med_demo_date(i) ) then
           if (fsmedexp(iunit) <= (med_demo_thres(i)-35)) fsmedexp(iunit) = med_demo_min(i)
           fsstdded(iunit) = fsstdded(iunit) - med_demo_stddedred(i)
   end if
end do
```

Child support expenses. The QC Minimodel imputes the child support expenses of the original unit to the head of the original unit. The child support payment deduction is equal to the child support expenses.

```
    if (orig_fscsded > 0 .and. fsun(orig_fsuhead) == iunit)  fscspded(iunit) = orig_fscsded
```

For a policy change simulation, we assign child support expenses to the simulated SNAP unit that contains the head of the original unit. If the head of the original unit does not belong to any of the newly simulated units, then the child support expenses are not used.

Homeless household shelter deduction. The QC Minimodel assigns the homeless household shelter deduction attributed to the original unit to all simulated SNAP units within the household.

```
    if (l_homeded%ihhld == 3)
       fshomeDED(IUNIT) = l_homelsded%ihhld
```

Recompute gross income test. In the QC Minimodel, the gross income test is recalculated for units with child support expenses:

```
        if (fscspded(iunit) > 0 .and. fsgrinc(iunit) - fscspded(iunit) <= GROSS_SCREEN(IUNIT))
                FSGRTEST(IUNIT) = 1
```

4h. Select participants

i. *Purpose*

After eligibility is determined for a SNAP unit in the household, the model must simulate whether or not
the unit decides to participate. In the QC Minimodel, we simulate all SNAP-eligible units on the file as
participants because every household on the file did in reality participate in SNAP. We believe that this
all-eligible-units-participate rule is reasonable in most cases. On the other hand, if a large reduction in
SNAP benefits is simulated, the user may want to make some out-of-model adjustments to account for
eligible SNAP units that may not continue to participate. If a baselaw eligible unit is simulated to have a
zero benefit under a policy change simulation, the unit is treated as ineligible in the simulation results.

ii. *Specification*

```
do iunit = 1, ctprhh      fspart(iunit) = 0
   if (fsun (iunit) /= iunit) cycle        !  not the SNAP unit head
   if (fsben(iunit) > 0) fspart(iunit) = 1 !  all eligible units participate
end do
```

We describe in detail the FSBEN calculation in the FSBEN entry of the codebook (Chapter V). We
describe MFIP and State SSI-CAP programs in Chapter III, and we list the MFIP parameters and SSI-
CAP standard benefit and shelter amounts in Appendix F.

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V.   Codebook for the FY 2020 SNAP QC Databases

In this chapter, we describe the variables on the FY 2020 SNAP QC databases, including an overview of the types of variables on the files, a list of variables, and a detailed description of each variable.

A.   Overview of variables on the QC file

For each variable in the FY 2020 SNAP QC databases, the Codebook provides the name, origin, label, range of values, and a list of values or description. This section explains how to interpret and use that information.

1.   Origin: Reported versus constructed

The "Origin" column in the codebook indicates the source of each particular variable as either reported or constructed. Variables coded as "R" are those reported on the QC Review Schedule input form and have been read directly from the raw data file, although some editing may have taken place, as noted in the variable description. Variables coded as "C" are constructed or recoded variables that are derived from reported variables and program parameters, such as the Thrifty Food Plan and the SNAP benefit reduction rate. Constructed variables are the best variables for analytical purposes because inconsistencies have been corrected.

In particular, certain constructed variables are used frequently in creating the tables in the "Characteristics of Supplemental Nutrition Assistance Program Households" report series. Data users will be able to obtain results consistent with those in the report by using the following variables rather than their unedited counterparts:

Variable	Description
FSBEN	Final calculated benefit
FSUSIZE	Constructed certified unit size
FSGRINC	Final gross countable unit income
FSNETINC	Final net countable unit income
FSERNDED	Calculated earned income deduction
TPOV	Gross income/poverty level ratio

2.   Missing values

Table V.1 lists the missing value conventions used in the restricted use version of the SNAP QC databases. Beginning in FY 2015, the public use version of the SNAP QC database includes only one value (".") for all missing data.

Table V.1. Codes for missing data in the restricted use SNAP QC databases

ASCII or binary codes	SAS codes	Description
-1	.	Blank on source file
-2	.A	Value out of range
-3	.B	Coded by QC reviewer as unknown (field coded with all 9s)
-4	.C	Pertains to constructed variables only; variable could not be constructed or calculated due to missing data
-5	.D	For CERTMTH variable, indicates that unit is participating in months not certified
-6	.E	For SSI-CAP and MFIP units, variables that are not relevant in the benefit determination

3.   Using the SNAP QC databases

The pre-pandemic period SNAP QC database has 18,319 observations for sample months ranging from October 2019 through February 2020 for all States, the District of Columbia, Guam, and the Virgin Islands. The waiver period SNAP QC database has 8,793 observations for sample months ranging from June 2020 through September 2020 for 45 States, Guam, and the Virgin Islands. As a result of the waivers, not every State conducted QC reviews in each of these four months. Five States—California, Delaware, Maine, Maryland, and New York—and the District of Columbia did not have any data for the waiver period. Eight States—Hawaii, Idaho, Indiana, Massachusetts, Ohio, Oregon, South Dakota, and Washington—had only one month of data in the waiver period. Fourteen States and territories—Alaska, Arizona, Florida, Georgia, Louisiana, Michigan, New Hampshire, New Jersey, North Dakota, Rhode Island, Virginia, Wisconsin, Guam, and the Virgin Islands—had only two months of data in the waiver period. Four States—Illinois, New Mexico, Oklahoma, and Texas—had three months of data in the waiver period. The combined SNAP QC database has a total of 27,112 observations. None of the databases include data for March 2020 through May 2020. To conduct analyses for a specific calendar month, the user should select observations sampled in that month by using the year month (YRMONTH) variable. The year month variable is a six-digit code with the first four digits indicating the year and the last two digits indicating the month. For example, to conduct an analysis based on observations from January 2020, the user should select all observations with a YRMONTH code equal to "202001."

After selecting the desired observations, the user must assign a weight to each observation so that the sample represents the national SNAP caseload. The weights, stored in the variable HWGT, are computed for each of the independent monthly samples and are based on actual program participation. When analyzing a specific calendar month, the user should use the YRMONTH code to select the correct observations and then use the HWGT variable. However, if the analysis is based on more than one month and an average monthly estimate is desired, the user should divide HWGT by the number of months to be analyzed that are available for each State on the file. The FYWGT_PER1 variable should be used for tabulations across the pre-pandemic period months of October 2019 through February 2020, the FYWGT_PER2 variable should be used for tabulations across the waiver period months of June 2020 through September 2020, and the FYWGT variable should be used for tabulations across all months in the combined SNAP QC database (October 2019 through February 2020 and June 2020 through September 2020). (FYWGT equals HWGT divided by 9, with the exception of the States listed above with one or more missing months of data from June 2020 through September 2020. In those States, the FYWGT equals HWGT divided by the corresponding number of months of data available.)

The tables in the "Characteristics of Supplemental Nutrition Assistance Program Households" report series present the pre-pandemic period SNAP QC database and the waiver period SNAP QC database separately. To create the tables for the pre-pandemic period, we selected all observations for all months in the pre-pandemic period and weighted the observations by FYWGT_PER1 to reflect the national monthly average caseload during that period. To create the tables for the waiver period, we selected all observations for all months in the waiver period and weighted the observations by FYWGT_PER2 to reflect the monthly average caseload during that period. Because five States and the District of Columbia do not have any data for the waiver period, the average numbers of participants and benefits do not reflect the national caseload and so should not be compared to pre-pandemic estimates.

The SNAP QC database can be used to obtain person-level information along with unit-level data. An integer from 1 to 16, representing up to 16 people in a household, is attached to each person-level variable. For ease, users often place these variables in arrays and use indices to access the data. One of the key person-level variables is the affiliation code FSAFILi. An FSAFILi value of 1 indicates that the person participated in SNAP.

B. Codebook

This codebook lists and describes each variable in the FY 2020 SNAP QC databases. The unit-level variables are listed first, followed by the person-level variables and then the detailed error findings variables, for a total of nine categories.

The unit-level variables are divided into the following six categories:

1. Unit-level QC review administrative data
2. Unit-level demographics and sample weights
3. Unit-level countable income
4. Unit-level countable assets
5. Unit-level expenses and deductions
6. Unit-level benefits

The person-level variables are divided into two categories:

1. Person-level characteristics
2. Person-level income

One category covers detailed error findings variables:

1. Detailed error findings

The categories appear in the order shown above. The variables in each category are listed alphabetically. Two codebooks are presented, both sorted in the same order. The first codebook—the quick-reference codebook—lists only the variable name, its origin, and a brief description. The second codebook—the detailed codebook—lists the variable name, its origin, and a description that includes all the valid values of the variable for discrete variables and the range of valid values for continuous variables (such as HWGT).

Note: Detailed information on each variable in the databases can be found starting here.

Table V.2. Quick-reference codebook

Variable	Origin*	Description
Unit QC review administrative data		
ACTNTYPE	R	Type of action
ALLADJ	R	Allotment adjustment
AMTADJ	R	Amount of allotment adjustment
AUTHREP	R	Authorized representative
BENFIX	C	Benefit allotment (SNAP benefit) adjusted for errors
CASE	R	Case classification
CAT_ELIG	C	Indicator of categorical eligibility status
CERTMTH	R	Months in certification period
EXPEDSER	R	Received expedited service
HHLDNO	C	SNAP household identification number
LASTCERT	C	Months since last SNAP certification
LOCALCOD	R	Local agency code (not retained on public use file)
MED_DED_DEMO	C	Indicator of standard medical deduction demonstration eligibility
MN_FIP	C	Indicator of MFIP participation
PURE_PA	C	Indicator of pure cash public assistance status
RCNTACTN	R	Most recent action on case
REP_SYS	R	Reporting requirement
REVNUM	R	State QC review number (not retained on public use file)
SSI_CAP	C	Indicator of SSI-CAP participation
STATUS	R	Status of case error findings
YRMONTH	R	Sample year and month
Unit demographics and sample weights		
AK_AREA	C	Alaska region (not retained on public use file)
CERTHHSZ	R	Certified unit size
COMPOSITION	C	Unit composition
COUNTYCD	C	FIPS code for county (not retained on public use file)
CTPRHH	C	Number of people in household
FSDIS	C	Indicator of non-elderly individuals with disabilities in unit
FSELDER	C	Indicator of elderly individuals in unit
FSKID	C	Indicator of children in unit
FSNDIS	C	Number of non-elderly individuals with disabilities in unit
FSNDISCA	C	Number of adults age 18–49 without disabilities in childless units
FSNELDER	C	Number of elderly individuals in unit
FSNGMOM	C	Indicator of single-female-headed unit
FSNK0T4	C	Number of preschool-age children in unit
FSNK5T17	C	Number of school-age children in unit

Variable	Origin*	Description
FSNKID	C	Number of children in unit
FSNONCIT	C	Number of noncitizens in unit
FSUSIZE	C	Constructed certified unit size
FYWGT	C	Weight used for full-year calculations
FYWGT_PER1	C	Weight used for full-pre-pandemic period calculations
FYWGT_PER2	C	Weight used for full-waiver period calculations
HWGT	C	Monthly sample weight
NONCIT_HEAD	C	Unit head citizenship indicator
RAWHSIZE	R	Reported number of people in household
REGION	C	Constructed census region code
REGIONCD	R	FNS region code
STATE	R	FIPS code for State or territory
STATENAME	C	State or territory
STRATUM	R	Stratum identification
TANF_IND	C	Indicator of TANF receipt for unit
TPOV	C	Gross income/poverty level ratio
URBRUR	C	Urban/rural indicator (not retained on public use file)
WRK_POOR	C	Indicator of working poor unit
Unit countable income (monthly dollar amounts)		
FSCONT	C	Countable unit income from contributions
FSCSUPRT	C	Countable unit child support payment income
FSDEEM	C	Countable unit deemed income
FSDIVER	C	Countable unit State diversion payments
FSEARN	C	Countable unit earned income
FSEDLOAN	C	Countable unit income from educational grants and loans
FSEITC	C	Countable unit income from earned income tax credit
FSENERGY	C	Countable unit energy assistance income
FSFOSTER	C	Countable unit foster care income
FSGA	C	Countable unit General Assistance benefits
FSGRINC	C	Final gross countable unit income
FSNETINC	C	Final net countable unit income
FSOTHERN	C	Countable unit other earned income
FSOTHGOV	C	Countable unit income from other government benefits
FSOTHUN	C	Countable unit other unearned income
FSSLFEMP	C	Countable unit self-employment income
FSSOCSEC	C	Countable unit Social Security income
FSSSI	C	Countable unit SSI benefits
FSTANF	C	Countable unit TANF payments
FSUNEARN	C	Countable unit unearned income
FSUNEMP	C	Countable unit unemployment compensation benefits
FSVET	C	Countable unit veterans' benefits
FSWAGES	C	Countable unit wages and salaries

Variable	Origin*	Description
FSWCOMP	C	Countable unit workers' compensation benefits
FSWGESUP	C	Countable unit wage supplementation income
RAWGROSS	R	Reported gross countable unit income
RAWNET	R	Reported net countable unit income
Unit countable and reported assets		
FSASSET	C	Total countable assets under State rules
FSVEHAST	C	Countable non-excluded vehicles' value under State rules
LIQRESOR	C	Countable liquid assets under State rules
OTHNLRES	C	Countable other nonliquid assets under State rules
RAWLQRES	R	Reported liquid assets
RAWOTRES	R	Reported other nonliquid assets
RAWRPROP	R	Reported real property
RAWVHAST	R	Reported non-excluded vehicles' value
REALPROP	C	Countable real property under State rules
VEHICLEA	R	Reported category for first vehicle
VEHICLEB	R	Reported category for second vehicle
Unit expenses and deductions		
ERN_INC_DED_PCT	C	Percentage used to calculate earned income deduction
EXCL_FSCSDED	C	Child support excluded from gross income
FSCSDED	C	Child support payment deduction
FSCSEXP	R	Reported child support payment deduction
FSDEPDED	R	Reported dependent care deduction
FSDEPDE2	C	Marginal effectiveness of dependent care deduction
FSERNDED	C	Calculated earned income deduction
FSERNDE2	C	Marginal effectiveness of earned income deduction
FSMEDDED	C	Calculated medical expense deduction
FSMEDDE2	C	Marginal effectiveness of medical expense deduction
FSMEDEXP	R	Reported medical expenses
FSSLTDED	C	Calculated excess shelter expense deduction
FSSLTDE2	C	Marginal effectiveness of excess shelter expense deduction
FSSLTEXP	C	Calculated shelter expenses
FSSTDDED	C	Standard deduction
FSSTDDE2	C	Marginal effectiveness of standard deduction
FSTOTDED	C	Total deductions
FSTOTDE2	C	Marginal effectiveness of total deduction
HOMEDED	R	Indicator of homelessness
HOMELESS_DED	C	Amount of homeless household shelter deduction
RAWERND	R	Reported earned income deduction
RENT	R	Rent/mortgage amount
SHELCAP	C	Maximum allowable shelter expense deduction
SHELDED	R	Reported shelter deduction
SUA1	R	Standard utility allowance—usage and entitlement

Variable	Origin*	Description
SUA2	R	Standard utility allowance—prorated
UTIL	R	Utility amount
Unit benefits		
AMTERR	R	Amount of benefit in error
ASSLIM	C	Asset limit
BENMAX	C	Maximum benefit amount
FSASTEST	C	Indicator of passing asset test
FSBEN	C	Final calculated benefit
FSBENSUPP	C	Eligible amount of emergency allotment
FSGRTEST	C	Indicator of passing gross income test
FSMINBEN	C	Received minimum benefit
FSNETEST	C	Indicator of passing net income test
GROSSCRN	C	Gross income screen
MINIMUM_BEN	C	Minimum benefit amount
NETSCRN	C	Net income screen
RAWBEN	R	Reported SNAP benefit received
SUPP_BEN	C	Indicator of eligibility for emergency allotment
Person-level characteristics: i = 1 to 16		
ABWDSTi	R	ABAWD status
AGEi	R	Age
CTZNi	R	Citizenship status
DISi	C	Person-level disability indicator
DPCOSTi	R	Reported dependent care cost
EMPRGi	R	SNAP Employment and Training program status
EMPSTAi	R	Employment status—type
EMPSTBi	R	Employment status—amount
FSAFILi	R	SNAP case affiliation
FSUNi	C	Position of head of SNAP unit
NDISCAi	C	Adult age 18–49 without disabilities in childless unit status
RACETHi	R	Race/ethnicity
RELi	R	Relationship to head of household
SEXi	R	Sex
WORKi	C	Person-level working indicator
WRKREGi	R	Work registration status
YRSEDi	R	Highest educational level completed
Person-level countable income (monthly dollar amounts): i = 1 to 16		
CONTi	R	Countable income from contributions
CSUPRTi	R	Countable child support payment income
DEEMi	R	Countable deemed income
DIVERi	R	Countable State diversion payments
EDLOANi	R	Countable income from educational grants and loans
EITCi	R	Countable income from earned income tax credit

Variable	Origin*	Description
ENERGYi	R	Countable energy assistance income
FOSTERi	R	Countable foster care income
GAi	R	Countable General Assistance benefits
OTHERNi	R	Countable other earned income
OTHGOVi	R	Countable income from other government benefits
OTHUNi	R	Countable other unearned income
SLFEMPi	R	Countable self-employment income
SOCSECi	R	Countable Social Security income
SSIi	R	Countable SSI benefits
TANFi	R	Countable TANF payments
UNEMPi	R	Countable unemployment compensation benefits
VETi	R	Countable veterans' benefits
WAGESi	R	Countable wages and salaries
WCOMPi	R	Countable workers' compensation benefits
WGESUPi	R	Countable wage supplementation income
Detailed error findings: i = 1 to 9		
AGENCYi	R	Agency or client responsibility
AMOUNTi	R	Variance dollar amount
DISCOVi	R	Variance discovery
E_FINDGi	R	Error finding
ELEMENTi	R	Variance element
NATUREi	R	Nature of variance
OCCDATEi	R	Variance occurrence date
TIMEPERi	R	Variance time period
VERIFi	R	Variance verification

* R indicates the variable is from the raw data; C indicates the variable was constructed.

Unit QC review administrative data

Variable	Origin	Description
ACTNTYPE	**R**	**TYPE OF ACTION**
		Range = (1, 2)
		1 = Certification
		2 = Recertification
ALLADJ	**R**	**ALLOTMENT ADJUSTMENT**
		Range = (1, 3)
		1 = No adjustment
		2 = Prorated benefit
		3 = Other adjustment
AMTADJ	**R**	**AMOUNT OF ALLOTMENT ADJUSTMENT**
		Range = (0, 855)
AUTHREP	**R**	**AUTHORIZED REPRESENTATIVE**
		Range = (1, 2)
		1 = Used to make application
		2 = Not used to make application
BENFIX	**C**	**BENEFIT ALLOTMENT ADJUSTED FOR ERRORS**
		Range = (0, 1970)
CASE	**R**	**CASE CLASSIFICATION**
		Range = (1, 3)
		1 = Included in error rate calculation
		2 = Excluded from error rate calculation—processed by SSA worker
		3 = Excluded from error rate calculation, as designated by FNS (for example, demonstration project, simplified SNAP)
CAT_ELIG	**C**	**INDICATOR OF CATEGORICAL ELIGIBILITY STATUS**
		Range = (0, 2)
		0 = Unit not categorically eligible for benefits
		1 = Unit reported as categorically eligible for benefits and therefore not subject to SNAP income or asset tests (unit subject to State-determined income and/or asset limit on cash Public Assistance [PA] or noncash TANF-funded benefit used to confer categorical eligibility)
		2 = Unit recoded as categorically eligible after being identified as pure cash PA or as meeting State-specified criteria for BBCE and therefore not subject to SNAP income or asset tests
CERTMTH	**R**	**MONTHS IN CERTIFICATION PERIOD**
		Range = (0, 60)
		Number of months SNAP unit was certified to participate during current certification or recertification period
EXPEDSER	**R**	**RECEIVED EXPEDITED SERVICE**
		Range = (1, 3)
		1 = Entitled to expedited service and received benefits within Federal time frame
		2 = Entitled to expedited service but did not receive benefits within Federal time frame
		3 = Not entitled to expedited service
HHLDNO	**C**	**SNAP HOUSEHOLD IDENTIFICATION NUMBER**
		Range = (1, 36557)
		Position of unit in unedited SNAP QC file (unique unit identifier)
LASTCERT	**C**	**MONTHS SINCE LAST SNAP CERTIFICATION**
		Range = (0, 96)

Variable	Origin	Description
LOCALCOD	**R**	**LOCAL AGENCY CODE (not retained on public use file)**
		Range = (0, 961)
		Designates local agency and allows grouping of data by county or county equivalent (may be FIPS code or alternative classification)
MED_DED_DEMO	**C**	**INDICATOR OF STANDARD MEDICAL DEDUCTION DEMONSTRATION ELIGIBILITY**
		Range = (0, 1)
		0 = No
		1 = Yes
MN_FIP	**C**	**INDICATOR OF MFIP PARTICIPATION**
		We recommend using MN_FIP, with the understanding that it may slightly underestimate the number of MFIP units. We recommend against using MFIP units' TANF income because it is not included as gross income and is most likely recorded incorrectly, if at all. See Appendix A for details.
		Range = (0, 1)
		0 = No
		1 = Yes
PURE_PA	**C**	**INDICATOR OF PURE CASH PUBLIC ASSISTANCE STATUS**
		Range = (0, 1)
		0 = No
		1 = Yes
		A unit is pure cash public assistance (pure PA) when everyone in the unit receives TANF, GA, or SSI or the unit has TANF income and every adult receives TANF, GA, or SSI.
RCNTACTN	**R**	**MOST RECENT ACTION ON CASE**
		Range = (20010201, 20200930)
		Date the case was certified or recertified for participation in sample month under review (in yyyymmdd format)
REP_SYS	**R**	**REPORTING REQUIREMENT**
		Range = (1, 10)
		1 = $25 change reporting
		2 = $80 change in earned income
		3 = $100 change in earned income
		4 = Status reporting
		5 = 5-hour change in hours worked and expected to continue over a month
		6 = Simplified reporting (exceeding 130 percent of income poverty guidelines)
		7 = Quarterly reporting
		8 = Monthly reporting
		9 = Transitional benefits (no reporting requirement)
		10 = Other
REVNUM	**R**	**STATE QC REVIEW NUMBER (not retained on public use file)**
		Range = (1, 880418)
SSI_CAP	**C**	**INDICATOR OF SSI-CAP PARTICIPATION**
		We recommend using SSI_CAP, with the understanding that it likely underestimates the actual number of SSI-CAP units. See Appendix A for details.
		Range = (0, 3)
		0 = Not in SSI-CAP
		1 = SSI-CAP case with standard shelter expenses
		2 = SSI-CAP case with standard benefit, consistent with program rules
		3 = SSI-CAP case with standard benefit, inconsistent with program rules

Variable	Origin	Description
STATUS	**R**	**STATUS OF CASE ERROR FINDINGS**
		Range = (1, 3)
		1 = Amount correct
		2 = Overissuance
		3 = Underissuance
YRMONTH	**R**	**SAMPLE YEAR AND MONTH**
		Range = (201910, 202009)
		Allows user to select one or more sample months from full-year file for analyses. The YRMONTH variable is a six-digit code; the first four digits indicate the sample year and the last two indicate the month. To select observations from January 2020, for example, YRMONTH should equal 202001.

Unit demographics and sample weights

Variable	Origin	Description
AK_AREA	**C**	**ALASKA REGION (not retained on public use file)**
		Range = (1, 3)
		1 = Alaska Rural I
		2 = Alaska Rural II
		3 = Alaska Urban
CERTHHSZ	**R**	**CERTIFIED UNIT SIZE**
		Range = (1, 16)
COMPOSITION	**C**	**UNIT COMPOSITION**
		Range = (0, 5)
		0 = No children
		1 = Child(ren) only
		2 = Child(ren) and one male adult
		3 = Child(ren) and one female adult
		4 = Child(ren) and married unit head (spouse may be nonparticipating; includes married teens)
		5 = Child(ren) with other multiple adults
COUNTYCD	**C**	**FIPS CODE FOR COUNTY (not retained on public use file)**
		Range = (1, 840)
CTPRHH	**C**	**NUMBER OF PEOPLE IN HOUSEHOLD**
		Range = (1, 16)
		Number of people in household with nonmissing person-level information
FSDIS	**C**	**INDICATOR OF NON-ELDERLY INDIVIDUALS WITH DISABILITIES IN UNIT**
		Range = (0, 1)
		We recommend using FSDIS, with the understanding that it likely underestimates the number of units containing non-elderly individuals with disabilities. See Appendix A for details.
		0 = No
		1 = Yes
		A SNAP unit with one or more individuals that are defined as disabled (DISi = 1)
FSELDER	**C**	**INDICATOR OF ELDERLY INDIVIDUALS IN UNIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		A SNAP unit with one or more elderly individuals
FSKID	**C**	**INDICATOR OF CHILDREN IN UNIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		A SNAP unit with one or more children under age 18
FSNDIS	**C**	**NUMBER OF NON-ELDERLY INDIVIDUALS WITH DISABILITIES IN UNIT**
		We recommend using FSNDIS, with the understanding that it likely underestimates the number of non-elderly individuals with disabilities. See Appendix A for details.
		Range = (0, 4)
		Number of individuals in the unit that are defined as disabled (DISi = 1)

Variable	Origin	Description
FSNDISCA	C	**NUMBER OF ADULTS AGE 18–49 WITHOUT DISABILITIES IN CHILDLESS UNITS**
		We recommend using FSNDISCA, with the understanding that it likely overestimates the number of adults without disabilities. See Appendix A for details.
		Range = (0, 4)
		Number of adults age 18–49 without disabilities in childless SNAP units
FSNELDER	C	**NUMBER OF ELDERLY INDIVIDUALS IN UNIT**
		Range = (0, 3)
		Number of adults age 60 or older in SNAP unit
FSNGMOM	C	**INDICATOR OF SINGLE-FEMALE-HEADED UNIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		A SNAP unit with one adult and one or more children; the adult is female
FSNK0T4	C	**NUMBER OF PRESCHOOL-AGE CHILDREN IN UNIT**
		Range = (0, 5)
		Number of children under age 5 in SNAP unit
FSNK5T17	C	**NUMBER OF SCHOOL-AGE CHILDREN IN UNIT**
		Range = (0, 9)
		Number of children age 5–17 in SNAP unit
FSNKID	C	**NUMBER OF CHILDREN IN UNIT**
		Range = (0, 12)
		Number of children under age 18 in SNAP unit
FSNONCIT	C	**NUMBER OF NONCITIZENS IN UNIT**
		Range = (0, 10)
		Number of people with FSAFILi = 1 and CTZNi >= 3
FSUSIZE	C	**CONSTRUCTED CERTIFIED UNIT SIZE**
		Range = (1, 16)
		Number of people with FSAFILi = 1
FYWGT	C	**WEIGHT USED FOR FULL-YEAR CALCULATIONS**
		Range = (5.07, 13396.71)
		Calculated as HWGT/12, with the exception of the District of Columbia, Guam, and 34 States with missing February data, where defined as HWGT/11.
FYWGT_PER1	C	**WEIGHT USED FOR FULL-PRE-PANDEMIC PERIOD CALCULATIONS**
		Range = (8.11, 13396.71)
		Calculated as HWGT/5.
FYWGT_PER2	C	**WEIGHT USED FOR FULL-WAIVER PERIOD CALCULATIONS**
		Range = (33.05, 32411.93)
		Calculated as HWGT/4, with the exception of the States with fewer than 4 months of data, where this measure is defined as HWGT divided by number of months of data for the State.
HWGT	C	**MONTHLY SAMPLE WEIGHT**
		Range = (40.55, 76977.65)
		Allows user to replicate total monthly caseloads as reflected in SNAP Program Operations data. If the reference period for the analysis is longer than one calendar month, the weight field must be divided by the number of months being analyzed to calculate an average monthly value for that reference period.
NONCIT_HEAD	C	**UNIT HEAD CITIZENSHIP INDICATOR**
		Range = (0, 2)
		0 = Head of unit is a citizen

Variable	Origin	Description
		1 = Head of unit is a participating noncitizen
		2 = Head of unit is a nonparticipating noncitizen
RAWHSIZE	**R**	**REPORTED NUMBER OF PEOPLE IN HOUSEHOLD**
		Range = (1, 16)
REGION	**C**	**CONSTRUCTED CENSUS REGION CODE**
		Range = (1, 4)
		1 = Northeast
		2 = Midwest
		3 = South
		4 = West
		See Appendix E (Table E.3) for a list of States in each region.
REGIONCD	**R**	**FNS REGION CODE**
		Range = (1, 7)
		1 = Northeast
		2 = Mid-Atlantic
		3 = Southeast
		4 = Midwest
		5 = Southwest
		6 = Mountain Plains
		7 = West
		See Appendix E (Table E.2) for a list of States in each region.
STATE	**R**	**FIPS CODE FOR STATE OR TERRITORY**
		Range = (1, 78)
		See Appendix E (Table E.1) for FIPS code list.
STATENAME	**C**	**STATE OR TERRITORY**
		State or territory name. See Appendix E (Table E.1) for list.
STRATUM	**R**	**STRATUM IDENTIFICATION**
		Range = (0, 0)
		Codes for distinct parts of States with stratified samples; codes in States that are not stratified are recoded to 0.
TANF_IND	**C**	**INDICATOR OF TANF RECEIPT FOR UNIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		TANF_IND = 1 if FSTANF > 0 or MN_FIP = 1
TPOV	**C**	**GROSS INCOME/POVERTY LEVEL RATIO**
		Range = (0, 818)
		TPOV = FSGRINC/NETSCRN*100, rounded to nearest integer. If FSGRINC = 0, then TPOV = 0. Otherwise if TPOV rounds to 0, TPOV is set to 1.

Variable	Origin	Description
URBRUR	**C**	**URBAN/RURAL INDICATOR (not retained on public use file)**
		We recommend caution when using URBRUR for any State-level tabulations because of concerns about the representativeness of the sample at the substate level. We recommend against the use of URBRUR for State-level tabulations in Alabama, Guam, Nebraska, Nevada, New Hampshire, Oklahoma, Utah, Vermont, the Virgin Islands, and Washington because of the number of cases with unknown locality. See Appendix A for details.
		Range = (1, 3)
		Location of agency at which unit's SNAP application was processed.
		1 = Metropolitan (at least one urbanized area of 50,000 or more population and adjacent territory with a high degree of social and economic integration with the core as measured by commuting ties)
		2 = Micropolitan (at least one urban cluster of at least 10,000 but fewer than 50,000 people and adjacent territory with a high degree of social and economic integration with the core as measured by commuting ties)
		3 = Rural (not metropolitan or micropolitan)
WRK_POOR	**C**	**INDICATOR OF WORKING POOR UNIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		All SNAP units with countable earnings (FSEARN) or multiple indicators of earnings in the unedited SNAP QC file

Unit countable income (monthly dollar amounts)

Variable	Origin	Description
FSCONT	**C**	**COUNTABLE UNIT INCOME FROM CONTRIBUTIONS**
		Range = (0, 1750)
		Sum of CONT1 through CONT16
FSCSUPRT	**C**	**COUNTABLE UNIT CHILD SUPPORT PAYMENT INCOME**
		Range = (0, 2167)
		Sum of CSUPRT1 through CSUPRT16
FSDEEM	**C**	**COUNTABLE UNIT DEEMED INCOME**
		Range = (0, 1484)
		Sum of DEEM1 through DEEM16
FSDIVER	**C**	**COUNTABLE UNIT STATE DIVERSION PAYMENTS**
		Range = (0, 59)
		Sum of DIVER1 through DIVER16
FSEARN	**C**	**COUNTABLE UNIT EARNED INCOME**
		Range = (0, 7823)
		Sum of FSWAGES, FSSLFEMP, and FSOTHERN
FSEDLOAN	**C**	**COUNTABLE UNIT INCOME FROM EDUCATIONAL GRANTS AND LOANS**
		Range = (0, 241)
		Sum of EDLOAN1 through EDLOAN16
FSEITC	**C**	**COUNTABLE UNIT INCOME FROM EARNED INCOME TAX CREDIT**
		Range = (0, 2495)
		Sum of EITC1 through EITC16
FSENERGY	**C**	**COUNTABLE UNIT ENERGY ASSISTANCE INCOME**
		Range = (0, 2000)
		Sum of ENERGY1 through ENERGY16
FSFOSTER	**C**	**COUNTABLE UNIT FOSTER CARE INCOME**
		Range = (0, 1304)
		Sum of FOSTER1 through FOSTER16
FSGA	**C**	**COUNTABLE UNIT GENERAL ASSISTANCE BENEFITS**
		Range = (0, 4984)
		Sum of GA1 through GA16
FSGRINC	**C**	**FINAL GROSS COUNTABLE UNIT INCOME**
		Range = (0, 8517)
		Total monthly gross income of unit (sum of FSEARN and FSUNEARN)
FSNETINC	**C**	**FINAL NET COUNTABLE UNIT INCOME**
		Range = (0, 7188)
		Total monthly income of unit after applying deductions. Calculated as FSGRINC-FSTOTDED but not less than 0.
		Coded as missing for MFIP units and for SSI-CAP units in States with standard SSI-CAP benefits
FSOTHERN	**C**	**COUNTABLE UNIT OTHER EARNED INCOME**
		Range = (0, 1732)
		Sum of OTHERN1 through OTHERN16
FSOTHGOV	**C**	**COUNTABLE UNIT INCOME FROM OTHER GOVERNMENT BENEFITS**
		Range = (0, 1584)
		Sum of OTHGOV1 through OTHGOV16

Variable	Origin	Description
FSOTHUN	**C**	**COUNTABLE UNIT OTHER UNEARNED INCOME**
		Range = (0, 3140)
		Sum of OTHUN1 through OTHUN16
FSSLFEMP	**C**	**COUNTABLE UNIT SELF-EMPLOYMENT INCOME**
		Range = (0, 4733)
		Sum of SLFEMP1 through SLFEMP16
FSSOCSEC	**C**	**COUNTABLE UNIT SOCIAL SECURITY INCOME**
		Range = (0, 2961)
		Sum of SOCSEC1 through SOCSEC16
FSSSI	**C**	**COUNTABLE UNIT SSI BENEFITS**
		Range = (0, 3132)
		Sum of SSI1 through SSI16
FSTANF	**C**	**COUNTABLE UNIT TANF PAYMENTS**
		We recommend against using FSTANF in Minnesota because TANF income is not used in the SNAP benefit calculation for MFIP units. See Appendix A for more details.
		Range = (0, 1690)
		Sum of TANF1 through TANF16
FSUNEARN	**C**	**COUNTABLE UNIT UNEARNED INCOME**
		Range = (0, 7465)
		Sum of FSCONT, FSCSUPRT, FSDEEM, FSEDLOAN, FSGA, FSOTHGOV, FSOTHUN, FSSOCSC, FSSSI, FSTANF, FSUNEMP, FSVET, FSWCOMP, FSDIVER, FSENERGY, and FSWGESUP
FSUNEMP	**C**	**COUNTABLE UNIT UNEMPLOYMENT COMPENSATION BENEFITS**
		Range = (0, 4447)
		Sum of UNEMP1 through UNEMP16
FSVET	**C**	**COUNTABLE UNIT VETERANS' BENEFITS**
		Range = (0, 4089)
		Sum of VET1 through VET16
FSWAGES	**C**	**COUNTABLE UNIT WAGES AND SALARIES**
		Range = (0, 7823)
		Sum of WAGES1 through WAGES16
FSWCOMP	**C**	**COUNTABLE UNIT WORKERS' COMPENSATION BENEFITS**
		Range = (0, 2571)
		Sum of WCOMP1 through WCOMP16
FSWGESUP	**C**	**COUNTABLE UNIT WAGE SUPPLEMENTATION INCOME**
		Range = (0, 1120)
		Sum of WGESUP1 through WGESUP16
RAWGROSS	**R**	**REPORTED GROSS COUNTABLE UNIT INCOME**
		Range = (0, 8518)
		Reported total monthly countable income of unit before applying deductions (see FSGRINC for final value)
RAWNET	**R**	**REPORTED NET COUNTABLE UNIT INCOME**
		Range = (0, 7189)
		Reported total monthly countable income of unit after applying deductions (see FSNETINC for final value)

Unit countable assets

Variable	Origin	Description
FSASSET	**C**	**TOTAL COUNTABLE ASSETS UNDER STATE RULES**
		We recommend using FSASSET with the understanding that only 9 percent of SNAP units have countable assets. See Appendix A for more details.
		Range = (0, 14639)
		Sum of LIQRESOR, FSVEHAST, OTHNLRES, and REALPROP
FSVEHAST	**C**	**COUNTABLE NON-EXCLUDED VEHICLES' VALUE UNDER STATE RULES**
		We recommend using FSVEHAST, with the understanding that very few SNAP units have non-excluded vehicles. See Appendix A for more details.
		Range = (0, 2300)
LIQRESOR	**C**	**COUNTABLE LIQUID ASSETS UNDER STATE RULES**
		Range = (0, 14639)
OTHNLRES	**C**	**COUNTABLE OTHER NONLIQUID ASSETS UNDER STATE RULES**
		Range = (0, 2800)
RAWLQRES	**R**	**REPORTED LIQUID ASSETS**
		Range = (0, 92919)
RAWOTRES	**R**	**REPORTED OTHER NONLIQUID ASSETS**
		Range = (0, 2800)
RAWRPROP	**R**	**REPORTED REAL PROPERTY**
		Range = (0, 75534)
		Does not include home
RAWVHAST	**R**	**REPORTED NON-EXCLUDED VEHICLES' VALUE**
		Range = (0, 3500)
REALPROP	**C**	**COUNTABLE REAL PROPERTY UNDER STATE RULES**
		Range = (0, 2052)
		Does not include home
VEHICLEA	**R**	**REPORTED CATEGORY FOR FIRST VEHICLE**
		We recommend against the use of VEHICLEA because of a history of coding inconsistencies. See Appendix A for more details.
		Range = (1, 8)
		1 = No vehicle
		2 = Vehicle exempt because used for producing income, as a home, to transport a physically disabled member, for long-distance travel (other than commuting), or to carry fuel or water
		3 = Vehicle exempt because inaccessible resource (equity value $1,500 or less)
		4 = Vehicle exempt due to categorical eligibility
		5 = Vehicle excluded under State TANF standard (vehicle of noncategorically eligible unit members only)
		6 = Vehicle registered and attributable to an adult unit member or used by a person under age 18 for employment or education (subject to fair market value only)
		7 = Vehicle not registered (equity test only)
		8 = Vehicle not excluded and not included in code 6 (subject to fair market value or equity test, whichever is greater)

Variable	Origin	Description
VEHICLEB	**R**	**REPORTED CATEGORY FOR SECOND VEHICLE**
		We recommend against the use of VEHICLEB because of a history of coding inconsistencies. See Appendix A for more details.
		Range = (1, 8)
		1 = No vehicle
		2 = Vehicle exempt because used for producing income, as a home, to transport a physically disabled member, for long-distance travel (other than commuting), or to carry fuel or water
		3 = Vehicle exempt because inaccessible resource (equity value $1,500 or less)
		4 = Vehicle exempt due to categorical eligibility
		5 = Vehicle excluded under State TANF standard (vehicle of noncategorically eligible unit members only)
		6 = Vehicle registered and attributable to an adult unit member or used by a person under age 18 for employment or education (subject to fair market value only)
		7 = Vehicle not registered (equity test only)
		8 = Vehicle not excluded and not included in code 6 (subject to fair market value or equity test, whichever is greater)

Unit expenses and deductions

Variable	Origin	Description
ERN_INC_DED_PCT	C	**PERCENTAGE USED TO CALCULATE EARNINGS DEDUCTION**
		Range = (0.20, 0.50)
		0.50 for MFIP participants; 0.20 for all other SNAP participants
EXCL_FSCSDED	C	**CHILD SUPPORT EXCLUDED FROM GROSS INCOME**
		Range = (0, 998)
		Child support expenses excluded before gross income test rather than before net income test for eligibility
FSCSDED	C	**CHILD SUPPORT PAYMENT DEDUCTION**
		Range = (0, 2400)
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States using standard SSI-CAP benefits
FSCSEXP	R	**REPORTED CHILD SUPPORT PAYMENT DEDUCTION**
		Range = (0, 2400)
		Some States treat child support payments to non-unit members as an income exclusion rather than a deduction. See EXCL_FSCSDED and FSCSDED for final values.
FSDEPDED	R	**REPORTED DEPENDENT CARE DEDUCTION**
		We recommend against using FSDEPDED for State-level tabulations because of small sample sizes and inconsistencies between DPCOSTi and FSDEPDED. See Appendix A for more details.
		Range = (0, 1505)
		Some values have been edited to obtain consistency with DPCOST1 to DPCOST16 and to improve the final benefit calculation. See Appendix B for details.
		Coded as missing for all MFIP and SSI-CAP units
FSDEPDE2	C	**MARGINAL EFFECTIVENESS OF DEPENDENT CARE DEDUCTION**[41]
		Range = (0, 1932)
		Calculated as FSDEPDE2 = NEWNET-FSNETINC, where NEWNET = MAX (0, FSGRINC-FSSLT3-FSERNDED-FSMEDDED-FSSTDDED-FSCSDED-HOMELESS_DED) and where FSSLT3 is the shelter deduction calculated without FSDEPDED
		Coded as missing for all MFIP and SSI-CAP units
FSERNDED	C	**CALCULATED EARNED INCOME DEDUCTION**
		Range = (0, 1564)
		Calculated as FSERNDED = ERN_INC_DED_PCT*FSEARN, rounded to nearest integer. The deduction equals 50 percent of total earned income for MFIP participants and 20 percent of total earned income for all others.
		Coded as missing for all SSI-CAP units
FSERNDE2	C	**MARGINAL EFFECTIVENESS OF EARNED INCOME DEDUCTION**
		Range = (0, 1564)
		Calculated as FSERNDE2 = NEWNET-FSNETINC, where NEWNET = MAX (0, FSGRINC-FSSLT2-FSDEPDED-FSMEDDED-FSSTDDED-FSCSDED-HOMELESS_DED) and where FSSLT2 is the shelter deduction calculated without FSERNDED
		Coded as missing for all MFIP and SSI-CAP units

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[41] The marginal effectiveness variables are calculated as the difference between the actual calculated net income and what the net income would have been without the deduction. Given that the combined value of deductions to which a unit is entitled sometimes exceeds the gross income received by the unit, the marginal effectiveness variables give a more accurate picture of the impact of the deductions.

Variable	Origin	Description
FSMEDDED	**C**	**CALCULATED MEDICAL EXPENSE DEDUCTION**
		Range = (0, 3647)
		The deduction is for units with elderly members or individuals with disabilities only; the entry for medical expenses should include only expenses in excess of $35. Calculated as FSMEDDED = MAX(0, FSMEDEXP).
		Coded as missing for all MFIP and SSI-CAP units
FSMEDDE2	**C**	**MARGINAL EFFECTIVENESS OF MEDICAL EXPENSE DEDUCTION**
		Range = (0, 2271)
		Calculated as FSMEDDE2 = NEWNET-FSNETINC, where NEWNET = MAX (0, FSGRINC-FSSLT4-FSDEPDED-FSERNDED-FSSTDDED-FSCSDED-HOMELESS_DED) and where FSSLT4 is the shelter deduction calculated without FSM EDDED
		Coded as missing for all MFIP and SSI-CAP units
FSMEDEXP	**R**	**REPORTED MEDICAL EXPENSES**
		Range = (0, 3647)
		Allowable medical expenses in excess of $35 for elderly adults or individuals with disabilities
FSSLTDED	**C**	**CALCULATED EXCESS SHELTER EXPENSE DEDUCTION**
		Range = (0, 4510)
		Set to 0 if HOMEDED = 3; otherwise set to XCOST for units with elderly members or individuals with disabilities and equal to the minimum of XCOST and SHELCAP for units without elderly members or individuals with disabilities, where XCOST = MAX(0, FSSLTEXP-HALFNET) and HALFNET = MAX (0,ROUND(FSGRINC-FSSTDDED-FSERNDED-FSDEPDED-FSMEDDED-FSCSDED)/2). The final value of FSSLTDED is rounded to nearest integer.
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits
FSSLTDE2	**C**	**MARGINAL EFFECTIVENESS OF EXCESS SHELTER EXPENSE DEDUCTION**
		Range = (0, 2157)
		Calculated as FSSLTDE2 = NEWNET-FSNETINC, where NEWNET = MAX (0,FSGRINC-FSDEPDED-FSERNDED-FSMEDDED-FSSTDDED-FSCSDED-HOMELESS_DED).
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits.
FSSLTEXP	**C**	**CALCULATED SHELTER EXPENSES**
		Range = (0, 4869)
		Sum of RENT and UTIL
FSSTDDED	**C**	**STANDARD DEDUCTION**
		Range = (147, 479)
		Varies by region. See Appendix F for values.
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits.
FSSTDDE2	**C**	**MARGINAL EFFECTIVENESS OF STANDARD DEDUCTION**
		Range = (0, 719)
		Calculated as FSSTDDE2 = NEWNET – FSNETINC, where NEWNET = MAX (0, FSGRINC – FSSLT1 – FSDEPDED – FSERNDED – FSMEDDED – FSCSDED – HOMELESS_DED) and where FSSLT1 is the shelter deduction calculated without FSSTDDED
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits
FSTOTDED	**C**	**TOTAL DEDUCTIONS**
		Range = (0, 4677)
		Sum of FSSTDDED, FSERNDED, FSDEPDED, FSSLTDED, FSMEDDED, HOMELESS_DED, and FSCSDED
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits

Variable	Origin	Description
FSTOTDE2	**C**	**MARGINAL EFFECTIVENESS OF TOTAL DEDUCTION**
		Range = (0, 3036)
		Calculated as FSGRINC-FSNETINC
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits
HOMEDED	**R**	**INDICATOR OF HOMELESSNESS**
		Range = (0, 3)
		1 = Not homeless
		2 = Homeless, not receiving homeless shelter allowance
		3 = Homeless, receiving homeless shelter allowance
HOMELESS_DED	**C**	**AMOUNT OF HOMELESS HOUSEHOLD SHELTER DEDUCTION**
		Range = (0, 152)
		Positive value only for those with HOMEDED = 3
		Coded as missing for all MFIP and SSI-CAP units
RAWERND	**R**	**REPORTED EARNED INCOME DEDUCTION**
		Range = (0, 998)
		See FSERNDED for final earned income deduction value.
RENT	**R**	**RENT/MORTGAGE AMOUNT**
		Range = (0, 4425)
		Some values for SSI-CAP units have been edited to apply standard shelter allowances.
SHELCAP	**C**	**MAXIMUM ALLOWABLE SHELTER EXPENSE DEDUCTION**
		Range = (448, 908)
		SHELCAP varies by region. See Appendix F for values.
SHELDED	**R**	**REPORTED SHELTER DEDUCTION**
		Range = (0, 5690)
		See FSSLTDED for the final value.
SUA1	**R**	**STANDARD UTILITY ALLOWANCE–USAGE AND ENTITLEMENT**
		Range = (1, 9)
		1 = No utilities and no LIHEAA assistance
		2 = Uses actual expenses
		3 = Uses higher standard based on LIHEAA assistance
		4 = Uses higher standard and does not receive LIHEAA assistance
		5 = Uses lower, or limited, standard
		6 = Uses telephone-only standard
		7 = Uses individual standards
		8 = Uses higher standard, LIHEAA assistance status unknown
		9 = Other
		Some values have been edited to obtain consistency with UTIL. See Appendix B for more details.
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits
		LIHEAA is the Low Income Home Energy Assistance Act of 1981. Some State programs may have another name, such as Home Energy Assistance Program (HEAP).
		Higher standard is an SUA based upon payment of heating or cooling and includes all utilities
		Lower, or limited, standard is an SUA based upon all utilities but is for households that do not incur heating or cooling or receive LIHEAA.

Variable	Origin	Description
SUA2	**R**	**STANDARD UTILITY ALLOWANCE–PRORATED**
		Range = (1, 2)
		1 = Not prorated
		2 = Prorated
		Some values have been edited to obtain consistency with UTIL. See Appendix B for more details. Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits.
UTIL	**R**	**UTILITY AMOUNT**
		Range = (0, 843)
		Some values have been edited to improve the final benefit calculation. See Appendix B for more details.

Unit benefits

Variable	Origin	Description
AMTERR	**R**	**AMOUNT OF BENEFIT IN ERROR**
		Range = (0, 924)
		Dollar amount of any identified error, or the difference between the benefits the State authorized and the benefits the State should have authorized. Before FY 2012, only errors over $25 were recorded.
ASSLIM	**C**	**ASSET LIMIT**
		Range = (2250, 3500)
		SNAP eligibility limit. Categorically eligible units are not subject to an asset limit. See Appendix F.
BENMAX	**C**	**MAXIMUM BENEFIT AMOUNT**
		Range = (194, 2677)
		The maximum possible benefit for a unit, which varies by unit size and region. See Appendix F for schedule.
FSASTEST	**C**	**INDICATOR OF PASSING ASSET TEST**
		Range = (0, 1)
		0 = No
		1 = Yes
FSBEN	**C**	**FINAL CALCULATED BENEFIT**
		Range = (1, 1970)
		Calculated as FSBEN = MAX(minimum benefit, BENMAX-ROUND (.3*FSNETINC)) if FSUSIZE is 2 or Less. Otherwise, FSBEN = MAX (0, BENMAX-ROUND (.3*FSNETINC)) for all units, except for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits where the benefit is calculated by using a State-specific formula.
FSBENSUPP	**C**	**CALCULATED AMOUNT OF EMERGENCY ALLOTMENT**
		Range = (0, 1405)
		Calculated as BENMAX – FSBEN if in June through September 2020 and in a State that administered emergency allotments in the sample month. FSBENSUPP is coded as missing in the pre-pandemic period and for Wisconsin in June and Nebraska in August and September, as those States did not issue emergency allotments in the months specified.
FSGRTEST	**C**	**INDICATOR OF PASSING GROSS INCOME TEST**
		Range = (0, 1)
		0 = No
		1 = Yes
FSMINBEN	**C**	**RECEIVED MINIMUM BENEFIT**
		Range = (0, 1)
		0 = No
		1 = Yes
		FSMINBEN = 1 when FSBEN = 8 percent of the maximum one-person benefit for the unit's geographic region and FSUSIZE = 1 or 2. FSMINBEN is always set to 0 for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits.
FSNETEST	**C**	**INDICATOR OF PASSING NET INCOME TEST**
		Range = (0, 1)
		0 = No
		1 = Yes

Variable	Origin	Description
		Coded as missing for MFIP units and for units participating in an SSI-CAP program in States that use standard SSI-CAP benefits.
GROSSCRN	**C**	**GROSS INCOME SCREEN**
		Range = (1354, 8537)
		SNAP eligibility limit determined by unit size. Categorically eligible units and those with elderly members or individuals with disabilities are not subject to the gross income screen. See Appendix F for values.
MINIMUM_BEN	**C**	**MINIMUM BENEFIT AMOUNT**
		Range = (16, 30)
		See Appendix Table F.6 for minimum monthly SNAP benefit amounts.
NETSCRN	**C**	**NET INCOME SCREEN**
		Range = (1041, 6572)
		SNAP eligibility limit determined by unit size. Categorically eligible units are not subject to the net income screen. See Appendix F for values.
RAWBEN	**R**	**REPORTED SNAP BENEFIT RECEIVED**
		Range = (0, 2186)
		Reported amount of SNAP benefits that the unit was certified to receive during the sample month (see FSBEN for final value)
SUPP_BEN	**C**	**INDICATOR OF ELIGIBILITY FOR EMERGENCY ALLOTMENT**
		Range = (0, 1)
		0 = No
		1 = Yes
		SUPP_BEN = 1 when FSBENSUPP > 0.

Person-level characteristics: i = 1 to 16

Variable	Origin	Description
ABWDST1 to ABWDST16	**R**	**ABAWD STATUS**
		We recommend caution when using ABWDSTi because of inconsistencies between ABWDSTi and several employment variables (i.e., WRKREGi, EMPSTAi, and EMPSTBi). We specifically recommend against using ABWDSTi for State-level tabulations in Alabama, Guam, Hawaii, Idaho, Indiana, Iowa, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, North Dakota, Oklahoma, South Carolina, Texas, Vermont, the Virgin Islands, Wisconsin, and Wyoming. See Appendix A for more details.
		Range = (1, 6)
		Person 1 through Person 16
		1 = Not an able-bodied adult without dependents (ABAWD)
		2 = ABAWD in a waived area
		3 = Exempt based on 15 percent option
		4 = ABAWD meeting work requirements
		5 = ABAWD in 1st 3 months
		6 = ABAWD in 2nd 3 months
		7 = ABAWD who has exhausted time-limited benefits
AGE1 to AGE16	**R**	**AGE**
		Range = (0, 98)
		Person 1 through Person 16
		0 = Age less than 1 year
		1 to 97 = Age in years
		98 = Age 98 years or older
CTZN1 to CTZN16	**R**	**CITIZENSHIP STATUS**
		Range = (1, 10)
		Person 1 through Person 16
		1 = US–born citizen
		2 = Naturalized citizen
		3 = Legal permanent resident with 40 quarters of work, military service, five years legal U.S. residency, disability, or under age 18
		5 = Person admitted as refugee, granted asylum, or given stay of deportation
		6 = Other eligible noncitizen
		7 = Noncitizen legally in U.S. who does not meet one of the above codes and is not receiving SNAP benefits but whose income and resources must be considered in determining benefits
		8 = Other ineligible legal noncitizen (for example, visitor, tourist, student, diplomat)
		9 = Undocumented noncitizen
		10 = Noncitizen, status unknown
DIS1 to DIS16	**C**	**PERSON-LEVEL DISABILITY INDICATOR**
		We recommend using DISi, with the understanding that it likely underestimates the number of non-elderly individuals with disabilities. See Appendix A for more details.
		Range = (0, 1)
		Person 1 through Person 16
		0 = Not disabled
		1 = Disabled

Variable	Origin	Description
		Non-elderly individuals identified as disabled using receipt of SSI or a combination of hours worked, work registration status, receipt of Social Security, veterans' benefits, or workers' compensation, and/or unit medical expense deduction. See Appendix B for details.
DPCOST1 to DPCOST16	**R**	**REPORTED DEPENDENT CARE COST**
		We recommend against using DPCOSTi for State-level tabulations because of small sample sizes and inconsistencies between DPCOSTi and FSDEPDED. See Appendix A for more details.
		Range = (0, 1325)
		Person 1 through Person 16
		Some values have been edited to obtain consistency with FSDEPDED. See Appendix B for details.
EMPRG1 to EMPRG16	**R**	**SNAP EMPLOYMENT AND TRAINING PROGRAM STATUS**
		We recommend using EMPRGi with the understanding that this variable is best used in conjunction with other work-related variables. See Appendix A for more details.
		Range = (0, 9)
		Person 1 through Person 16
		0 = Not participating in E&T
		1 = Participating in non-SNAP E&T (such as TANF)
		2 = SNAP job search or job search training
		3 = SNAP E&T workfare or work experience
		4 = SNAP E&T work supplementation
		5 = SNAP E&T education leading to high school diploma or GED
		6 = SNAP E&T postsecondary education leading to degree or certificate
		7 = SNAP E&T remedial education (including adult education and English lessons not leading to degree)
		8 = SNAP E&T vocational training
		9 = Other
EMPSTA1 to EMPSTA16	**R**	**EMPLOYMENT STATUS—TYPE**
		Range = (1, 8)
		Person 1 through Person 16
		We recommend using EMPSTAi with the understanding that this variable is best used in conjunction with other work-related variables. See Appendix A for more details.
		1 = Not in labor force and not looking for work
		2 = Unemployed and looking for work
		3 = Active-duty military
		4 = Migrant farm labor
		5 = Nonmigrant farm labor
		6 = Self-employed, farming
		7 = Self-employed, nonfarming
		8 = Employed by other
EMPSTB1 to EMPSTB16	**R**	**EMPLOYMENT STATUS—AMOUNT**
		Range = (1, 5)
		Person 1 through Person 16
		We recommend using EMPSTBi with the understanding that this variable is best used in conjunction with other work-related variables. See Appendix A for more details.
		1 = Not employed
		2 = 1–19 hours/week
		3 = 20–29 hours/week

Variable	Origin	Description
		4 = 30–39 hours/week
		5 = Full-time (40 hours or more)
FSAFIL1 to FSAFIL16	**R**	**SNAP CASE AFFILIATION**
		Range = (1, 99)
		Person 1 through Person 16
		We recommend against the use of FSAFILi for State-level tabulations of nonparticipants in Ohio and West Virginia and advise caution when using FSAFILi for State-level tabulations of nonparticipants in Colorado, Florida, Georgia, Idaho, Louisiana, and Michigan due to high percentages of unknown values among nonparticipants. See Appendix A for more details.
		1 = Eligible member of SNAP case under review and entitled to receive benefits
		2 = Eligible SNAP participant in another unit, not currently under review (code added by Mathematica for use in certain SNAP-CAP units)
		4 = Member is ineligible noncitizen and not participating in State-funded SNAP
		5 = Member not paying/cooperating with child support agency
		6 = Member is ineligible striker
		7 = Member is ineligible student
		8 = Member disqualified for program violation
		9 = Member ineligible to participate due to disqualification or failure to meet work requirements (work registration, E&T, acceptance of employment, employment status/job availability, voluntary quit/reducing work effort, workfare/comparable workfare)
		10 = ABAWD time limit exhausted and ABAWD ineligible to participate due to failure to meet ABAWD work requirements, to work at least 20 hours per week, to participate in at least 20 hours per week in qualifying educational training activities, or to participate in workfare
		11 = Fleeing felon or parole and probation violator
		13 = Convicted drug felon
		14 = Social Security Number disqualified
		15 = SSI recipient in California
		16 = Prisoner in detention center
		17 = Foster care
		18 = Member is ineligible noncitizen and participating in State-funded SNAP
		19 = Individual in the home but not part of SNAP household
		99 = Unknown
FSUN1 to FSUN16	**C**	**POSITION OF HEAD OF SNAP UNIT**
		Range = (0, 7)
		Person 1 through Person 16
		Identifies the index position of the head of the SNAP unit. The head is defined as the first person in unit with RELi = 1 or, if no one in unit has RELi = 1, as the first adult in unit. If there are no adults in unit, the oldest child is the head. FSUNi is the same for everyone in unit. For example, if unit head is the second person in the household, FSUNi = 2 for everyone in unit. FSUNi = 0 for any individuals in household who are not part of the SNAP unit.
NDISCA1 to NDISCA16	**C**	**ADULT AGE 18–49 WITHOUT DISABILITIES IN CHILDLESS UNIT STATUS**
		We recommend using NDISCAi, with the understanding that it likely overestimates the number of adults without disabilities. See Appendix A for details.
		Range = (0, 2)
		Person 1 through Person 16
		0 = Not in universe (AGEi<18 or AGEi>49)

Variable	Origin	Description
		1 = Adult age 18–49 without disabilities in childless unit
		2 = Age 18–49, but not adult without disabilities in childless unit
RACETH1 to RACETH16	**R**	**RACE/ETHNICITY**
		Range = (1, 22)
		Person 1 through Person 16
		We recommend against using RACETHi due to a high prevalence of unreported race/ethnicity data nationally. See Appendix A for more details.
		1 = Racial/ethnic data not available because application was not found
		2 = Not recorded on application
		Not Hispanic or Latino
		3 = American Indian or Alaska Native
		4 = Asian
		5 = Black or African American
		6 = Native Hawaiian or other Pacific Islander
		7 = White
		Multiple races reported
		8 = (American Indian or Alaska Native) and white
		9 = Asian and white
		10 = (Black or African American) and white
		11 = (American Indian or Alaska Native) and (black or African American)
		12 = Respondent reported more than one race and does not fit into above categories (codes 8 through 11)
		Hispanic or Latino
		13 = (Hispanic or Latino) and (American Indian or Alaska Native)
		14 = (Hispanic or Latino) and Asian
		15 = (Hispanic or Latino) and (black or African American)
		16 = (Hispanic or Latino) and (Native Hawaiian or other Pacific Islander)
		17 = (Hispanic or Latino) and white
		Multiple races reported
		18 = (Hispanic or Latino) and (American Indian or Alaska Native) and white
		19 = (Hispanic or Latino) and Asian and white
		20 = (Hispanic or Latino) and (black or African American) and white
		21 = (Hispanic or Latino) and (American Indian or Alaska Native) and (black or African American)
		22 = (Hispanic or Latino) and respondent reported more than one race and does not fit into above categories (codes 18 through 21)
REL1 to REL16	**R**	**RELATIONSHIP TO HEAD OF HOUSEHOLD**
		Range = (1, 7)
		Person 1 through Person 16
		1 = Head of household
		2 = Spouse
		3 = Parent
		4 = Daughter, stepdaughter, son, or stepson
		5 = Other related person (brother, sister, niece, nephew, grandchild, great-grandchild, cousin)
		6 = Foster child
		7 = Unrelated person

Variable	Origin	Description
SEX1 to SEX16	**R**	**SEX**
		Range = (1, 2)
		Person 1 through Person 16
		1 = Male
		2 = Female
WORK1 to WORK16	**C**	**PERSON-LEVEL WORKING INDICATOR**
		Range = (0, 1)
		Person 1 through Person 16
		0 = No
		1 = Yes
		Identifies individuals who are coded as being employed (EMPSTAi > 2), having positive earnings (WAGESi + OTHERNi + SLFEMPi > 0), and working one or more hours per week (EMPSTBI > 1).
WRKREG1 to WRKREG16	**R**	**WORK REGISTRATION STATUS**
		Range = (1, 6)
		Person 1 through Person 16
		We recommend using WRKREGi, with the understanding that this variable is best used in conjunction with other work-related variables. See Appendix A for more details.
		1 = Federal exemption for disability
		2 = Federal exemption for reason other than disability
		3 = Work registrant, not E&T participant
		4 = Work registrant, voluntary E&T participant
		5 = Work registrant, mandatory E&T participant
		6 = Should have been registered but was not registered
YRSED1 to YRSED16	**R**	**HIGHEST EDUCATIONAL LEVEL COMPLETED**
		We recommend against the use of YRSEDi due to a high percentage of missing or unknown values. See Appendix A for more details.
		Range = (0, 14)
		Person 1 through Person 16
		0 = None
		1 = Grade 1
		2 = Grade 2
		3 = Grade 3
		4 = Grade 4
		5 = Grade 5
		6 = Grade 6
		7 = Grade 7
		8 = Grade 8
		9 = Grade 9
		10 = Grade 10
		11 = Grade 11
		12 = High school graduate or GED
		13 = Postsecondary education (for example, technical education or some college)
		14 = College graduate or postgraduate degree

Person-level countable income (monthly dollar amounts): i = 1 to 16[42]

Variable	Origin	Description
CONT1 to CONT16	**R**	**COUNTABLE INCOME FROM CONTRIBUTIONS**
		Range = (0, 1750)
		Person 1 through Person 16
		Amount of contributions, charity, and in-kind income
CSUPRT1 to CSUPRT16	**R**	**COUNTABLE CHILD SUPPORT PAYMENT INCOME**
		Range = (0, 2167)
		Person 1 through Person 16
		Court-ordered child support payments received from absent parent or responsible person
DEEM1 to DEEM16	**R**	**COUNTABLE DEEMED INCOME**
		Range = (0, 1484)
		Person 1 through Person 16
		Income deemed from sponsor of noncitizen member of unit
DIVER1 to DIVER16	**R**	**COUNTABLE STATE DIVERSION PAYMENTS**
		Range = (0, 59)
		Person 1 through Person 16
EDLOAN1 to EDLOAN16	**R**	**COUNTABLE INCOME FROM EDUCATIONAL GRANTS AND LOANS**
		Range = (0, 241)
		Person 1 through Person 16
		Educational grants, scholarships, and loans
EITC1 to EITC16	**R**	**COUNTABLE INCOME FROM EARNED INCOME TAX CREDIT**
		Range = (0, 2495)
		Person 1 through Person 16
ENERGY1 to ENERGY16	**R**	**COUNTABLE ENERGY ASSISTANCE INCOME**
		Range = (0, 1000)
		Person 1 through Person 16
FOSTER1 to FOSTER16	**R**	**COUNTABLE FOSTER CARE INCOME**
		Range = (0, 1200)
		Person 1 through Person 16
GA1 to GA16	**R**	**COUNTABLE GENERAL ASSISTANCE BENEFITS**
		Range = (0, 4984)
		Person 1 through Person 16
OTHERN1 to OTHERN16	**R**	**COUNTABLE OTHER EARNED INCOME**
		Range = (0, 1732)
		Person 1 through Person 16
OTHGOV1 to OTHGOV16	**R**	**COUNTABLE INCOME FROM OTHER GOVERNMENT BENEFITS**
		Range = (0, 1584)
		Person 1 through Person 16
		Includes but not limited to Black Lung Benefits, Railroad Retirement payments, and payments to farmers by USDA. OTHGOVi amounts were recoded as SSI benefits in units with reported SSI income in cases for which OTHGOVi equaled an applicable State SSI supplement.

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[42] Some person-level income amounts have been edited to obtain consistency with final gross income (FSGRINC).

Variable	Origin	Description
OTHUN1 to OTHUN16	**R**	**COUNTABLE OTHER UNEARNED INCOME**
		Range = (0, 3140)
		Person 1 through Person 16
		Includes alimony, foster care income, dividends and interest, rental income, pensions, and union benefits. OTHUNi amounts were recoded as SSI benefits in units with reported SSI income in cases for which OTHUNi equaled an applicable State SSI supplement.
SLFEMP1 to SLFEMP16	**R**	**COUNTABLE SELF-EMPLOYMENT INCOME**
		Range = (0, 4733)
		Person 1 through Person 16
		Net income from any self-employment enterprise
SOCSEC1 to SOCSEC16	**R**	**COUNTABLE SOCIAL SECURITY INCOME**
		Range = (0, 2468)
		Person 1 through Person 16
SSI1 to SSI16	**R**	**COUNTABLE SSI BENEFITS**
		Range = (0, 1968)
		Person 1 through Person 16
		Includes recoded countable income reported as OTHGOVi or OTHUNi in units with reported SSI income and where OTHGOVi or OTHUNi equaled an applicable State SSI supplement
TANF1 to TANF16	**R**	**COUNTABLE TANF PAYMENTS**
		Range = (0, 1690)
		Person 1 through Person 16
		Assigned to payee or principal person of assistance group
UNEMP1 to UNEMP16	**R**	**COUNTABLE UNEMPLOYMENT COMPENSATION UNEMP16 BENEFITS**
		Range = (0, 4447)
		Person 1 through Person 16
VET1 to VET16	**R**	**COUNTABLE VETERANS' BENEFITS**
		Range = (0, 4089)
		Person 1 through Person 16
WAGES1 to WAGES16	**R**	**COUNTABLE WAGES AND SALARIES**
		Range = (0, 7823)
		Person 1 through Person 16
		Amount of wages, salaries, tips, and commission
WCOMP1 to WCOMP16	**R**	**COUNTABLE WORKERS' COMPENSATION BENEFITS**
		Range = (0, 2571)
		Person 1 through Person 16
WGESUP1 to WGESUP16	**R**	**COUNTABLE WAGE SUPPLEMENTATION INCOME**
		Range = (0, 1120)
		Person 1 through Person 16
		Earnings above cash assistance and/or SNAP benefit amount

Detailed error findings: i = 1 to 9

Variable	Origin	Description
AGENCY1 to AGENCY9	**R**	**AGENCY OR CLIENT RESPONSIBILITY**
		Range = (1, 99)
		Variance 1 through Variance 9
		Primary cause of variance
		1 = Information not reported
		2 = Incomplete or incorrect information provided; agency not required to verify
		3 = Information withheld by client (case referred for Intentional Program Violation [IPV] investigation)
		4 = Incorrect information provided by client (case referred for IPV investigation)
		7 = Inaccurate information reported by collateral contact
		8 = Acted on incorrect Federal computer match information not requiring verification (such variance is excluded from error determination but must be recorded)
		10 = Policy incorrectly applied
		12 = Reported information disregarded or not applied
		14 = Agency failed to follow up on inconsistent or incomplete information
		15 = Agency failed to follow up on impending changes
		16 = Agency failed to verify required information
		17 = Computer programming error
		18 = Data entry and/or coding error
		19 = Mass change (error due to problem with computer- generated mass change)
		20 = Arithmetic computation error
		21 = Computer user error
		99 = Other
AMOUNT1 to AMOUNT9	**R**	**VARIANCE DOLLAR AMOUNT**
		Range = (0, 1600)
		Variance 1 through Variance 9
		Dollar amount of variance
DISCOV1 to DISCOV9	**R**	**VARIANCE DISCOVERY**
		Range = (1, 9)
		Variance 1 through Variance 9
		How variance was discovered
		1 = Variance clearly identified from case record (documentation not from an automated match)
		2 = Variance clearly identified from case record (documentation from an automated match)
		3 = Variance discovered from recipient interview
		4 = Employer (present or former)
		5 = Financial institution, insurance company, or other business
		6 = Landlord
		7 = Government agency or public records, not automated match
		8 = Government agency or public records, automated match
		9 = Other

Variable	Origin	Description
E_FINDG1 to E_FINDG9	**R**	**ERROR FINDING**
		Range = (2, 4)
		Variance 1 through Variance 9
		Impact of variance
		2 = Overissuance
		3 = Underissuance
		4 = Ineligible
ELEMENT1 to ELEMENT9	**R**	**VARIANCE ELEMENT**
		Range = (111, 820)
		Variance 1 through Variance 9
		Element of variance
		111 = Student status
		130 = Citizenship and noncitizen status
		140 = Residency
		150 = Unit composition
		151 = Recipient disqualification
		160 = Employment and training programs
		161 = Time-limited participation
		162 = Work registration requirements
		163 = Voluntary quit/reduced work effort
		164 = Workfare and comparable workfare
		165 = Employment status/job availability
		166 = Acceptance of employment
		170 = Social Security number
		211 = Bank accounts or cash on hand
		212 = Nonrecurring lump-sum payment
		213 = Other liquid assets
		221 = Real property
		222 = Vehicles
		224 = Other nonliquid resources
		225 = Combined resources
		311 = Wages and salaries
		312 = Self-employment
		314 = Other earned income
		321 = Earned income deductions
		323 = Dependent care deduction
		331 = RSDI benefits
		332 = Veterans' benefits
		333 = SSI and/or State SSI supplement
		334 = Unemployment compensation
		335 = Workers' compensation
		336 = Other government benefits
		342 = Contributions
		343 = Deemed income
		344 = TANF, PA, or GA
		345 = Educational grants/scholarships/loans

Variable	Origin	Description
		346 = Other unearned income
		350 = Child support payments received from absent parent
		361 = Standard deduction
		363 = Shelter deduction
		364 = Standard utility allowance
		365 = Medical expense deductions
		366 = Child support payment deduction
		371 = Combined gross income
		372 = Combined net income
		520 = Arithmetic computation
		530 = Transitional benefits
		560 = Reporting systems
		810 = SNAP simplification project
		820 = Demonstration projects
NATURE1 to NATURE9	**R**	**NATURE OF VARIANCE**
		Range = (6, 309)
		Variance 1 through Variance 9
		Nature of each variance
		6 = Eligible person(s) excluded
		7 = Ineligible person(s) included
		12 = Eligible person(s) with no income, resources, or deductible expenses excluded
		13 = Eligible person(s) with income excluded
		14 = Eligible person(s) with resources excluded
		15 = Eligible person(s) with deductible expenses excluded
		16 = Newborn improperly excluded
		20 = Incorrect resource limit applied
		24 = Resource should have been excluded
		28 = Incorrect income limit applied
		29 = Exceeds prescribed limit
		30 = Resource should have been included
		32 = Failed to consider or incorrectly considered income of ineligible member
		35 = Unreported source of income (do not use for change in employment status)
		36 = Rounding used/not used or incorrectly applied
		37 = All income from source known but not included
		38 = More income received from this source than budgeted
		39 = Employment status changed from unemployed to employed
		40 = Employment status changed from employed to unemployed
		41 = Change only in amount of earnings
		42 = Conversion to monthly amount not used or incorrectly applied
		43 = Averaging not used or incorrectly applied
		44 = Less income received from this source than budgeted
		45 = Cost of doing business not used or incorrectly applied
		46 = Failed to consider/anticipate month with extra pay date
		52 = Deduction that should have been included was not
		53 = Deduction included that should not have been
		54 = Incorrect standard used (not as a result of change in unit size or move)

Variable	Origin	Description
		64 = Incorrect amount used resulting from change in residence
		65 = Incorrect standard used resulting from change in unit size
		75 = Benefit/allotment/eligibility incorrectly computed
		77 = Unit not entitled to transitional benefits
		79 = Incorrect use of allotment tables
		80 = Improper prorating of initial month's benefits
		97 = Not required to be reported or acted upon based on time frames and reporting requirements for allotment differences below the $50 threshold
		98 = Transcription or computation errors
		99 = Other
		111 = Child support payment(s) not considered or incorrectly applied for initial month(s) of eligibility
		112 = Retained child support payment(s) not considered or incorrectly applied
		120 = Variance/errors resulting from noncompliance with this means-tested public assistance program
		123 = Incorrectly prorated
		124 = Variances resulting from use of automatic Federal information exchange system
		127 = Pass-through not considered or incorrectly applied
		200 = Eligible noncitizen excluded
		201 = Ineligible noncitizen included
		301 = Unit improperly participating under retrospective budgeting
		302 = Unit improperly participating under prospective budgeting
		303 = Unit improperly participating under monthly reporting
		304 = Unit improperly participating under quarterly reporting
		305 = Unit improperly participating under semiannual reporting
		306 = Unit improperly participating under change reporting
		307 = Unit improperly participating under status reporting
		308 = Unit improperly participating under 5 hour reporting
		309 = Unit improperly participating in transitional benefits
OCCDATE1 to OCCDATE9	**R**	**VARIANCE OCCURRENCE DATE**
		Range = (200701, 999999)
		Variance 1 through Variance 9
		Date each variance occurred (year and month)
		999999 = Unknown
TIMEPER1 to TIMEPER9	**R**	**VARIANCE TIME PERIOD**
		Range = (1, 9)
		Variance 1 through Variance 9
		Time period during which variance occurred
		1 = Before most recent action
		2 = At time of most recent action by agency
		3 = After most recent action by agency
		9 = Time of occurrence cannot be determined

Variable	Origin	Description
VERIF1 to VERIF9	**R**	**VARIANCE VERIFICATION**
		Range = (1, 9)
		Variance 1 through Variance 9
		Indicates how each variance was verified
		1 = From case record (verification not from an automated match)
		2 = From case record (verification from an automated match)
		3 = From information provided by recipient
		4 = Employer (present or former)
		5 = Financial institution, insurance company, or other business
		6 = Landlord
		7 = Government agency or public records, not automated match
		8 = Government agency or public records, automated match
		9 = Other

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APPENDIX A

Assessment of the Quality of the Selected Variables
in the FY 2020 SNAP QC Databases

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We assessed the quality of the data for variables that are new to the FY 2020 SNAP QC database, have changed in recent years, or have a history of coding inconsistencies. Based on our assessment, we recommend against using some variables and recommend caution when using other variables, as listed and described in detail below. The codebook in Chapter V also summarizes our recommendations regarding the use of each variable if there are any concerns.

This assessment is based on the combined QC database. Users should keep in mind that sample sizes are smaller in each of the pre-pandemic period and waiver period databases. Furthermore, caution should used when working with the waiver period data for several reasons as follows.

(1) Five States—California, Delaware, Maine, Maryland, and New York—and the District of Columbia do not have any data for the waiver period. Therefore, the average numbers of participants and benefits do not reflect the national caseload and so should not be compared to pre-pandemic estimates.

(2) Monthly sample sizes for this time period were often smaller than usual and many States did not have data for all four months in the waiver period. As such, State results should be interpreted with caution and we recommend against using data at the individual month level.

(3) FNS was unable to provide its usual level of oversight of the sampling procedures in the waiver period. Users should interpret findings from the data for this period with this caveat in mind.

More information about our assessment and recommendations is available upon request.

A. Summary recommendations concerning use of certain variables

Based on our assessment, we recommend against using the following variables:

- RACETHi
- VEHICLEA and VEHICLEB
- YRSEDi

We recommend against using the following variables in some instances:

- ABWDSTi for State-level tabulations in Alabama, Guam, Hawaii, Idaho, Indiana, Iowa, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, North Dakota, Oklahoma, South Carolina, Texas, Vermont, the Virgin Islands, Wisconsin, and Wyoming
- DPCOSTi and FSDEPDED for State-level tabulations
- FSAFILi for State-level tabulations of nonparticipants in Ohio and West Virginia
- FSTANF in Minnesota
- URBRUR for State-level tabulations in Alabama, Guam, Nebraska, Nevada, New Hampshire, Oklahoma, Utah, Vermont, the Virgin Islands, and Washington (this variable is not retained in public use file)

We recommend caution when using the following variables:

- ABWDSTi
- FSAFILi for State-level tabulations of nonparticipants in Colorado, Florida, Georgia, Idaho, Louisiana, and Michigan

- URBRUR for tabulations in States other than those listed above (this variable is not retained in public use file)

We recommend using the following variables with disclaimers:

- DISi, FSDIS, and FSNDIS (with the understanding that DISi and FSNDIS likely underestimate the number of non-elderly individuals with disabilities and that FSDIS likely underestimates the number of units containing non-elderly individuals with disabilities)

- EMPRGi (with the understanding that this variable is best used in conjunction with other work-related variables)

- EMPSTAi and EMPSTBi (with the understanding that these variables are best used in conjunction with other work-related variables)

- FSASSET and FSVEHAST (with the understanding that only 9 percent of SNAP units have countable assets)

- MN_FIP (with the understanding that this variable may slightly underestimate the number of Minnesota Family Investment Program [MFIP] units)

- NDISCAi and FSNDISCA (with the understanding that NDISCAi likely overestimates the number of adults without disabilities)

- SSI_CAP (with the understanding that this variable likely underestimates the actual number of SSI-CAP units)

- SUPP_BEN (with the understanding that it is an indicator of eligibility for, not receipt of, the emergency allotment)

- FSBENSUPP (with the understanding that it is the amount a household was estimated to have received)

- WRKREGi (with the understanding that this variable is best used in conjunction with other work-related variables)

We found the quality of other assessed variables to be suitable for all tabulations. Below, we discuss in detail our recommendations for specific variables in the SNAP QC database.

B.   Variables not recommended for all tabulations

1.   Race/ethnicity (RACETHi)

Current values for RACETHi allow reporting of multiple races and ethnicities and include values indicating that race/ethnicity data are not available or not recorded (unreported race/ethnicity data). About 16 percent of participants have unreported race/ethnicity data, although this percentage varies considerably by State. Given the large percentage of participants with unreported race/ethnicity data nationally, we recommend against use of this variable.

2.   Vehicles (VEHICLEA and VEHICLEB)

For more than a decade, we have recommended against using the vehicle variables (VEHICLEA and VEHICLEB) because of coding inconsistencies, and we continue to recommend against using these variables in the FY 2020 SNAP QC database. In addition, because QC reviewers are instructed to record

possession of vehicles only if the vehicle's value is counted toward a unit's resources, VEHICLEA and VEHICLEB are often missing, limiting the usefulness of the variables for analyses.

3. Highest educational level completed (YRSEDi)

We recommend against using YRSEDi because 7 percent of adult participants have a missing or unknown value for this variable.

C. Variables not recommended for specific tabulations

1. Non-elderly childless adults without disabilities subject to work registration (ABWDSTi)

We recommend that care be taken to avoid State-level tabulations that result in small sample sizes, which could produce misleading findings. For this reason, we recommend against using ABWDSTi for State-level tabulations in Alabama, Guam, Hawaii, Idaho, Indiana, Iowa, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New Jersey, North Dakota, Oklahoma, South Carolina, Texas, Vermont, the Virgin Islands, Wisconsin, and Wyoming.

2. Dependent care costs (DPCOSTi) and deduction (FSDEPDED)

Nationally, we find inconsistencies between DPCOSTi and FSDEPDED in 1 percent of unweighted units that have a positive dependent care deduction, positive dependent care costs, or both. In a few States, however, the percentage of units with dependent care expenses or deductions that have inconsistencies between the two variables is relatively high (100 percent in Guam, 25 percent in Hawaii, 20 percent in Michigan, and 6 percent in Delaware). Furthermore, sample sizes are small in most States. As a result, we recommend against the use of DPCOSTi and FSDEPDED for State-level tabulations.

3. SNAP case affiliation (FSAFILi)

FSAFILi may be used for tabulations of participants. However, in two States, the percentage of nonparticipants with unknown FSAFILi values is very high (93 percent in West Virginia and 49 percent in Ohio). As a result, we recommend against use of FSAFILi for State-level tabulations of nonparticipants in Ohio and West Virginia.

4. TANF recipients in the Minnesota Family Investment Program (MFIP) (FSTANF)

In general, we code units in Minnesota with TANF income (FSTANF) as MFIP units. The reported TANF amounts for these units are typically very small, likely because of Federal QC System constraints. Specifically, when States transmit a quality control record, the national computer system checks that the unit's gross income is equal to the sum of all reported income types. Because TANF income is not used in the MFIP benefit calculation, it is not included in reported gross income, resulting in a fatal error in the data transmission if the full TANF amount is reported. Because TANF receipt may not be recorded for some units receiving MFIP cash assistance, we recommend using the MFIP variable (MN_FIP) with the understanding that it may slightly underestimate the number of MFIP units. We recommend against use of MFIP units' TANF income because it is not included as gross income and is most likely recorded incorrectly, if at all.

5. Locality (URBRUR)

Four States (Guam, Nebraska, Utah, and the Virgin Islands) use Local Agency Codes (LACs) that do not align to geographic areas and therefore cannot be used to classify units as located in a metropolitan, micropolitan, or rural area. All units in these four States are classified as having an unknown locality. In addition, mostly because of the use of statewide LACs, we cannot identify locality for more than 5 percent of units in Alabama, Nevada, New Hampshire, Oklahoma, Vermont, and Washington. Because we cannot identify locality for a large percentage of cases in these States, we recommend against use of URBRUR (metropolitan, micropolitan, or rural status) in these States. URBRUR is not retained in the public use file.

D. Variables recommended for use with caution

1. Non-elderly childless adults without disabilities subject to work registration (ABWDSTi)

There are some inconsistencies between ABWDSTi and related employment variables (WRKREGi, EMPSTAi, and EMPSTBi). For example, of the 331,000 weighted participants with an ABWDSTi code indicating they are an ABAWD meeting work requirements, 60 percent have a WRKREGi code indicating they are exempt from work registration and thus do not have work requirements. In view of the inconsistencies between ABWDSTi and these employment variables, we recommend caution when using this variable.

2. SNAP case affiliation (FSAFILi)

As discussed in Section C of this appendix, Ohio and West Virginia had very high percentages of missing or unknown values for nonparticipants. Additionally, there are 6 States where more than 5 percent of nonparticipants have missing or unknown values. We recommend caution when using FSAFILi for State-level tabulations of nonparticipants in Colorado, Florida, Georgia, Idaho, Louisiana, and Michigan.

3. Locality (URBRUR)

Because of concerns about the representativeness of the sample within a State, we recommend caution when using URBRUR for State-level tabulations. URBRUR is not retained in the public use file.

E. Variables recommended for use, with disclaimers

1. Person-level and unit disability (DISi, FSDIS, and FSNDIS)

We use an algorithm to identify individuals with disabilities (DISi) based on SSI receipt, medical expenses, age, work registration status (WRKREGi), and other factors. We then use this variable to identify units containing individuals with disabilities (FSDIS) and count the number of individuals with disabilities in a unit (FSNDIS). We recommend use of DISi, FSDIS, and FSNDIS with the understanding that the variables likely underestimate the number of individuals and units with disabilities. For more information, including a description of the disability algorithm, see Appendix B.

2. **SNAP employment and training program status (EMPRGi) and employment status (EMPSTAi and EMPSTBi)**

Although we are limited in our ability to assess EMPRGi, we did uncover some inconsistencies between EMPRGi and other variables indicating employment and training status. For example, there are a number of cases with contradicting values for participation in employment and training programs, specifically those coded as participating based on WRKREG (work registration status) and not participating based on EMPRG. In addition, we noticed inconsistencies between YRSEDi (years of education) and EMPRGi when defining the participant's level of education completed. Based on our limited assessment of EMPRGi and the other work-related variables, we recommend caution when using EMPRGi.

As in previous years, we found inconsistencies between the two employment status variables, EMPSTAi and EMPSTBi, and with other variables recording countable earned income. For example, of the 7,117 unweighted participants coded as working more than one hour and employed, 176 have no countable earnings. Given these inconsistencies, we recommend use of EMPSTAi and EMPSTBi in conjunction with other work-related variables to determine participants' employment status. Specifically, we recommend use of the person-level work indicator, WORKi, which incorporates information from person-level earnings variables as well as EMPSTAi and EMPSTBi.

3. **Assets (FSASSET and FSVEHAST)**

We edit positive values of FSVEHAST, LIQRESOR, OTHNLRES, and REALPROP to $0 for units not subject to a SNAP asset test because of their State's broad-based categorical eligibility (BBCE) policy. In view of this edit and the large number of States with BBCE policies, a large number of units have no recorded assets. Only 9 percent of SNAP units have recorded assets (FSASSET > 0) in the FY 2020 file, and nearly all units have no vehicle assets (FSVEHAST = 0). We recommend use of FSASSET and FSVEHAST for tabulations with the understanding that most units have no recorded countable assets.

4. **Adults age 18–49 without disabilities in childless units (NDISCAi and FSNDISCA)**

We recommend use of NDISCAi and FSNDISCA, with the understanding that DISi likely underestimates the number of non-elderly individuals with disabilities as discussed above, and therefore, NDISCAi likely overestimates the number of adults without disabilities.

5. **SSI-CAP (SSI_CAP)**

The raw SNAP QC data do not identify units that enter SNAP through an SSI-CAP, so we use an algorithm for identifying, recoding, and assigning benefits for SSI-CAP units in States with these projects.[43]

Because SSI-CAP units are not directly identified in the raw data but rather through an algorithm that relies on available data, the SNAP QC data file may underestimate the actual number of SSI-CAP units in some States. Therefore, we recommend caution when using SSI_CAP.

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[43] See Section III.2 for details on States implementing SSI-CAP programs during FY 2020.

6. Emergency Allotment (SUPP_BEN and FSBENSUPP)

We recommend use of SUPP_BEN and FSBENSUPP, with the understanding that SUPP_BEN is an indicator of eligibility for, not receipt of, the emergency allotment and that FSBENSUPP is the amount a household is estimated to have received.

7. Work registration status (WRKREGi)

WRKREGi includes values that distinguish between individuals with a Federal exemption because of a disability (WRKREGi = 1) and individuals with a Federal exemption for a reason other than a disability (WRKREGi = 2). We found continued evidence in the FY 2020 file of likely miscoding of this variable. For example, we found some inconsistencies between WRKREGi and DISi, which captures additional indicators of disability. Twenty-one States have a high percentage (greater than 20 percent) of participants coded as individuals with a Federal exemption because of a disability (WRKREGi = 1). Twenty of these States have a discrepancy of 5 percentage points or more between the percentage with WRKREGi = 1 and those flagged as having a disability (DISi = 1), with the higher percentage coded as WRKREGi = 1. Because of such inconsistencies and our limited ability to assess WRKREGi, we recommend use of WRKREGi with the understanding that it is best used in conjunction with other work-related variables. If attempting to identify individuals with disabilities, we recommend use of the person-level disability indicator, DISi, described above.

APPENDIX B

Automated Edits to SNAP Units

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We were able to resolve some inconsistencies in the raw FY 2020 data file through automated edits involving simple algorithms, as described in this section.

A. Missing and miscoded SNAP affiliation (FSAFILi) codes

We checked for instances in which the SNAP case affiliation codes in the raw data file were missing. If the individual had nonmissing age and gender, we recoded them as potential SNAP participants. That is, we first recoded FSAFILi as "unknown" (99) and then set it to 1 if certain other conditions, described below, were met.

We also checked for instances in which the SNAP case affiliation codes in the raw data file were inconsistent with other coded variables in the file such as citizenship, ABAWD status, and receipt of SSI and TANF. We were able to recode many of the inconsistencies:

- In the case of differences between unit size (the count of those with an affiliation code of 1) and certified household size, we checked to see which size was consistent with the reported benefit and then edited the affiliation codes accordingly. We also resolved differences by recoding any affiliation codes that were inconsistent with citizenship or ABAWD status.

- Beginning in FY 2015, if a participating minor child of the household head (FSAFILi = 1, AGEi < 18, and RELi = 4) had an inconsistent citizenship status (CTZNi >= 7) and there was no one outside the unit (FSAFILi > 1), then we changed the child's citizenship status to the value for the household head.

- MFIP uses unit composition rules that differ from those used in regular SNAP. Specifically, SSI and TANF recipients living in the same household are treated as separate SNAP units. Consequently, if a Minnesota unit of more than one person had both SSI and TANF income, we set the affiliation code of the SSI recipient to unknown (99).

B. Vehicle assets

The following States consider the value of some vehicles when determining asset eligibility for households that are not categorically eligible: Alaska, Arkansas, Delaware, Idaho, Illinois, Iowa, Kansas, Maine, Minnesota, Nebraska, Nevada, New Hampshire, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, the Virgin Islands, and Washington. For all other States, we reset any reported vehicle assets to $0 because the States exclude the value of all vehicles when determining asset eligibility.

C. Child support deduction and child support income

We checked for instances in which the reported child support payment deduction is exactly equal to the reported countable unit child support payment income. Although it is possible for a unit to have both child support expenses and child support income, it is highly unlikely that the two would be exactly equal in value. In these units, we checked to see if either of the amounts should be excluded by using the following procedure:

- If unit income less child support income was within $5 of reported gross income, we set child support income to $0.

- If calculated net income for the unit was within $5 of reported net income, we retained both the child support income and the child support deduction.

- If calculated net income was greater than reported net income and the difference between the two was greater than or equal to child support income, we set child support income to $0.

- If calculated net income was less than reported net income and the difference between the two was less than child support income, we set the child support payment deduction to $0.

In addition, if a unit was not categorically eligible, included no elderly members or non-elderly individuals with disabilities, and would have passed the gross income test if child support expenses were excluded from gross income but would not if they were included, we excluded child support expenses from unit gross income and set the child support payment deduction to $0.

D. Dependent care expenses

The QC data file includes units for which the QC reviewers recorded dependent care expenses for the parent rather than for the dependent. We corrected for this error, as follows:

- If dependent care expenses were assigned to adults age 18 to 59 without SSI and there were children in the unit without dependent care expenses, we set the expenses to $0 for the adults and distributed them among the children in the following order:

  1. If the unit contained at least one member age 0 to 4, we distributed the expenses evenly to unit members age 0 to 8.

  2. If the unit did not contain a member age 0 to 4, we distributed the expenses evenly to any unit members age 5 to 13.

  3. If the unit did not contain a member age 0 to 13, we distributed the expenses evenly to any unit members age 14 to 17.

In units where the calculated benefit matched the raw benefit, we assumed the recorded dependent care deduction was correct and, if necessary, recoded the expenses to make them consistent with the deduction. We followed these guidelines to reconcile differences between the dependent care deduction and expenses:

- If the dependent care deduction was greater than the total value of dependent care expenses, we set the expenses equal to the deduction by assigning additional dependent care expenses to unit members who originally had positive dependent care expenses.

- If no unit members originally had recorded dependent care expenses, we assigned expenses to unit members in the following order:

  1. If the unit contained at least one member age 0 to 4, we distributed expenses evenly to unit members age 0 to 8.

  2. If the unit did not contain a member age 0 to 4, we distributed expenses evenly to any unit members age 5 to 13.

  3. If the unit did not contain a member age 0 to 13, we distributed expenses evenly to any unit members age 14 to 17.

  4. If the unit did not contain a member age 0 to 17, we distributed expenses evenly to any unit members age 18 or older with SSI.

  5. If the unit did not contain a member age 0 to 17 or an adult with SSI, we distributed expenses to elderly unit members without SSI.

6. If the unit did not contain a member age 0 to 17 or an adult with SSI or an elderly unit member without SSI, we distributed expenses evenly to all unit members.

- In units with positive dependent care expenses, no dependent care deduction, and a calculated benefit that did not match the raw benefit, we set the dependent care deduction equal to the total unit dependent care expenses if doing so resulted in a calculated benefit that matches the raw benefit.

These edits excluded households identified as MFIP or SSI-CAP.

E. SUA usage and prorating[44]

The SNAP QC data file includes two variables that describe the use of Standard Utility Allowances (SUAs). One variable records the use of and entitlement to SUAs (SUA1); the other records prorating utility allowances in shared housing situations (SUA2). In units where the calculated benefit matched the raw benefit, we assumed the recorded utility amount to be correct. For these units, we recoded the SUA1 and SUA2 variables to make them consistent with the utility amount. For units coded as receiving a type of SUA not used in the State, we recoded SUA1 regardless of the result of the benefit calculation.

In most States, we checked for full SUA values as well as for half SUA values (Table F.7).[45] If the utility amount equaled a full SUA value, we confirmed that SUA1 indicated the correct SUA type and that SUA2 was coded as "not prorated." If the utility amount equaled half of an SUA value, we confirmed that SUA1 indicated the correct SUA type and that SUA2 was coded as "prorated." However, in States that use individual standards, we checked half SUA values for the HCSUA and LUA, but only full SUA values for the telephone SUA, electricity SUA, or both (telephone plus electricity). If the utility amount did not equal a full or half SUA value and was not coded as prorated, we coded the unit as using individual standards in States with individual standards and as using actual expenses in other States. However, in States where SUA use was mandatory and the State did not use individual standards, we did not change the values from the raw data file and were unable to reconcile the value of SUA1 and SUA2.[46]

F. Pure public assistance (PA) units

We flagged the following types of units as pure PA units:

- Units containing only children where at least one member received TANF income
- Units in which at least one member received TANF income and in which every adult member of the unit received TANF, SSI, or General Assistance (GA) income
- Units in which every adult and every child received SSI or GA income
- All MFIP units

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[44] These edits exclude units identified as MFIP or SSI-CAP participants. SSI-CAP participants in States with a standard benefit had SUA1 and SUA2 set to missing. SSI-CAP participants in States with a standardized shelter expense had SUA1 set to 9 ("Other") and SUA2 set to 1 (not prorated).

[45] Prorated values are not always equal to half of the full SUA value. However, because of the multitude of possible values, we checked only for values that were half of the full amount.

[46] Throughout FY 2020, 46 States, the District of Columbia, and Guam mandated the use of an SUA rather than actual utility costs. The 46 States include Alaska, which mandates the use of an SUA for the Central geographic region.

G. Categorical eligibility

Most States have adopted BBCE policies that confer categorical SNAP eligibility on all units authorized to receive a TANF or Maintenance of Effort–funded noncash benefit. In such States, units meeting State-determined eligibility criteria are exempt from the Federal SNAP income and asset tests. In States with BBCE policies, most units were already identified as categorically eligible through the CAT_ELIG variable, which is set in the raw file to 0 for units that are not categorically eligible and to 1 for units reported as categorically eligible.[47] We set the CAT_ELIG flag to 2 for units that were not reported to be categorically eligible but that we identified as pure PA or met the following State-specific criteria:[48]

- Alabama. All units with net income at or below 100 percent of Federal poverty guidelines and either (1) gross income at or below 130 percent of Federal poverty guidelines or (2) only elderly individuals or individuals with disabilities and gross income at or below 200 percent of Federal poverty guidelines
- Arizona, Connecticut, New Jersey, Oregon, and Vermont. All units with gross income at or below 185 percent of Federal poverty guidelines
- California, Delaware, District of Columbia, Florida, Hawaii, Maryland, Nevada, North Carolina, Washington, West Virginia, and Wisconsin. All units with gross income at or below 200 percent of Federal poverty guidelines
- Colorado, Massachusetts, Montana, and North Dakota. All units with net income at or below 100 percent of Federal poverty guidelines and gross income at or below 200 percent of Federal poverty guidelines
- Georgia. All units with (1) gross income at or below 130 percent of Federal poverty guidelines or (2) only elderly individuals or individuals with disabilities and gross income at or below 200 percent of Federal poverty guidelines
- Guam, Minnesota, and New Mexico. All units with gross income at or below 165 percent of Federal poverty guidelines
- Idaho. All units with countable assets at or below $5,000, net income at or below 100 percent of Federal poverty guidelines, and either (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability
- Illinois. All units with (1) gross income at or below 165 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines
- Indiana. All units with countable assets at or below $5,000 and either (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability
- Iowa. All units with gross income at or below 160 percent of Federal poverty guidelines
- Kentucky. Through April 2020, all units with (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines; as of May 2020, all units with gross income at or below 200 percent of Federal poverty guidelines

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[47] Beginning in FY 2019, we recoded to 0 a small number of cases with a missing value for CAT_ELIG in the raw file because the cases were in States without BBCE policies, not identified as pure PA, and passed federal SNAP eligibility tests.
[48] Mississippi ended its BBCE program on July 1, 2019.

- Louisiana. As of April 2020, all units with gross income at or below 130 percent of Federal poverty guidelines
- Maine. Through November 2019, all units with (1) gross income at or below 185 percent of Federal poverty guidelines with children under 18, or age 18 and a full-time high school student living with a parent or caretaker, or (2) gross income at or below 185 percent of Federal poverty guidelines and countable assets at or below $5,000; as of December 2019, all units with gross income at or below 185 percent of Federal poverty guidelines
- Michigan. Through November 2019, all units with gross income at or below 200 percent of Federal poverty guidelines and countable assets at or below $5,000; as of December 2019, all units with gross income at or below 200 percent of Federal poverty guidelines and countable assets at or below $15,000
- Ohio and South Carolina. All units with (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines
- Oklahoma. All units with net income at or below 100 percent of Federal poverty guidelines and either (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability
- Nebraska. All units with net income at or below 100 percent of Federal poverty guidelines, countable financial assets at or below $25,000, and either (1) gross income at or below 130 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability
- New Hampshire. All units with children under age 22, a relative of the child present, and gross income at or below 185 percent of Federal poverty guidelines
- New York. All units with (1) gross income at or below 130 percent of Federal poverty guidelines, (2) earned income and gross income at or below 150 percent of Federal poverty guidelines, (3) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines, or (4) dependent care expenses and gross income at or below 200 percent of Federal poverty guidelines
- Pennsylvania. All units with (1) gross income at or below 160 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines
- Rhode Island. All units with (1) gross income at or below 185 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines
- Texas. All units with gross income at or below 165 percent of Federal poverty guidelines and countable assets at or below $5,000
- Virgin Islands. All units with (1) gross income at or below 175 percent of Federal poverty guidelines or (2) at least one elderly individual or individual with a disability and gross income at or below 200 percent of Federal poverty guidelines

H. State SSI supplements

Some States appear to have coded State SSI supplements as other government benefits (FSOTHGOV) or other unearned income (FSOTHUN), rather than SSI. We add these types of income to SSI (and remove them from FSOTHGOV or FSOTHUN) if the total amount of one of the income types was equal to the State's SSI supplement for individuals or couples.

I.   Person-level disability

The QC data file does not directly identify individuals with disabilities. However, we can use information in the QC data file—such as SSI receipt or work registration status—to identify those likely to have a disability. Starting with the FY 2012 SNAP QC data file, we used the following procedure to flag individuals with disabilities:

- We identify as disabled most individuals under age 60 with SSI. We make exceptions if they are the only individual in the unit to have SSI and a work registration status indicating a Federal exemption for a reason other than a disability (WRKREGi = 2) and meet any of the following conditions:

  1. Individual is an adult (age 18 to 59) living with at least one individual who does not have SSI, does not have earned income, and has a work registration status indicating disability (WRKREGi = 1). In these cases, we code the first child in the unit with WRKREGi = 1 as disabled; or, if there are no children in the unit, we code the first adult in the unit with WRKREGi = 1 as disabled. We do not code the adult with SSI and WRKREGi = 2 as disabled.

  2. Individual is a child (age 0 to 17) living with at least one other child who does not have SSI, does not have earned income, and has a work registration status indicating disability. In these cases, we code the first child in the unit with WRKREGi = 1 as disabled. We do not code the child with SSI and WRKREGi = 2 as disabled.

  3. Individual does not meet conditions (1) or (2) but is in the labor force (EMPSTAi > 1); has earned income; has no Social Security, veterans' benefits, or workers' compensation; and is living with at least one child who does not have SSI. In these cases, we code the first child in the unit as disabled. We do not code the individual described above with SSI as disabled.

- We identify as disabled all non-elderly adults who satisfy all three of the following: conditions:

  1. Coded as working fewer than 30 hours per week (EMPSTBi = 1, 2, or 3) and either

     a. Has monthly earnings equal to less than the equivalent of the monthly Federal minimum wage for someone working 30 hours a week, or

     b. Beginning with the FY 2014 SNAP QC data file, does not have a related dependent (age 17 or under, RELi = 4 or 5) receiving Social Security in the unit

  2. Coded as exempt from work registration due to disability (WRKREGi = 1)

  3. Receives Social Security, veterans' benefits, or workers' compensation

- In units in which no individual is identified as disabled per the above criteria, but the unit receives a medical expense deduction and has no participating elderly individuals or nonparticipating elderly members with FSAFILi = 8, 9, 11, or 13, we code at least one individual as disabled. We do so by looking for the following types of individuals, among those with FSAFILi = 1 and FSAFILi = 8, 9, 11, or 13, stopping when a step codes one or more individuals as disabled:

  1. Individuals with a work registration status indicating disability (code all such individuals as disabled)

  2. Individuals receiving Social Security, veterans' benefits, or workers' compensation and coded as working fewer than 30 hours per week (code all such individuals as disabled)

  3. Individuals receiving Social Security, veterans' benefits, or workers' compensation (code all such individuals as disabled)

  4. Child coded as working fewer than 30 hours per week (code first as disabled)

5. Adult coded as working fewer than 30 hours per week (code first as disabled)

If the unit did not contain any of the types of individuals listed above, we code all individuals in the unit as disabled.

- Beginning with the FY 2015 SNAP QC data file, we also identify as disabled non-elderly adults in single-person SNAP households who receive Social Security and without any individuals outside of the unit.

- Beginning with the FY 2016 SNAP QC data file, we also identify as disabled non-elderly adults in single-person SNAP units with WRKREGi = 1, no gross income, and assets above the limit for units without any elderly or disabled individuals but below the limit for units with elderly or disabled individuals.

- Beginning with the FY 2016 SNAP QC data file, we exclude nonparticipating elderly members with FSAFILi = 8, 9, 11, or 13 from being flagged as disabled.

J. Homeless household shelter deduction

The 2018 Farm Bill made mandatory the existing State option to provide a standard shelter deduction to homeless households that had qualifying shelter expenses and that were not claiming the excess shelter expense deduction. The 2018 Farm Bill also indexed the homeless shelter deduction to inflation. In FY 2020, the value of the mandated homeless shelter deduction was $152.06, and States appeared to consistently round down the value. As such, we identified households as receiving the homeless shelter deduction if the reported shelter deduction (SHELDDED) was $152.

K. Illogical relationship (RELi) and age (AGEi) codes

We checked for instances of illogical values between the relationship (RELi) and age (AGEi) codes. Specifically, we checked for five types of inconsistencies: (1) children age 12 or younger coded as a spouse or parent, (2) children age 14 or younger coded as the head of the SNAP household, with someone older in SNAP household, (3) adults age 22 or older coded as a foster child, (4) adults age 80 or older coded as a daughter, stepdaughter, son, or stepson, and (5) SNAP households with a parent and child in which the difference between ages of any parent and the oldest child in the SNAP household is either less than 12 years or between 12 and 14 years. Beginning in FY 2020, we recoded many of the inconsistencies:

- If a child age 12 or younger was coded as a spouse (RELi = 2) or parent (RELi = 3), then we changed the child's relationship to daughter, stepdaughter, son, or stepson (RELi = 4).
- If a child age 14 or younger was coded as the head of household, with someone older in the SNAP household, then we changed the child's relationship to daughter, stepdaughter, son, or stepson (RELi = 4) and changed the adult's relationship to household head (RELi = 1).
- If an adult age 22 or older was coded as a foster child (RELi = 6), then we changed the adult's relationship to an unrelated individual (RELi = 7).
- If an individual age 98 was coded as a daughter, stepdaughter, son, or stepson, the we changed the individual's age to missing.
- If a SNAP household contained a head of household (RELi = 1) or spouse of the head of household (RELi = 2) and child (RELi = 4) in which the difference between ages of the older of the head or

spouse and the oldest child was less than 15 years, then we changed the child's relationship to other related person (RELi = 5).

- If a SNAP household contained a parent of the household head (RELi = 3) in which the difference between ages of the parent and the household head was less than 15 years, then we changed the relationship of the parent to other related (RELi = 5).

APPENDIX C

New Variables and Variables That Changed
in the FY 2020 SNAP QC Databases

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A. New variables in the FY 2020 SNAP QC databases

SUPP_BEN   SUPP_BEN identifies SNAP households in June through September 2020 that appear to have qualified for an emergency allotment because they were in a State that issued the emergency allotment for the sample month and were not already receiving the maximum benefit.

FSBENSUPP   FSBENSUPP estimates the emergency allotment amount received for each SNAP household in June through September 2020 that appears to have qualified for an emergency allotment.

FYWGT_PER1   FWYGT_PER1 is a weight for SNAP households in October 2019 through February 2020 that can be used for average monthly estimates for the full pre-pandemic period. FYWGT_PER1 is equal to HWGT / 5.

FYWGT_PER2   FWYGT_PER2 is a weight for SNAP households in June through September 2020 that can be used for average monthly estimates for the full waiver period. FYWGT_PER2 is equal to HWGT / 4, except for the States with fewer than 4 months of data. For those States, the value is equal to HWGT divided by the number of months of data by State.

B. Variables changed in the FY 2020 SNAP QC databases

RELi   The RELi algorithm was slightly adjusted to (1) recode children age 12 or younger coded as a spouse (RELi = 2) or parent (RELi = 3) to daughter, stepdaughter, son, or stepson (RELi = 4); (2) recode children age 14 or younger coded as the head of household, with someone older in the SNAP household, to daughter, stepdaughter, son, or stepson (RELi = 4) and the adult to household head (RELi = 1); (3) recode adults age 22 or older coded as a foster child (RELi = 6) to an unrelated individual (RELi = 7); and (4) in cases where the SNAP household includes a parent and child in which the difference between ages of the oldest parent and the oldest child is less than 15 years, recode the child to other related person (RELi = 5) if they were the child of the household head and not at least 15 years younger than the household head or spouse of the household head, and recode the parent of the household head to other related (RELi = 5) if they were not at least 15 years older than the household head.

AGEi   The AGEi algorithm was slightly adjusted to recode the age of adults (1) coded as AGEi = 98 and (2) coded as a daughter, stepdaughter, son, or stepson to missing age (AGEi = .)

Information on variables in the FY 2019 SNAP QC database appears in *Technical Documentation for the Fiscal Year 2019 SNAP QC Database and QC Minimodel* (Cronquist et al. 2020).

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APPENDIX D

Derivation of Weights by State and Month

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Tables D.1a through D.3b present the final calculated weighted counts of SNAP units, individuals, and benefit amounts separately for the 2020 pre-pandemic period SNAP QC file and the FY 2020 waiver period SNAP QC file. The pre-pandemic period tables are denoted by the ".a" suffix and the waiver period tables are denoted by the ".b" suffix that appears in the table's title line. Tables D.4a through D.6b present the corresponding adjustments to the Program Operations data that yielded the weighted counts in the each file. Tables D.7 through D.18 show the preliminary monthly weights (HWGT) and their derivation for each State and stratum. Please note that no data are shown for March through May 2020 because there are no data for those months in the file. The preliminary weights (stratum-specific weights) are derived as follows:

Data	Table D.7 through D.18 columns	Derivation
Sampling interval	a	Raw data
Stratum sampling size	b	Raw data
SNAP units in stratum (unedited)	c^	a*b
Stratum share of State sample	d^	c/(sum c over State)
SNAP units in State	e	Raw data
SNAP units in stratum (edited)	f^	d*e
Units with complete reviews	g	Raw data
Ineligible units	h	Raw data
Disqualification rate	i	h/g
Adjusted SNAP units in State	j	(1-i)*f
Failing units	k	Raw data
Stratum sampling size	l	g-h-k
Stratum-specific weight	m	j/l

^ Column omitted from published tables due to space limitations; available on request.

As described in Chapter III, Section C, the preliminary monthly stratum-specific unit weights are the starting point for creating the final weights. After deriving the preliminary weights, we use a nonlinear programming technique to create final weights that match the adjusted monthly Program Operations number of units, participants, and benefits as closely as possible. In Chapter III, Section C, we provide a description of the derivation of sampling weights.

Table D.1a. Calculated weighted unit counts by State (October 2019 to February 2020) and pre-pandemic period average

State	October 2019	November 2019	December 2019	January 2020	February 2020	Pre-pandemic period average 2020
Alabama	337,244	339,535	329,539	319,922	330,450	331,338
Alaska	29,564	32,245	37,124	34,701	32,425	33,212
Arizona	354,433	361,075	352,611	366,366	338,743	354,646
Arkansas	145,191	148,324	153,844	150,690	153,052	150,220
California	2,111,065	2,117,826	2,164,962	2,131,945	2,162,336	2,137,627
Colorado	223,238	215,314	214,032	220,705	209,975	216,653
Connecticut	202,900	205,198	203,847	201,774	206,767	204,097
Delaware	58,843	57,661	55,833	55,056	54,025	56,284
District of Columbia	64,751	64,210	64,949	65,401	64,245	64,711
Florida	1,496,733	1,509,611	1,474,417	1,436,122	1,447,669	1,472,910
Georgia	612,230	606,387	593,199	593,625	594,498	599,988
Hawaii	76,885	78,172	79,848	76,622	78,954	78,096
Idaho	64,964	65,405	66,039	66,980	67,039	66,085
Illinois	893,077	872,527	884,624	872,167	862,746	877,028
Indiana	260,085	249,996	244,090	252,176	249,518	251,173
Iowa	143,384	140,217	143,103	142,226	140,353	141,857
Kansas	93,728	90,369	93,229	87,709	87,254	90,458
Kentucky	223,422	223,282	214,584	213,420	214,158	217,773
Louisiana	374,728	361,192	349,055	358,589	360,478	360,808
Maine	80,265	82,667	82,208	82,723	84,571	82,487
Maryland	332,343	331,108	328,342	325,982	322,413	328,038
Massachusetts	445,614	450,455	449,970	447,593	458,066	450,340
Michigan	601,252	588,116	572,400	594,083	621,145	595,399
Minnesota	203,860	199,337	201,247	198,657	198,237	200,268
Mississippi	201,926	203,165	198,257	196,160	190,524	198,007
Missouri	310,043	303,284	312,125	297,394	300,940	304,757
Montana	52,359	49,407	51,508	51,833	52,809	51,583
Nebraska	68,915	69,925	69,606	70,063	67,259	69,154
Nevada	218,813	214,993	212,339	214,883	214,189	215,044
New Hampshire	38,093	37,842	38,346	38,294	36,712	37,857
New Jersey	344,332	343,354	340,793	339,487	338,447	341,283
New Mexico	220,270	219,734	217,301	211,462	219,426	217,639
New York	1,459,115	1,459,332	1,459,572	1,405,012	1,474,315	1,451,469
North Carolina	594,933	595,038	587,292	571,153	582,439	586,171
North Dakota	23,225	21,029	22,323	23,041	22,907	22,505
Ohio	677,245	665,195	664,956	684,259	671,505	672,632
Oklahoma	272,397	263,060	263,937	264,792	264,782	265,793
Oregon	345,102	344,537	344,810	340,919	341,682	343,410
Pennsylvania	944,514	943,674	937,337	925,021	941,031	938,315
Rhode Island	85,919	85,735	85,885	83,933	83,508	84,996
South Carolina	269,204	263,898	264,904	266,299	256,108	264,083
South Dakota	35,986	37,126	35,611	36,454	37,002	36,436
Tennessee	407,662	399,034	379,250	405,597	381,615	394,632
Texas	1,422,808	1,413,350	1,400,723	1,399,712	1,350,804	1,397,479
Utah	69,585	69,118	68,943	69,461	69,610	69,343
Vermont	38,544	38,695	37,412	39,146	38,216	38,403
Virginia	330,091	317,615	334,045	315,128	333,669	326,110
Washington	472,440	470,541	470,129	463,863	470,863	469,567
West Virginia	154,405	161,116	153,374	162,147	160,446	158,298
Wisconsin	303,967	310,146	302,610	298,637	306,190	304,310
Wyoming	11,006	10,956	11,089	11,660	11,084	11,159
Guam	15,392	15,056	14,859	14,258	14,207	14,754
Virgin Islands	10,517	10,284	10,251	10,026	9,731	10,162
United States	18,828,607	18,726,468	18,642,685	18,505,328	18,581,139	18,656,845

Table D.1b. Calculated weighted unit counts by State (June 2020 to September 2020) and waiver period average

State	June 2020	July 2020	August 2020	September 2020	Waiver period average 2020
Alabama	361,052	361,924	355,987	364,426	360,847
Alaska	36,712	39,112	-	-	37,912
Arizona	404,078	392,713	-	-	398,395
Arkansas	171,467	183,935	176,795	174,702	176,725
California	-	-	-	-	-
Colorado	273,215	249,799	271,871	267,559	265,611
Connecticut	210,062	200,131	216,424	210,192	209,202
Delaware	-	-	-	-	-
District of Columbia	-	-	-	-	-
Florida	2,050,212	2,057,939	-	-	2,054,075
Georgia	807,882	733,432	-	-	770,657
Hawaii	92,400	-	-	-	92,400
Idaho	70,386	-	-	-	70,386
Illinois	1,038,619	1,023,094	1,072,385	-	1,044,699
Indiana	298,426	-	-	-	298,426
Iowa	149,360	144,793	148,050	153,752	148,989
Kansas	96,758	92,361	94,470	95,537	94,781
Kentucky	264,964	264,846	277,136	281,413	272,090
Louisiana	376,742	338,088	-	-	357,415
Maine	-	-	-	-	-
Maryland	-	-	-	-	-
Massachusetts	-	497,246	-	-	497,246
Michigan	694,977	609,676	-	-	652,327
Minnesota	215,080	215,108	212,745	207,342	212,569
Mississippi	202,969	191,319	197,836	201,659	198,446
Missouri	352,088	357,106	346,777	362,014	354,496
Montana	53,680	52,186	50,484	44,944	50,324
Nebraska	67,772	67,074	70,468	69,255	68,642
Nevada	247,561	241,830	240,960	242,356	243,177
New Hampshire	37,691	36,573	-	-	37,132
New Jersey	367,534	373,825	-	-	370,680
New Mexico	237,099	234,530	236,557	-	236,062
New York	-	-	-	-	-
North Carolina	653,106	685,351	703,199	728,135	692,448
North Dakota	22,556	21,731	-	-	22,143
Ohio	707,588	-	-	-	707,588
Oklahoma	289,572	295,545	292,559	-	292,559
Oregon	411,918	-	-	-	411,918
Pennsylvania	1,007,932	980,777	997,132	994,409	995,062
Rhode Island	81,788	74,533	-	-	78,161
South Carolina	299,447	291,045	290,153	277,661	289,576
South Dakota	35,611	-	-	-	35,611
Tennessee	404,812	373,669	410,871	395,343	396,174
Texas	1,673,481	1,603,853	1,650,724	-	1,642,686
Utah	69,837	67,109	66,694	69,514	68,289
Vermont	39,328	37,743	38,348	39,308	38,682
Virginia	371,421	369,955	-	-	370,688
Washington	-	519,247	-	-	519,247
West Virginia	156,526	160,187	157,313	154,925	157,238
Wisconsin	354,557	354,581	-	-	354,569
Wyoming	11,157	12,326	12,311	12,114	11,977
Guam	14,571	16,510	-	-	15,540
Virgin Islands	12,065	12,301	-	-	12,183
United States	15,796,060	14,835,103	8,588,249	5,346,558	16,686,050

- No sample data.

Table D.2a. Calculated weighted individual counts by State (October 2019 to February 2020) and pre-pandemic period average

State	October 2019	November 2019	December 2019	January 2020	February 2020	Pre-pandemic period average 2020
Alabama	707,230	716,466	688,727	659,989	692,910	693,064
Alaska	62,789	69,408	81,225	77,569	75,828	73,364
Arizona	766,925	766,889	731,404	772,259	678,751	743,246
Arkansas	311,924	306,669	331,727	326,327	327,757	320,881
California	3,893,176	3,932,280	4,059,554	4,008,813	4,031,055	3,984,976
Colorado	439,390	413,478	415,379	434,142	410,523	422,582
Connecticut	348,124	346,573	340,530	329,423	344,873	341,904
Delaware	119,749	115,628	111,721	106,192	109,531	112,564
District of Columbia	107,214	109,458	109,420	105,326	108,570	107,998
Florida	2,734,335	2,765,924	2,682,018	2,621,249	2,634,689	2,687,643
Georgia	1,305,629	1,316,731	1,242,896	1,236,793	1,263,222	1,273,054
Hawaii	145,949	151,331	154,377	143,193	152,252	149,420
Idaho	142,199	142,817	143,833	146,233	145,703	144,157
Illinois	1,778,953	1,649,563	1,719,555	1,694,288	1,705,731	1,709,618
Indiana	576,112	545,263	526,577	556,423	550,335	550,942
Iowa	293,151	281,276	293,334	290,439	284,226	288,485
Kansas	198,426	190,241	195,064	181,277	181,994	189,400
Kentucky	501,544	497,548	467,692	469,089	474,535	482,082
Louisiana	804,561	777,233	753,747	773,090	777,931	777,312
Maine	141,238	147,322	141,407	146,906	151,411	145,657
Maryland	612,751	610,581	604,287	598,415	591,474	603,502
Massachusetts	721,453	731,945	722,760	729,504	761,339	733,400
Michigan	1,136,472	1,110,118	1,069,930	1,117,296	1,156,280	1,118,019
Minnesota	398,706	376,571	392,140	379,665	373,834	384,183
Mississippi	431,160	431,882	413,393	408,964	403,238	417,727
Missouri	657,188	644,292	663,517	627,409	629,642	644,410
Montana	105,667	98,713	104,392	101,651	105,578	103,200
Nebraska	151,326	152,803	152,018	153,187	144,694	150,806
Nevada	405,355	395,307	391,719	392,265	395,561	396,041
New Hampshire	70,996	67,942	72,461	72,283	67,609	70,258
New Jersey	682,734	679,995	674,031	669,841	666,998	674,720
New Mexico	444,273	441,473	437,605	416,699	438,244	435,659
New York	2,516,904	2,530,807	2,515,091	2,374,696	2,560,098	2,499,519
North Carolina	1,227,671	1,222,052	1,206,194	1,133,508	1,192,208	1,196,327
North Dakota	48,243	40,611	46,899	47,804	47,673	46,246
Ohio	1,371,162	1,291,222	1,337,620	1,377,403	1,319,790	1,339,439
Oklahoma	579,618	545,629	546,374	559,804	553,148	556,915
Oregon	584,077	581,564	581,511	577,058	570,876	579,017
Pennsylvania	1,744,319	1,741,549	1,725,850	1,710,287	1,728,680	1,730,137
Rhode Island	142,843	137,094	138,608	136,456	131,131	137,227
South Carolina	576,371	574,659	572,793	571,309	555,523	570,131
South Dakota	76,723	78,286	76,024	77,472	78,006	77,302
Tennessee	841,203	836,393	780,768	840,075	796,227	818,933
Texas	3,329,167	3,280,049	3,247,148	3,231,991	3,106,320	3,238,935
Utah	163,473	159,217	158,561	160,411	159,538	160,240
Vermont	67,296	67,392	63,405	67,995	64,765	66,171
Virginia	663,781	645,415	687,817	625,738	679,702	660,491
Washington	802,305	797,097	793,616	741,919	797,442	786,476
West Virginia	279,281	305,334	286,431	306,625	303,583	296,251
Wisconsin	587,331	602,506	583,896	569,605	583,595	585,387
Wyoming	24,030	24,485	24,512	25,915	24,618	24,712
Guam	43,506	42,584	42,109	41,477	40,989	42,133
Virgin Islands	21,752	21,318	21,270	20,792	20,172	21,061
United States	36,887,756	36,508,987	36,324,938	35,944,539	36,150,401	36,363,324

Table D.2b. Calculated weighted individual counts by State (June 2020 to September 2020) and waiver period average

State	June 2020	July 2020	August 2020	September 2020	Waiver period average 2020
Alabama	742,279	746,774	734,850	756,314	745,054
Alaska	80,873	87,331	-	-	84,102
Arizona	851,890	753,499	-	-	802,694
Arkansas	348,681	374,878	367,175	355,989	361,681
California	-	-	-	-	-
Colorado	527,346	473,365	537,949	521,483	515,036
Connecticut	338,548	343,896	371,916	360,862	353,806
Delaware	-	-	-	-	-
District of Columbia	-	-	-	-	-
Florida	3,846,134	3,757,155	-	-	3,801,644
Georgia	1,575,370	1,181,641	-	-	1,378,505
Hawaii	179,520	-	-	-	179,520
Idaho	152,881	-	-	-	152,881
Illinois	2,090,727	1,930,365	1,854,047	-	1,958,380
Indiana	549,483	-	-	-	549,483
Iowa	282,327	281,759	277,847	305,629	286,891
Kansas	202,461	190,412	195,009	199,252	196,783
Kentucky	576,225	594,761	606,216	616,169	598,343
Louisiana	822,884	602,678	-	-	712,781
Maine	-	-	-	-	-
Maryland	-	-	-	-	-
Massachusetts	-	767,900	-	-	767,900
Michigan	1,281,847	1,029,324	-	-	1,155,585
Minnesota	421,314	418,388	405,176	390,443	408,830
Mississippi	445,223	382,637	399,561	411,965	409,847
Missouri	739,910	728,255	685,924	752,531	726,655
Montana	104,067	99,878	98,807	87,311	97,516
Nebraska	145,989	139,732	149,525	149,381	146,157
Nevada	421,443	498,228	406,113	481,392	451,794
New Hampshire	69,031	66,455	-	-	67,743
New Jersey	721,815	730,796	-	-	726,306
New Mexico	500,872	417,945	488,087	-	468,968
New York	-	-	-	-	-
North Carolina	1,464,332	1,573,768	1,557,720	1,555,152	1,537,743
North Dakota	46,971	44,647	-	-	45,809
Ohio	1,366,376	-	-	-	1,366,376
Oklahoma	612,074	625,399	345,751	-	527,741
Oregon	692,588	-	-	-	692,588
Pennsylvania	1,837,224	1,728,082	1,826,611	1,797,505	1,797,355
Rhode Island	133,112	115,893	-	-	124,503
South Carolina	672,288	593,142	644,365	536,304	611,525
South Dakota	75,795	-	-	-	75,795
Tennessee	829,133	714,367	884,954	889,521	829,493
Texas	3,508,262	3,456,189	4,146,462	-	3,703,638
Utah	156,331	149,353	148,527	156,970	152,795
Vermont	68,219	65,484	64,614	68,416	66,683
Virginia	661,805	719,730	-	-	690,767
Washington	-	796,775	-	-	796,775
West Virginia	285,127	291,579	291,797	285,208	288,428
Wisconsin	671,629	651,202	-	-	661,416
Wyoming	23,905	27,413	27,533	26,344	26,299
Guam	42,191	46,494	-	-	44,342
Virgin Islands	24,368	24,728	-	-	24,548
United States	31,190,870	28,222,297	17,516,535	10,704,141	32,169,504

- No sample data.

Table D.3a. Calculated weighted benefit amounts by State (October 2019 to February 2020) and pre-pandemic period average

State	October 2019	November 2019	December 2019	January 2020	February 2020	Pre-pandemic period average 2020
Alabama	80,023,183	85,265,021	78,256,877	76,842,672	78,362,444	79,750,040
Alaska	9,971,777	11,623,168	12,833,675	12,577,870	13,233,179	12,047,934
Arizona	91,076,349	90,633,940	88,806,730	93,597,954	84,824,160	89,787,827
Arkansas	34,668,355	35,184,622	34,332,385	35,657,361	34,973,728	34,963,290
California	486,119,923	457,309,256	480,256,918	462,467,207	468,711,097	470,972,880
Colorado	53,811,225	48,150,778	51,290,406	51,568,522	48,581,423	50,680,471
Connecticut	42,233,390	43,565,752	43,352,453	41,349,021	47,287,593	43,557,642
Delaware	13,596,036	12,431,366	12,242,915	12,688,826	12,551,799	12,702,189
District of Columbia	13,131,094	14,090,788	14,010,798	12,624,596	13,273,190	13,426,093
Florida	322,702,512	318,897,905	319,780,621	300,617,438	284,315,533	309,262,802
Georgia	159,912,852	161,311,556	149,426,904	150,885,746	151,053,487	154,518,109
Hawaii	34,934,195	36,413,073	36,063,033	33,289,559	36,536,946	35,447,361
Idaho	15,371,878	15,433,394	15,586,263	15,504,382	15,780,489	15,535,281
Illinois	212,933,592	188,602,556	213,640,242	190,127,378	187,692,604	198,599,274
Indiana	68,223,880	60,174,083	62,105,669	65,699,589	63,970,676	64,034,779
Iowa	31,669,281	31,687,171	31,481,725	30,661,568	31,708,159	31,441,581
Kansas	21,452,308	20,483,231	21,157,453	19,883,070	19,322,910	20,459,795
Kentucky	56,753,955	52,600,171	53,708,885	52,171,235	54,126,184	53,872,086
Louisiana	98,591,330	98,863,021	93,713,509	93,206,166	98,421,686	96,559,143
Maine	15,004,176	14,505,846	16,592,830	13,721,208	16,058,214	15,176,455
Maryland	71,342,169	70,099,220	66,052,374	64,593,526	66,837,266	67,784,911
Massachusetts	88,999,277	86,880,471	91,316,170	84,698,910	90,263,037	88,431,573
Michigan	130,506,988	126,838,842	129,983,693	123,470,597	131,543,153	128,468,655
Minnesota	39,286,514	38,644,508	39,809,126	37,858,415	38,159,544	38,751,621
Mississippi	48,772,588	45,281,567	44,827,362	44,963,843	44,800,026	45,729,077
Missouri	74,987,890	77,525,723	80,588,107	77,581,715	76,376,442	77,411,975
Montana	11,908,481	11,078,992	11,022,316	10,589,838	12,405,484	11,401,022
Nebraska	16,512,227	17,517,059	17,192,228	17,317,129	15,550,439	16,817,817
Nevada	47,344,883	44,605,684	45,240,449	43,025,796	43,833,768	44,810,116
New Hampshire	7,507,069	7,062,028	7,346,357	7,167,867	6,824,774	7,181,619
New Jersey	77,997,110	80,889,365	78,176,120	74,818,317	76,109,204	77,598,023
New Mexico	51,710,766	49,801,450	50,359,860	50,207,045	51,310,538	50,677,932
New York	362,167,882	330,052,642	349,023,451	316,924,045	334,338,921	338,501,388
North Carolina	139,949,275	131,223,725	137,943,848	137,891,044	130,595,638	135,520,706
North Dakota	5,798,575	4,803,014	5,350,240	5,319,294	5,375,984	5,329,421
Ohio	164,303,810	158,472,195	156,632,514	154,017,204	159,781,591	158,641,463
Oklahoma	65,128,051	65,223,024	65,210,863	64,744,575	65,170,961	65,095,495
Oregon	62,650,896	69,263,236	69,301,126	65,726,989	67,880,586	66,964,567
Pennsylvania	203,396,213	190,548,836	201,164,406	195,680,652	199,349,520	198,027,925
Rhode Island	16,855,383	16,685,868	16,497,940	16,595,282	16,285,338	16,583,962
South Carolina	69,061,660	66,966,520	66,041,028	63,507,263	65,638,230	66,242,940
South Dakota	9,900,530	9,925,572	9,552,747	9,916,082	9,926,211	9,844,228
Tennessee	101,907,352	97,851,442	95,967,410	100,333,177	95,688,143	98,349,505
Texas	379,985,842	380,015,592	377,260,746	358,387,386	355,860,511	370,302,015
Utah	18,936,155	18,720,144	18,064,664	17,974,954	17,956,209	18,330,425
Vermont	8,095,221	8,055,345	7,112,768	7,992,998	7,349,079	7,721,082
Virginia	78,340,181	73,651,101	74,434,907	69,200,967	75,680,932	74,261,618
Washington	94,198,939	90,831,835	90,567,062	87,587,461	90,659,898	90,769,039
West Virginia	31,255,572	31,840,247	29,517,282	29,500,098	31,533,814	30,729,402
Wisconsin	63,989,172	60,282,018	60,309,448	60,214,970	59,144,532	60,788,028
Wyoming	2,928,862	2,808,223	2,939,998	2,885,839	2,813,186	2,875,222
Guam	7,998,667	7,305,724	7,464,829	6,735,527	7,480,979	7,397,145
Virgin Islands	3,316,804	3,188,402	3,262,389	3,258,199	3,471,446	3,299,448
United States	4,419,222,296	4,271,166,312	4,334,174,116	4,175,828,371	4,216,780,883	4,283,434,396

Table D.3b. Calculated weighted benefit amounts by State (June 2020 to September 2020) and waiver period average

State	June 2020	July 2020	August 2020	September 2020	Waiver period average 2020
Alabama	81,552,431	85,217,990	83,161,735	88,294,754	84,556,728
Alaska	12,575,885	14,975,463	-	-	13,775,674
Arizona	98,418,468	87,614,113	-	-	93,016,291
Arkansas	39,168,801	44,966,868	41,442,266	43,637,829	42,303,941
California	-	-	-	-	-
Colorado	66,525,286	57,578,201	62,863,870	57,120,032	61,021,847
Connecticut	45,979,234	45,475,089	46,677,599	42,108,786	45,060,177
Delaware	-	-	-	-	-
District of Columbia	-	-	-	-	-
Florida	451,714,076	428,485,617	-	-	440,099,846
Georgia	197,042,403	101,172,895	-	-	149,107,649
Hawaii	43,293,360	-	-	-	43,293,360
Idaho	17,344,734	-	-	-	17,344,734
Illinois	254,987,786	235,948,570	237,411,834	-	242,782,730
Indiana	53,901,448	-	-	-	53,901,448
Iowa	30,017,731	30,788,082	30,652,401	34,667,321	31,531,384
Kansas	21,647,934	21,777,898	22,443,005	21,822,250	21,922,772
Kentucky	63,580,772	67,206,824	65,142,476	69,946,565	66,469,159
Louisiana	100,590,166	76,108,926	-	-	88,349,546
Maine	-	-	-	-	-
Maryland	-	-	-	-	-
Massachusetts	-	87,420,967	-	-	87,420,967
Michigan	159,806,143	119,156,101	-	-	139,481,122
Minnesota	41,741,107	40,642,832	40,665,862	39,603,516	40,663,329
Mississippi	47,067,017	39,054,678	42,486,188	44,348,102	43,238,996
Missouri	86,560,309	88,987,828	79,546,271	91,464,799	86,639,802
Montana	11,789,886	10,867,505	10,880,406	11,890,026	11,356,956
Nebraska	15,946,954	15,140,769	14,997,315	17,435,506	15,880,136
Nevada	47,964,914	65,538,783	47,699,314	65,396,323	56,649,834
New Hampshire	6,964,832	6,833,417	-	-	6,899,125
New Jersey	90,768,495	93,127,343	-	-	91,947,919
New Mexico	61,361,234	45,931,803	56,893,554	-	54,728,864
New York	-	-	-	-	-
North Carolina	179,446,030	158,392,175	175,452,721	192,578,140	176,467,266
North Dakota	5,454,971	4,892,515	-	-	5,173,743
Ohio	151,708,452	-	-	-	151,708,452
Oklahoma	70,851,906	78,685,029	43,431,639	-	64,322,858
Oregon	85,384,306	-	-	-	85,384,306
Pennsylvania	214,790,221	204,174,823	211,984,631	195,103,805	206,513,370
Rhode Island	15,912,704	14,551,224	-	-	15,231,964
South Carolina	82,844,135	68,745,513	72,244,275	55,109,946	69,735,967
South Dakota	9,716,294	-	-	-	9,716,294
Tennessee	86,137,137	85,114,067	96,459,937	102,769,290	92,620,108
Texas	404,760,652	375,662,947	428,972,097	-	403,131,899
Utah	18,686,748	17,030,332	17,411,330	17,900,661	17,757,268
Vermont	7,680,440	7,619,110	7,402,971	8,456,134	7,789,664
Virginia	78,835,788	84,450,558	-	-	81,643,173
Washington	-	84,673,060	-	-	84,673,060
West Virginia	30,416,324	29,232,336	30,650,437	31,046,452	30,336,387
Wisconsin	73,210,926	71,660,367	-	-	72,435,646
Wyoming	2,687,403	3,074,909	2,973,945	2,955,611	2,922,967
Guam	8,020,092	8,740,984	-	-	8,380,538
Virgin Islands	4,213,334	4,334,254	-	-	4,273,794
United States	3,679,069,269	3,211,052,766	1,969,948,079	1,233,655,849	3,719,663,060

- No sample data.

Table D.4a. Adjustments to weighted unit counts by State (October 2019 to February 2020)

State	October 2019	November 2019	December 2019	January 2020	February 2020
Alabama	3,789	0	8,038	15,234	4,131
Alaska	4,223	4,961	0	807	2,861
Arizona	20,547	9,629	15,331	4,580	32,482
Arkansas	12,865	9,270	3,895	5,651	1,890
California	30,595	31,144	0	30,898	0
Colorado	0	6,427	9,044	0	9,544
Connecticut	10,405	7,695	7,741	10,482	5,302
Delaware	1,015	824	2,295	3,610	2,843
District of Columbia	966	1,053	0	1,038	0
Florida	16,448	0	16,947	33,791	0
Georgia	24,989	31,257	36,318	32,262	32,310
Hawaii	3,075	1,533	0	3,005	0
Idaho	(0)	0	0	0	818
Illinois	(0)	24,929	14,042	27,255	25,007
Indiana	0	7,463	12,204	0	6,931
Iowa	5,311	7,380	3,717	1,823	1,823
Kansas	0	3,266	0	3,248	3,400
Kentucky	3,103	0	5,879	4,640	2,278
Louisiana	0	9,505	20,235	5,352	4,291
Maine	6,254	3,307	4,060	3,182	995
Maryland	0	0	0	0	0
Massachusetts	11,003	5,775	5,769	10,785	0
Michigan	7,158	16,113	38,676	30,080	7,764
Minnesota	0	2,402	0	2,580	2,542
Mississippi	4,538	2,745	5,019	4,616	9,073
Missouri	8,494	13,380	0	12,930	8,983
Montana	0	2,964	920	879	(0)
Nebraska	2,954	896	953	0	2,727
Nevada	3,218	5,811	7,675	5,372	5,355
New Hampshire	762	742	0	0	1,468
New Jersey	0	0	0	0	0
New Mexico	2,898	2,713	4,939	10,844	2,644
New York	18,014	17,582	18,019	73,948	0
North Carolina	6,685	7,000	6,829	19,924	6,619
North Dakota	0	1,855	572	0	0
Ohio	8,160	17,278	17,499	0	7,994
Oklahoma	0	9,395	6,598	5,950	5,756
Oregon	0	0	0	4,802	4,496
Pennsylvania	0	(0)	0	13,806	0
Rhode Island	3,105	3,988	2,996	4,250	4,912
South Carolina	2,991	6,209	3,154	0	8,537
South Dakota	1,333	0	1,295	663	0
Tennessee	14,914	24,632	29,552	9,324	23,269
Texas	18,721	0	0	0	17,774
Utah	1,697	1,750	1,682	1,634	1,785
Vermont	0	0	1,439	0	708
Virginia	10,315	20,827	5,388	20,331	0
Washington	0	0	0	7,363	0
West Virginia	7,594	0	7,669	0	0
Wisconsin	7,414	0	7,205	11,199	3,602
Wyoming	459	457	462	0	443
Guam	0	0	0	0	0
Virgin Islands	0	0	0	0	0
United States	286,011	324,157	334,054	438,138	263,355

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.

Table D.4b. Adjustments to weighted unit counts by State (June 2020 to September 2020)

State	June 2020	July 2020	August 2020	September 2020
Alabama	4,057	0	6,472	0
Alaska	2,369	0	-	-
Arizona	21,267	36,817	-	-
Arkansas	16,527	12,101	13,427	13,103
California	-	-	-	-
Colorado	3,373	31,665	7,155	11,467
Connecticut	15,560	25,658	5,695	8,881
Delaware	-	-	-	-
District of Columbia	-	-	-	-
Florida	47,679	75,521	-	-
Georgia	38,934	142,612	-	-
Hawaii	5,280	-	-	-
Idaho	0	-	-	-
Illinois	40,466	38,607	0	-
Indiana	9,474	-	-	-
Iowa	3,643	5,870	4,056	1,875
Kansas	4,398	6,758	4,343	2,359
Kentucky	19,997	20,115	0	0
Louisiana	29,743	73,497	-	-
Maine	-	-	-	-
Maryland	-	-	-	-
Massachusetts	-	12,589	-	-
Michigan	46,332	87,097	-	-
Minnesota	2,501	2,473	4,835	10,239
Mississippi	8,730	4,666	0	0
Missouri	20,711	18,471	25,687	0
Montana	1,884	3,795	1,262	2,568
Nebraska	2,864	1,973	903	2,234
Nevada	2,947	5,827	10,830	9,960
New Hampshire	785	1,016	-	-
New Jersey	0	0	-	-
New Mexico	11,855	15,034	11,978	-
New York	-	-	-	-
North Carolina	34,374	16,922	17,803	8,989
North Dakota	0	0	-	-
Ohio	8,133	-	-	-
Oklahoma	0	0	0	-
Oregon	0	-	-	-
Pennsylvania	14,399	15,089	(0)	12,914
Rhode Island	8,389	14,294	-	-
South Carolina	2,936	7,368	3,768	15,214
South Dakota	1,344	-	-	-
Tennessee	28,915	49,456	15,603	34,592
Texas	40,325	112,947	78,606	-
Utah	0	1,678	3,294	1,675
Vermont	0	726	737	0
Virginia	13,265	20,179	-	-
Washington	-	17,905	-	-
West Virginia	6,522	2,626	4,767	7,619
Wisconsin	7,310	7,465	-	-
Wyoming	1,339	0	474	466
Guam	2,429	750	-	-
Virgin Islands	0	0	-	-
United States	531,054	889,567	221,695	144,157

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.
- Adjustments are not calculated for States and months that do not have samples in the waiver period SNAP QC database.

Table D.5a. Adjustments to weighted individual counts by State (October 2019 to February 2020)

State	October 2019	November 2019	December 2019	January 2020	February 2020
Alabama	11,562	0	22,657	45,553	11,878
Alaska	10,341	11,912	0	2,261	4,329
Arizona	28,388	18,104	44,998	9,935	104,152
Arkansas	38,523	41,383	16,323	17,108	11,706
California	147,469	110,251	0	34,859	0
Colorado	0	22,459	21,862	(0)	20,874
Connecticut	16,535	16,962	19,993	31,409	15,158
Delaware	2,238	3,168	6,394	13,043	6,085
District of Columbia	3,829	1,013	0	2,981	0
Florida	44,977	0	49,253	62,657	0
Georgia	65,150	52,772	106,048	102,935	79,403
Hawaii	9,112	3,186	0	10,441	0
Idaho	0	0	0	0	2,056
Illinois	0	134,111	59,811	81,456	42,643
Indiana	0	25,425	41,121	0	15,814
Iowa	13,789	23,231	8,739	4,867	6,688
Kansas	0	6,945	0	9,023	7,771
Kentucky	3,040	0	23,480	15,863	7,748
Louisiana	(0)	18,506	36,995	5,189	3,832
Maine	15,212	7,751	13,918	7,163	2,636
Maryland	0	0	0	0	0
Massachusetts	43,072	30,754	37,709	33,971	0
Michigan	7,428	28,104	80,035	54,476	19,621
Minnesota	(0)	17,314	0	12,091	17,330
Mississippi	9,336	7,061	19,014	16,489	20,743
Missouri	21,200	28,868	0	31,001	27,675
Montana	0	6,774	877	3,836	0
Nebraska	6,652	2,729	2,516	0	8,175
Nevada	14,477	21,689	22,845	21,793	16,781
New Hampshire	2,420	3,484	0	0	4,316
New Jersey	0	0	0	0	(0)
New Mexico	5,519	6,039	8,803	29,209	6,994
New York	59,195	42,676	55,730	195,905	0
North Carolina	18,601	18,801	20,678	83,252	20,555
North Dakota	0	6,873	533	0	0
Ohio	9,328	83,305	36,152	0	46,146
Oklahoma	0	32,926	27,665	13,865	19,349
Oregon	0	0	0	4,809	10,412
Pennsylvania	0	0	0	15,691	0
Rhode Island	4,753	11,425	8,402	9,375	14,779
South Carolina	8,881	6,421	2,794	(0)	12,209
South Dakota	2,131	0	1,839	662	0
Tennessee	41,419	50,684	71,187	25,595	48,094
Texas	19,133	0	0	0	55,896
Utah	1,901	5,370	4,972	3,515	4,980
Vermont	0	0	4,275	0	2,756
Virginia	31,223	46,130	5,459	57,803	(0)
Washington	(0)	0	0	54,957	(0)
West Virginia	28,123	0	18,227	0	0
Wisconsin	18,705	0	16,310	31,259	16,674
Wyoming	1,534	980	1,289	0	1,179
Guam	0	0	0	0	0
Virgin Islands	0	0	0	0	0
United States	765,195	955,582	918,902	1,156,297	717,438

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.

Table D.5b. Adjustments to weighted individual counts by State (June 2020 to September 2020)

State	June 2020	July 2020	August 2020	September 2020
Alabama	13,415	0	16,279	0
Alaska	6,930	0	-	-
Arizona	38,395	145,376	-	-
Arkansas	56,837	26,991	31,044	35,995
California	-	-	-	-
Colorado	11,985	78,571	7,685	24,150
Connecticut	48,549	43,070	8,993	14,963
Delaware	-	-	-	-
District of Columbia	-	-	-	-
Florida	(114,529)	36,116	-	-
Georgia	179,522	625,125	-	-
Hawaii	781	-	-	-
Idaho	0	-	-	-
Illinois	(23,635)	102,402	0	-
Indiana	123,950	-	-	-
Iowa	22,244	14,649	23,940	5,460
Kansas	10,926	17,504	12,115	6,199
Kentucky	51,492	32,957	0	0
Louisiana	29,280	258,584	-	-
Maine	-	-	-	-
Maryland	-	-	-	-
Massachusetts	-	82,865	-	-
Michigan	62,623	205,611	-	-
Minnesota	9,028	11,954	25,166	39,899
Mississippi	(5,835)	10,626	0	0
Missouri	33,169	49,630	85,982	0
Montana	5,430	10,244	4,275	8,731
Nebraska	5,264	6,904	3,603	4,615
Nevada	44,026	(32,692)	62,832	(10,535)
New Hampshire	3,174	3,346	-	-
New Jersey	0	0	-	-
New Mexico	(7,076)	74,836	5,602	-
New York	-	-	-	-
North Carolina	(63,536)	(147,777)	(98,694)	(65,121)
North Dakota	0	0	-	-
Ohio	36,645	-	-	-
Oklahoma	0	(0)	279,800	-
Oregon	(0)	-	-	-
Pennsylvania	54,436	93,917	0	54,886
Rhode Island	14,673	28,381	-	-
South Carolina	(33,336)	22,430	(27,031)	78,601
South Dakota	2,186	-	-	-
Tennessee	46,880	132,491	(29,882)	(24,140)
Texas	376,322	414,399	(246,054)	-
Utah	0	4,139	8,893	4,378
Vermont	0	909	3,114	0
Virginia	111,914	65,681	-	-
Washington	-	144,066	-	-
West Virginia	16,772	8,576	9,662	20,054
Wisconsin	18,055	36,178	-	-
Wyoming	4,082	0	1,039	1,728
Guam	4,840	894	-	-
Virgin Islands	0	0	-	-
United States	1,195,879	2,608,952	188,363	199,863

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.

- Adjustments are not calculated for States and months that do not have samples in the waiver period SNAP QC database.

Table D.6a. Adjustments to weighted benefit amounts by State (October 2019 to February 2020)

State	October 2019	November 2019	December 2019	January 2020	February 2020
Alabama	6,278,233	632,248	6,806,587	5,738,774	5,144,624
Alaska	2,797,869	2,428,960	1,173,689	1,067,410	644,512
Arizona	6,069,974	4,671,542	5,389,099	882,710	9,699,425
Arkansas	3,936,915	3,233,943	3,724,776	1,547,840	2,331,280
California	14,246,854	39,007,256	16,862,992	27,847,559	24,540,749
Colorado	(810,093)	4,473,254	1,973,045	721,482	4,025,486
Connecticut	6,646,708	5,008,095	4,698,653	5,991,793	597,101
Delaware	675,071	1,356,479	1,240,946	1,155,906	985,867
District of Columbia	1,301,433	163,490	280,064	1,272,903	620,981
Florida	12,165,193	12,625,948	6,812,628	16,184,689	29,394,662
Georgia	12,447,081	8,989,538	16,970,167	12,027,220	11,952,764
Hawaii	2,009,460	329,223	581,954	2,806,554	(407,311)
Idaho	134,408	118,104	118,265	139,964	183,893
Illinois	9,715,416	33,311,289	6,125,166	29,353,701	31,011,650
Indiana	315,808	7,049,789	5,014,478	924,212	3,372,024
Iowa	3,441,677	2,933,505	2,879,113	2,389,672	1,067,575
Kansas	642,669	1,479,307	558,176	1,008,969	1,486,378
Kentucky	1,758,864	4,621,246	2,663,662	3,059,852	866,113
Louisiana	3,199,465	2,228,720	6,550,253	3,279,039	(285,740)
Maine	2,563,985	2,813,332	745,365	3,238,481	1,037,794
Maryland	656,138	1,685,940	(520,604)	3,989,749	1,975,305
Massachusetts	6,941,864	8,615,532	3,649,004	10,160,831	3,978,137
Michigan	5,749,390	7,391,197	5,860,683	12,675,741	7,647,301
Minnesota	2,344,627	2,427,788	1,026,069	2,277,769	1,876,777
Mississippi	1,076,954	4,397,166	3,899,398	2,366,672	2,894,211
Missouri	8,563,321	4,587,265	(885,975)	2,845,616	3,640,781
Montana	267,617	1,058,841	1,081,054	1,372,404	(298,195)
Nebraska	1,214,674	281,595	224,166	(243,586)	1,835,731
Nevada	1,104,798	3,132,437	2,544,072	3,673,327	3,331,911
New Hampshire	(55,144)	297,206	(44,074)	49,250	368,772
New Jersey	1,234,613	(1,846,165)	378,933	1,796,441	558,873
New Mexico	1,955,166	3,236,365	2,716,779	2,113,700	1,335,936
New York	(4,293,788)	24,806,111	4,749,272	32,333,906	19,391,185
North Carolina	4,187,022	11,220,761	2,826,458	69,295	6,664,357
North Dakota	(141,083)	682,006	152,911	149,528	144,586
Ohio	5,453,876	10,355,148	9,525,399	11,359,896	7,098,606
Oklahoma	4,267,415	3,923,424	3,377,522	2,356,128	2,722,764
Oregon	5,642,181	3,095,727	3,065,933	6,257,065	4,685,478
Pennsylvania	6,095,300	9,821,852	3,405,733	9,720,796	3,253,691
Rhode Island	3,011,350	2,938,284	3,038,644	2,556,504	3,016,108
South Carolina	917,077	2,545,100	2,523,044	3,571,156	1,831,661
South Dakota	125,437	(40,424)	307,332	(55,470)	(80,726)
Tennessee	6,157,452	10,791,058	8,492,642	4,015,906	7,400,840
Texas	14,171,753	3,268,664	3,610,066	17,851,226	16,052,403
Utah	253,453	192,264	748,495	705,188	1,054,925
Vermont	38,385	137,879	989,411	176,167	734,706
Virginia	4,424,912	8,139,257	7,610,106	10,594,613	4,990,824
Washington	3,912,918	6,547,146	7,025,426	9,393,811	6,444,715
West Virginia	2,062,009	1,294,909	3,611,783	3,250,884	1,406,937
Wisconsin	343,773	3,197,420	2,974,012	2,700,500	4,297,526
Wyoming	(24,173)	48,047	(48,333)	3,334	132,504
Guam	249,564	738,528	495,276	921,936	182,276
Virgin Islands	298,048	324,363	261,975	198,217	(61,354)
United States	177,743,888	276,767,959	179,841,693	281,847,231	248,779,381

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.

Table D.6b. Adjustments to weighted benefit amounts by State (June 2020 to September 2020)

State	June 2020	July 2020	August 2020	September 2020
Alabama	9,206,197	4,189,629	5,975,334	571,765
Alaska	2,927,686	445,060	-	-
Arizona	12,059,282	23,628,573	-	-
Arkansas	7,235,310	2,363,535	5,264,632	2,753,280
California	-	-	-	-
Colorado	851,550	8,622,840	3,925,069	9,668,906
Connecticut	5,419,703	6,118,655	3,576,488	7,512,978
Delaware	-	-	-	-
District of Columbia	-	-	-	-
Florida	24,077,264	53,205,594	-	-
Georgia	23,281,297	125,213,416	-	-
Hawaii	1,003,871	-	-	-
Idaho	184,158	-	-	-
Illinois	92,737	17,055,373	10,677,954	-
Indiana	29,193,809	-	-	-
Iowa	4,618,072	2,723,874	2,669,355	393,635
Kansas	2,310,964	1,571,363	1,181,147	1,277,709
Kentucky	9,606,236	5,980,184	4,960,485	1,136,416
Louisiana	6,137,603	32,084,513	-	-
Maine	-	-	-	-
Maryland	-	-	-	-
Massachusetts	-	19,241,365	-	-
Michigan	4,524,198	32,650,973	-	-
Minnesota	3,065,422	4,163,697	4,140,668	5,203,013
Mississippi	2,260,251	3,520,260	(613,158)	(493,687)
Missouri	7,870,124	6,917,669	10,879,946	2,717,257
Montana	1,192,074	2,204,124	1,848,564	496,285
Nebraska	925,927	1,023,258	1,889,974	131,822
Nevada	10,744,382	(6,829,487)	11,009,982	(6,687,027)
New Hampshire	213,706	(1,120)	-	-
New Jersey	1,380,509	2,194,329	-	-
New Mexico	(761,169)	14,759,923	2,669,394	-
New York	-	-	-	-
North Carolina	(14,711,326)	9,353,935	(4,235,072)	(18,092,135)
North Dakota	126,131	342,738	-	-
Ohio	122,486,976	-	-	-
Oklahoma	1,272,571	(6,770)	31,969,729	-
Oregon	6,278,865	-	-	-
Pennsylvania	16,261,179	17,955,640	7,691,338	25,418,316
Rhode Island	3,621,183	4,479,834	-	-
South Carolina	(6,186,479)	6,704,924	3,206,163	20,340,491
South Dakota	334,819	-	-	-
Tennessee	68,628,161	82,891,089	62,264,937	54,857,371
Texas	54,170,902	84,234,656	34,003,485	-
Utah	(204,536)	1,029,862	990,556	956,820
Vermont	143,686	76,976	487,881	(261,669)
Virginia	12,769,721	9,463,724	-	-
Washington	-	26,640,339	-	-
West Virginia	2,401,563	2,857,119	1,752,794	1,757,446
Wisconsin	2,880,125	4,265,877	-	-
Wyoming	520,425	13,443	160,352	248,459
Guam	1,048,373	416,516	-	-
Virgin Islands	54,884	(103,799)	-	-
United States	441,518,386	613,663,702	208,347,995	109,907,451

Note: For more details on the adjustments made, see Section II.C, Creation of the SNAP QC database.
- Adjustments are not calculated for States and months that do not have samples in the waiver period SNAP QC database.

Table D.7. Stratification and weight calculation by State, October 2019

State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
		Unedited SNAP QC data			**Edited SNAP QC data**						
	Stratum	a	b	e	g	h	i	j	k	l	m
Alabama	0	1	96	341,033	90	1	0	337,244	2	87	3,876
Alaska	0	1	52	33,787	40	5	0	29,564	0	35	845
Arizona	0	1	101	374,980	73	4	0	354,433	1	68	5,212
Arkansas	0	1	94	158,056	86	7	0	145,191	1	78	1,861
California	0	1	98	2,141,660	70	1	0	2,111,065	0	69	30,595
Colorado	0	1	98	223,238	65	0	0	223,238	1	64	3,488
Connecticut	0	1	99	213,305	82	4	0	202,900	2	76	2,670
Delaware	0	1	78	59,858	59	1	0	58,843	2	56	1,051
District of Columbia	0	1	91	65,717	68	1	0	64,751	0	67	966
Florida	0	1	124	1,513,181	92	1	0	1,496,733	1	90	16,630
Georgia	0	1	116	637,219	102	4	0	612,230	0	98	6,247
Hawaii	0	1	94	79,960	52	2	0	76,885	0	50	1,538
Idaho	0	1	105	64,964	87	0	0	64,964	0	87	747
Illinois	0	1	90	893,077	68	0	0	893,077	0	68	13,133
Indiana	0	1	95	260,085	63	0	0	260,085	1	62	4,195
Iowa	0	1	93	148,694	84	3	0	143,384	0	81	1,770
Kansas	0	1	96	93,728	91	0	0	93,728	0	91	1,030
Kentucky	0	1	85	226,525	73	1	0	223,422	0	72	3,103
Louisiana	0	1	101	374,728	74	0	0	374,728	0	74	5,064
Maine	0	1	88	86,519	83	6	0	80,265	0	77	1,042
Maryland	0	1	90	332,343	52	0	0	332,343	1	51	6,517
Massachusetts	0	1	93	456,617	83	2	0	445,614	0	81	5,501
Michigan	0	1	95	608,410	85	1	0	601,252	0	84	7,158
Minnesota	0	1	91	203,860	74	0	0	203,860	0	74	2,755
Mississippi	0	1	104	206,464	91	2	0	201,926	0	89	2,269

Table D.7. (continued)

	Unedited SNAP QC data			Edited SNAP QC data							
		Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Missouri	0	1	89	318,537	75	2	0	310,043	0	73	4,247
Montana	0	1	77	52,359	62	0	0	52,359	0	62	845
Nebraska	0	1	89	71,869	73	3	0	68,915	0	70	985
Nevada	0	1	98	222,031	69	1	0	218,813	0	68	3,218
New Hampshire	0	1	58	38,855	51	1	0	38,093	0	50	762
New Jersey	0	1	101	344,332	57	0	0	344,332	0	57	6,041
New Mexico	0	1	98	223,168	77	1	0	220,270	0	76	2,898
New York	0	1	92	1,477,129	82	1	0	1,459,115	0	81	18,014
North Carolina	0	1	95	601,618	90	1	0	594,933	0	89	6,685
North Dakota	0	1	41	23,225	38	0	0	23,225	0	38	611
Ohio	0	1	92	685,405	84	1	0	677,245	0	83	8,160
Oklahoma	0	1	99	272,397	90	0	0	272,397	0	90	3,027
Oregon	0	1	102	345,102	83	0	0	345,102	0	83	4,158
Pennsylvania	0	1	89	944,514	73	0	0	944,514	0	73	12,939
Rhode Island	0	1	94	89,024	86	3	0	85,919	0	83	1,035
South Carolina	0	1	103	272,195	91	1	0	269,204	0	90	2,991
South Dakota	0	1	58	37,319	56	2	0	35,986	0	54	666
Tennessee	0	1	109	422,576	85	3	0	407,662	1	81	5,033
Texas	0	1	94	1,441,529	77	1	0	1,422,808	0	76	18,721
Utah	0	1	91	71,282	84	2	0	69,585	0	82	849
Vermont	0	1	57	38,544	54	0	0	38,544	0	54	714
Virginia	0	1	89	340,406	66	2	0	330,091	0	64	5,158
Washington	0	1	96	472,440	68	0	0	472,440	0	68	6,948
West Virginia	0	1	89	161,999	64	3	0	154,405	0	61	2,531
Wisconsin	0	1	92	311,381	84	2	0	303,967	0	82	3,707
Wyoming	0	1	28	11,465	25	1	0	11,006	0	24	459
Guam	0	1	29	15,392	20	0	0	15,392	0	20	770
Virgin Islands	0	1	24	10,517	21	0	0	10,517	0	21	501

Table D.8. Stratification and weight calculation by State, November 2019

State	Stratum	Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
		a	b	e	g	h	i	j	k	l	m
Alabama	0	1	95	339,535	84	0	0	339,535	0	84	4,042
Alaska	0	1	57	37,206	45	6	0	32,245	0	39	827
Arizona	0	1	100	370,704	77	2	0	361,075	0	75	4,814
Arkansas	0	1	94	157,594	85	5	0	148,324	0	80	1,854
California	0	1	100	2,148,970	69	1	0	2,117,826	0	68	31,144
Colorado	0	1	98	221,741	69	2	0	215,314	0	67	3,214
Connecticut	0	1	99	212,893	83	3	0	205,198	0	80	2,565
Delaware	0	1	79	58,485	71	1	0	57,661	1	69	836
District of Columbia	0	1	90	65,263	62	1	0	64,210	0	61	1,053
Florida	0	1	107	1,509,611	89	0	0	1,509,611	1	88	17,155
Georgia	0	1	114	637,644	102	5	0	606,387	0	97	6,251
Hawaii	0	1	93	79,705	52	1	0	78,172	0	51	1,533
Idaho	0	1	106	65,405	80	0	0	65,405	0	80	818
Illinois	0	1	90	897,456	72	2	0	872,527	0	70	12,465
Indiana	0	1	94	257,459	69	2	0	249,996	2	65	3,846
Iowa	0	1	90	147,597	80	4	0	140,217	0	76	1,845
Kansas	0	1	95	93,635	86	3	0	90,369	1	82	1,102
Kentucky	0	1	84	223,282	75	0	0	223,282	0	75	2,977
Louisiana	0	1	100	370,697	78	2	0	361,192	0	76	4,753
Maine	0	1	88	85,974	78	3	0	82,667	0	75	1,102
Maryland	0	1	90	331,108	49	0	0	331,108	0	49	6,757
Massachusetts	0	1	94	456,230	79	1	0	450,455	0	78	5,775
Michigan	0	1	94	604,229	75	2	0	588,116	0	73	8,056
Minnesota	0	1	90	201,739	84	1	0	199,337	0	83	2,402
Mississippi	0	1	104	205,910	75	1	0	203,165	1	73	2,783

Table D.8. (continued)

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Missouri	0	1	89	316,664	71	3	0	303,284	0	68	4,460
Montana	0	1	77	52,371	53	3	0	49,407	0	50	988
Nebraska	0	1	87	70,821	79	1	0	69,925	0	78	896
Nevada	0	1	97	220,804	76	2	0	214,993	0	74	2,905
New Hampshire	0	1	58	38,584	52	1	0	37,842	0	51	742
New Jersey	0	1	92	343,354	53	0	0	343,354	0	53	6,478
New Mexico	0	1	98	222,447	82	1	0	219,734	0	81	2,713
New York	0	1	92	1,476,914	84	1	0	1,459,332	0	83	17,582
North Carolina	0	1	94	602,038	86	1	0	595,038	0	85	7,000
North Dakota	0	1	40	22,884	37	3	0	21,029	0	34	618
Ohio	0	1	91	682,473	79	2	0	665,195	0	77	8,639
Oklahoma	0	1	98	272,455	87	3	0	263,060	0	84	3,132
Oregon	0	1	102	344,537	81	0	0	344,537	1	80	4,307
Pennsylvania	0	1	88	943,674	71	0	0	943,674	0	71	13,291
Rhode Island	0	1	94	89,723	90	4	0	85,735	0	86	997
South Carolina	0	1	102	270,107	87	2	0	263,898	0	85	3,105
South Dakota	0	1	58	37,126	54	0	0	37,126	0	54	688
Tennessee	0	1	109	423,666	86	5	0	399,034	0	81	4,926
Texas	0	1	93	1,413,350	73	0	0	1,413,350	0	73	19,361
Utah	0	1	92	70,868	81	2	0	69,118	0	79	875
Vermont	0	1	57	38,695	52	0	0	38,695	0	52	744
Virginia	0	1	88	338,442	65	4	0	317,615	0	61	5,207
Washington	0	1	95	470,541	70	0	0	470,541	0	70	6,722
West Virginia	0	1	89	161,116	66	0	0	161,116	0	66	2,441
Wisconsin	0	1	92	310,146	82	0	0	310,146	0	82	3,782
Wyoming	0	1	28	11,413	25	1	0	10,956	0	24	457
Guam	0	1	27	15,056	24	0	0	15,056	0	24	627
Virgin Islands	0	1	24	10,284	23	0	0	10,284	0	23	447

Table D.9. Stratification and weight calculation by State, December 2019

State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
		Unedited SNAP QC data			**Edited SNAP QC data**						
	Stratum	**a**	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Alabama	0	1	95	337,577	84	2	0	329,539	3	79	4,171
Alaska	0	1	57	37,124	43	0	0	37,124	0	43	863
Arizona	0	1	99	367,942	72	3	0	352,611	0	69	5,110
Arkansas	0	1	94	157,739	81	2	0	153,844	0	79	1,947
California	0	1	100	2,164,962	78	0	0	2,164,962	0	78	27,756
Colorado	0	1	98	223,076	74	3	0	214,032	1	70	3,058
Connecticut	0	1	98	211,588	82	3	0	203,847	0	79	2,580
Delaware	0	1	83	58,128	76	3	0	55,833	0	73	765
District of Columbia	0	1	90	64,949	59	0	0	64,949	0	59	1,101
Florida	0	1	105	1,491,364	88	1	0	1,474,417	1	86	17,144
Georgia	0	1	112	629,517	104	6	0	593,199	0	98	6,053
Hawaii	0	1	94	79,848	52	0	0	79,848	0	52	1,536
Idaho	0	1	106	66,039	91	0	0	66,039	1	90	734
Illinois	0	1	91	898,666	64	1	0	884,624	0	63	14,042
Indiana	0	1	93	256,294	63	3	0	244,090	2	58	4,208
Iowa	0	1	90	146,820	79	2	0	143,103	0	77	1,858
Kansas	0	1	95	93,229	82	0	0	93,229	0	82	1,137
Kentucky	0	1	83	220,463	75	2	0	214,584	0	73	2,940
Louisiana	0	1	100	369,290	73	4	0	349,055	0	69	5,059
Maine	0	1	88	86,268	85	4	0	82,208	0	81	1,015
Maryland	0	1	89	328,342	45	0	0	328,342	0	45	7,296
Massachusetts	0	1	94	455,739	79	1	0	449,970	0	78	5,769
Michigan	0	1	93	611,076	79	5	0	572,400	0	74	7,735
Minnesota	0	1	89	201,247	79	0	0	201,247	0	79	2,547
Mississippi	0	1	102	203,276	81	2	0	198,257	0	79	2,510
Missouri	0	1	88	312,125	73	0	0	312,125	0	73	4,276

Table D.9. (continued)

		Unedited SNAP QC data			Edited SNAP QC data						
State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
	Stratum	a	b	e	g	h	i	j	k	l	m
Montana	0	1	77	52,428	57	1	0	51,508	0	56	920
Nebraska	0	1	86	70,559	74	1	0	69,606	0	73	954
Nevada	0	1	97	220,014	86	3	0	212,339	0	83	2,558
New Hampshire	0	1	57	38,346	53	0	0	38,346	1	52	737
New Jersey	0	1	91	340,793	47	0	0	340,793	0	47	7,251
New Mexico	0	1	98	222,240	90	2	0	217,301	0	88	2,469
New York	0	1	92	1,477,591)	82	1	0	1,459,572	0	81	18,019
North Carolina	0	1	93	594,121	87	1	0	587,292	0	86	6,829
North Dakota	0	1	42	22,895	40	1	0	22,323	0	39	572
Ohio	0	1	91	682,455	78	2	0	664,956	0	76	8,749
Oklahoma	0	1	98	270,535	82	2	0	263,937	0	80	3,299
Oregon	0	1	102	344,810	69	0	0	344,810	1	68	5,071
Pennsylvania	0	1	88	937,337	70	0	0	937,337	0	70	13,391
Rhode Island	0	1	93	88,881	89	3	0	85,885	0	86	999
South Carolina	0	1	101	268,058	85	1	0	264,904	0	84	3,154
South Dakota	0	1	58	36,906	57	2	0	35,611	0	55	647
Tennessee	0	1	105	408,802	83	6	0	379,250	0	77	4,925
Texas	0	1	92	1,400,723	75	0	0	1,400,723	0	75	18,676
Utah	0	1	91	70,625	84	2	0	68,943	0	82	841
Vermont	0	1	57	38,851	54	2	0	37,412	0	52	719
Virginia	0	1	88	339,433	63	1	0	334,045	0	62	5,388
Washington	0	1	95	470,129	71	0	0	470,129	1	70	6,716
West Virginia	0	1	88	161,043	63	3	0	153,374	0	60	2,556
Wisconsin	0	1	91	309,815	86	2	0	302,610	0	84	3,603
Wyoming	0	1	27	11,551	25	1	0	11,089	0	24	462
Guam	0	1	27	14,859	22	0	0	14,859	0	22	675
Virgin Islands	0	1	23	10,251	19	0	0	10,251	0	19	540

Table D.10. Stratification and weight calculation by State, January 2020

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Alabama	0	1	95	335,156	88	4	0	319,922	0	84	3,809
Alaska	0	1	55	35,508	44	1	0	34,701	0	43	807
Arizona	0	1	100	370,946	81	1	0	366,366	0	80	4,580
Arkansas	0	1	93	156,341	83	3	0	150,690	0	80	1,884
California	0	1	99	2,162,843	70	1	0	2,131,945	0	69	30,898
Colorado	0	1	96	220,705	72	0	0	220,705	0	72	3,065
Connecticut	0	1	98	212,256	81	4	0	201,774	1	76	2,655
Delaware	0	1	79	58,666	65	4	0	55,056	1	60	918
District of Columbia	0	1	89	66,439	64	1	0	65,401	0	63	1,038
Florida	0	1	103	1,469,913	87	2	0	1,436,122	0	85	16,896
Georgia	0	1	112	625,887	97	5	0	593,625	0	92	6,452
Hawaii	0	1	94	79,627	53	2	0	76,622	0	51	1,502
Idaho	0	1	106	66,980	89	0	0	66,980	0	89	753
Illinois	0	1	91	899,422	66	2	0	872,167	1	63	13,844
Indiana	0	1	94	252,176	78	0	0	252,176	0	78	3,233
Iowa	0	1	89	144,049	79	1	0	142,226	0	78	1,823
Kansas	0	1	93	90,957	84	3	0	87,709	0	81	1,083
Kentucky	0	1	98	218,060	94	2	0	213,420	0	92	2,320
Louisiana	0	1	98	363,941	68	1	0	358,589	0	67	5,352
Maine	0	1	88	85,905	81	3	0	82,723	0	78	1,061
Maryland	0	1	87	325,982	51	0	0	325,982	0	51	6,392
Massachusetts	0	1	95	458,378	85	2	0	447,593	0	83	5,393
Michigan	0	1	95	624,163	83	4	0	594,083	0	79	7,520
Minnesota	0	1	89	201,237	78	1	0	198,657	0	77	2,580
Mississippi	0	1	102	200,776	87	2	0	196,160	16	69	2,843
Missouri	0	1	86	310,324	72	3	0	297,394	0	69	4,310

Table D.10. (continued)

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Montana	0	1	78	52,712	60	1	0	51,833	0	59	879
Nebraska	0	1	86	70,063	75	0	0	70,063	0	75	934
Nevada	0	1	97	220,255	82	2	0	214,883	0	80	2,686
New Hampshire	0	1	57	38,294	54	0	0	38,294	0	54	709
New Jersey	0	1	91	339,487	51	0	0	339,487	0	51	6,657
New Mexico	0	1	98	222,306	82	4	0	211,462	0	78	2,711
New York	0	1	92	1,478,960	80	4	0	1,405,012	1	75	18,733
North Carolina	0	1	92	591,077	89	3	0	571,153	0	86	6,641
North Dakota	0	1	41	23,041	33	0	0	23,041	0	33	698
Ohio	0	1	91	684,259	81	0	0	684,259	0	81	8,448
Oklahoma	0	1	99	270,742	91	2	0	264,792	0	89	2,975
Oregon	0	1	101	345,721	72	1	0	340,919	1	70	4,870
Pennsylvania	0	1	89	938,827	68	1	0	925,021	0	67	13,806
Rhode Island	0	1	93	88,183	83	4	0	83,933	0	79	1,062
South Carolina	0	1	100	266,299	93	0	0	266,299	0	93	2,863
South Dakota	0	1	58	37,117	56	1	0	36,454	0	55	663
Tennessee	0	1	107	414,921	89	2	0	405,597	0	87	4,662
Texas	0	1	91	1,399,712	75	0	0	1,399,712	0	75	18,663
Utah	0	1	91	71,095	87	2	0	69,461	0	85	817
Vermont	0	1	58	39,146	54	0	0	39,146	0	54	725
Virginia	0	1	88	335,459	66	4	0	315,128	0	62	5,083
Washington	0	1	95	471,226	64	1	0	463,863	0	63	7,363
West Virginia	0	1	86	162,147	68	0	0	162,147	0	68	2,385
Wisconsin	0	1	91	309,836	83	3	0	298,637	0	80	3,733
Wyoming	0	1	28	11,660	25	0	0	11,660	0	25	466
Guam	0	1	26	14,258	20	0	0	14,258	0	20	713
Virgin Islands	0	1	22	10,026	20	0	0	10,026	0	20	501

Table D.11. Stratification and weight calculation by State, February 2020

State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
	Stratum	**a**	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Alabama	0	1	94	334,581	81	1	0	330,450	1	79	4,183
Alaska	0	1	55	35,286	37	3	0	32,425	1	33	983
Arizona	0	1	100	371,225	80	7	0	338,743	0	73	4,640
Arkansas	0	1	93	154,942	82	1	0	153,052	0	81	1,890
California	0	1	102	2,162,336	71	0	0	2,162,336	0	71	30,455
Colorado	0	1	97	219,519	69	3	0	209,975	0	66	3,181
Connecticut	0	1	98	212,069	80	2	0	206,767	1	77	2,685
Delaware	0	1	78	56,868	60	3	0	54,025	0	57	948
District of Columbia	0	1	89	64,245	67	0	0	64,245	1	66	973
Florida	0	1	99	1,447,669	77	0	0	1,447,669	0	77	18,801
Georgia	0	1	111	626,808	97	5	0	594,498	0	92	6,462
Hawaii	0	1	93	78,954	45	0	0	78,954	0	45	1,755
Idaho	0	1	109	67,857	83	1	0	67,039	0	82	818
Illinois	0	1	90	887,753	71	2	0	862,746	0	69	12,504
Indiana	0	1	95	256,449	74	2	0	249,518	0	72	3,466
Iowa	0	1	87	142,176	78	1	0	140,353	0	77	1,823
Kansas	0	1	92	90,654	80	3	0	87,254	0	77	1,133
Kentucky	0	1	98	216,436	95	1	0	214,158	0	94	2,278
Louisiana	0	1	100	364,769	85	1	0	360,478	0	84	4,291
Maine	0	1	88	85,566	86	1	0	84,571	0	85	995
Maryland	0	1	87	322,413	46	0	0	322,413	0	46	7,009
Massachusetts	0	1	94	458,066	75	0	0	458,066	1	74	6,190
Michigan	0	1	97	628,909	81	1	0	621,145	0	80	7,764
Minnesota	0	1	90	200,779	79	1	0	198,237	0	78	2,542
Mississippi	0	1	101	199,597	88	4	0	190,524	1	83	2,295
Missouri	0	1	86	309,923	69	2	0	300,940	0	67	4,492

Table D.11. (continued)

		Unedited SNAP QC data			**Edited SNAP QC data**						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	**Stratum**	**a**	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Montana	0	1	77	52,809	61	0	0	52,809	0	61	866
Nebraska	0	1	85	69,986	77	3	0	67,259	0	74	909
Nevada	0	1	97	219,544	82	2	0	214,189	0	80	2,677
New Hampshire	0	1	57	38,180	52	2	0	36,712	0	50	734
New Jersey	0	1	90	338,447	38	0	0	338,447	0	38	8,907
New Mexico	0	1	98	222,070	84	1	0	219,426	0	83	2,644
New York	0	1	92	1,474,315	80	0	0	1,474,315	1	79	18,662
North Carolina	0	1	92	589,058	89	1	0	582,439	0	88	6,619
North Dakota	0	1	41	22,907	39	0	0	22,907	0	39	587
Ohio	0	1	91	679,499	85	1	0	671,505	0	84	7,994
Oklahoma	0	1	98	270,538	94	2	0	264,782	0	92	2,878
Oregon	0	1	101	346,178	77	1	0	341,682	0	76	4,496
Pennsylvania	0	1	88	941,031	74	0	0	941,031	0	74	12,717
Rhode Island	0	1	94	88,420	90	5	0	83,508	0	85	982
South Carolina	0	1	100	264,645	93	3	0	256,108	0	90	2,846
South Dakota	0	1	57	37,002	56	0	0	37,002	0	56	661
Tennessee	0	1	105	404,884	87	5	0	381,615	0	82	4,654
Texas	0	1	91	1,368,578	77	1	0	1,350,804	1	75	18,011
Utah	0	1	92	71,395	80	2	0	69,610	0	78	892
Vermont	0	1	57	38,924	55	1	0	38,216	0	54	708
Virginia	0	1	87	333,669	64	0	0	333,669	0	64	5,214
Washington	0	1	95	470,863	80	0	0	470,863	0	80	5,886
West Virginia	0	1	89	160,446	65	0	0	160,446	0	65	2,468
Wisconsin	0	1	92	309,792	86	1	0	306,190	0	85	3,602
Wyoming	0	1	28	11,527	26	1	0	11,084	0	25	443
Guam	0	1	26	14,207	18	0	0	14,207	0	18	789
Virgin Islands	0	1	27	9,731	24	0	0	9,731	0	24	405

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Table D.12. Stratification and weight calculation by State, March 2020

Table omitted because there are no sample data for March 2020 through May 2020.

Table D.13. Stratification and weight calculation by State, April 2020

Table omitted because there are no sample data for March 2020 through May 2020.

Table D.14. Stratification and weight calculation by State, May 2020

Table omitted because there are no sample data for March 2020 through May 2020.

Table D.15. Stratification and weight calculation by State, June 2020

		Unedited SNAP QC data			Edited SNAP QC data						
State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualifica tion rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
	Stratum	a	b	e	g	h	i	j	k	l	m
Alabama	0	1	103	365,109	90	1	0	361,052	0	89	4,057
Alaska	0	1	50	39,081	33	2	0	36,712	1	30	1,224
Arizona	0	1	81	425,345	60	3	0	404,078	0	57	7,089
Arkansas	0	1	114	187,994	91	8	0	171,467	1	82	2,091
California	0	1	0	2,592,246	0	0	0	0	0	0	0
Colorado	0	1	121	276,588	82	1	0	273,215	1	80	3,415
Connecticut	0	1	106	225,622	87	6	0	210,062	0	81	2,593
Delaware	0	1	0	59,929	0	0	0	0	0	0	0
District of Columbia	0	1	0	74,750	0	0	0	0	0	0	0
Florida	0	1	158	2,097,891	132	3	0	2,050,212	0	129	15,893
Georgia	0	1	96	846,816	87	4	0	807,882	3	80	10,099
Hawaii	0	1	77	97,680	37	2	0	92,400	0	35	2,640
Idaho	0	1	112	70,386	87	0	0	70,386	0	87	809
Illinois	0	1	94	1,079,085	80	3	0	1,038,619	0	77	13,489
Indiana	0	1	113	307,900	65	2	0	298,426	0	63	4,737
Iowa	0	1	94	153,003	84	2	0	149,360	0	82	1,821
Kansas	0	1	103	101,156	92	4	0	96,758	0	88	1,100
Kentucky	0	1	126	284,961	114	8	0	264,964	1	105	2,523
Louisiana	0	1	49	406,485	41	3	0	376,742	0	38	9,914
Maine	0	1	0	94,113	0	0	0	0	0	0	0
Maryland	0	1	0	460,297	0	0	0	0	0	0	0
Massachusetts	0	1	0	515,524	0	0	0	0	0	0	0
Michigan	0	1	116	741,309	96	6	0	694,977	0	90	7,722
Minnesota	0	1	92	217,581	87	1	0	215,080	0	86	2,501

Table D.15. (continued)

State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualifica tion rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
		a	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Mississippi	0	1	107	211,699	97	4	0	202,969	0	93	2,182
Missouri	0	1	103	372,799	72	4	0	352,088	0	68	5,178
Montana	0	1	82	55,564	59	2	0	53,680	0	57	942
Nebraska	0	1	85	70,636	74	3	0	67,772	0	71	955
Nevada	0	1	108	250,508	85	1	0	247,561	0	84	2,947
New Hampshire	0	1	55	38,476	49	1	0	37,691	0	48	785
New Jersey	0	1	100	367,534	26	0	0	367,534	0	26	14,136
New Mexico	0	1	98	248,954	84	4	0	237,099	0	80	2,964
New York	0	1	0	1,588,996	0	0	0	0	0	0	0
North Carolina	0	1	108	687,480	100	5	0	653,106	0	95	6,875
North Dakota	0	1	39	22,556	35	0	0	22,556	0	35	644
Ohio	0	1	103	715,721	88	1	0	707,588	0	87	8,133
Oklahoma	0	1	83	289,572	81	0	0	289,572	0	81	3,575
Oregon	0	1	86	411,918	74	0	0	411,918	0	74	5,566
Pennsylvania	0	1	96	1,022,331	71	1	0	1,007,932	0	70	14,399
Rhode Island	0	1	93	90,177	86	8	0	81,788	0	78	1,049
South Carolina	0	1	113	302,383	103	1	0	299,447	0	102	2,936
South Dakota	0	1	58	36,955	55	2	0	35,611	1	52	685
Tennessee	0	1	112	433,727	90	6	0	404,812	1	83	4,877
Texas	0	1	110	1,713,806	85	2	0	1,673,481	0	83	20,162
Utah	0	1	89	69,837	79	0	0	69,837	0	79	884
Vermont	0	1	58	39,328	52	0	0	39,328	0	52	756
Virginia	0	1	98	384,686	58	2	0	371,421	1	55	6,753
Washington	0	1	0	532,312	0	0	0	0	0	0	0
West Virginia	0	1	91	163,048	75	3	0	156,526	0	72	2,174
Wisconsin	0	1	106	361,867	99	2	0	354,557	0	97	3,655
Wyoming	0	1	29	12,496	28	3	0	11,157	0	25	446
Guam	0	1	47	17,000	21	3	0	14,571	0	18	810
Virgin Islands	0	1	32	12,065	32	0	0	12,065	0	32	377

Table D.16. Stratification and weight calculation by State, July 2020

State	Stratum	Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
			Unedited SNAP QC data					**Edited SNAP QC data**			
	Stratum	**a**	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Alabama	0	1	102	361,924	89	0	0	361,924	0	89	4,067
Alaska	0	1	65	39,112	37	0	0	39,112	0	37	1,057
Arizona	0	1	50	429,530	35	3	0	392,713	0	32	12,272
Arkansas	0	1	116	196,036	81	5	0	183,935	1	75	2,452
California	0	1	0	2,513,681	0	0	0	0	0	0	0
Colorado	0	1	122	281,464	80	9	0	249,799	1	70	3,569
Connecticut	0	1	106	225,789	88	10	0	200,131	0	78	2,566
Delaware	0	1	0	59,181	0	0	0	0	0	0	0
District of Columbia	0	1	0	76,605	0	0	0	0	0	0	0
Florida	0	1	159	2,133,460	113	4	0	2,057,939	0	109	18,880
Georgia	0	1	99	876,044	86	14	0	733,432	0	72	10,187
Hawaii	0	1	0	97,382	0	0	0	0	0	0	0
Idaho	0	1	0	68,297	0	0	0	0	0	0	0
Illinois	0	1	57	1,061,701	55	2	0	1,023,094	0	53	19,304
Indiana	0	1	0	298,581	0	0	0	0	0	0	0
Iowa	0	1	91	150,663	77	3	0	144,793	0	74	1,957
Kansas	0	1	101	99,119	88	6	0	92,361	0	82	1,126
Kentucky	0	1	92	284,961	85	6	0	264,846	0	79	3,352
Louisiana	0	1	118	411,585	84	15	0	338,088	0	69	4,900
Maine	0	1	0	92,073	0	0	0	0	0	0	0
Maryland	0	1	0	469,129	0	0	0	0	0	0	0
Massachusetts	0	1	102	509,835	81	2	0	497,246	0	79	6,294
Michigan	0	1	110	696,773	88	11	0	609,676	0	77	7,918
Minnesota	0	1	92	217,581	88	1	0	215,108	0	87	2,473
Mississippi	0	1	99	195,985	84	2	0	191,319	0	82	2,333
Missouri	0	1	65	375,577	61	3	0	357,106	0	58	6,157

Table D.16. (continued)

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Montana	0	1	82	55,981	59	4	0	52,186	0	55	949
Nebraska	0	1	83	69,047	70	2	0	67,074	0	68	986
Nevada	0	1	105	247,657	85	2	0	241,830	0	83	2,914
New Hampshire	0	1	41	37,589	37	1	0	36,573	0	36	1,016
New Jersey	0	1	56	373,825	18	0	0	373,825	0	18	20,768
New Mexico	0	1	98	249,564	83	5	0	234,530	0	78	3,007
New York	0	1	0	1,591,841	0	0	0	0	0	0	0
North Carolina	0	1	86	702,273	83	2	0	685,351	0	81	8,461
North Dakota	0	1	38	21,731	37	0	0	21,731	0	37	587
Ohio	0	1	0	779,836	0	0	0	0	0	0	0
Oklahoma	0	1	52	295,545	50	0	0	295,545	0	50	5,911
Oregon	0	1	0	418,178	0	0	0	0	0	0	0
Pennsylvania	0	1	93	995,866	66	1	0	980,777	0	65	15,089
Rhode Island	0	1	91	88,827	87	14	0	74,533	0	73	1,021
South Carolina	0	1	90	298,413	81	2	0	291,045	0	79	3,684
South Dakota	0	1	0	36,887	0	0	0	0	0	0	0
Tennessee	0	1	109	423,125	77	9	0	373,669	0	68	5,495
Texas	0	1	110	1,716,800	76	5	0	1,603,853	0	71	22,589
Utah	0	1	88	68,787	82	2	0	67,109	0	80	839
Vermont	0	1	55	38,469	53	1	0	37,743	0	52	726
Virginia	0	1	100	390,134	58	3	0	369,955	0	55	6,726
Washington	0	1	87	537,152	60	2	0	519,247	0	58	8,953
West Virginia	0	1	86	162,813	62	1	0	160,187	0	61	2,626
Wisconsin	0	1	106	362,046	97	2	0	354,581	0	95	3,732
Wyoming	0	1	29	12,326	26	0	0	12,326	0	26	474
Guam	0	1	48	17,260	23	1	0	16,510	0	22	750
Virgin Islands	0	1	21	12,301	21	0	0	12,301	0	21	586

Table D.17. Stratification and weight calculation by State, August 2020

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	**Stratum**	**a**	**b**	**e**	**g**	**h**	**i**	**j**	**k**	**l**	**m**
Alabama	0	1	60	362,459	56	1	0	355,987	0	55	6,472
Alaska	0	1	0	40,012	0	0	0	0	0	0	0
Arizona	0	1	0	436,957	0	0	0	0	0	0	0
Arkansas	0	1	113	190,222	85	6	0	176,795	0	79	2,238
California	0	1	0	2,488,992	0	0	0	0	0	0	0
Colorado	0	1	119	279,026	78	2	0	271,871	0	76	3,577
Connecticut	0	1	104	222,119	78	2	0	216,424	0	76	2,848
Delaware	0	1	0	60,931	0	0	0	0	0	0	0
District of Columbia	0	1	0	78,560	0	0	0	0	0	0	0
Florida	0	1	0	2,164,425	0	0	0	0	0	0	0
Georgia	0	1	0	893,828	0	0	0	0	0	0	0
Hawaii	0	1	0	97,265	0	0	0	0	0	0	0
Idaho	0	1	0	66,989	0	0	0	0	0	0	0
Illinois	0	1	20	1,072,385	20	0	0	1,072,385	0	20	53,619
Indiana	0	1	0	289,261	0	0	0	0	0	0	0
Iowa	0	1	93	152,106	75	2	0	148,050	0	73	2,028
Kansas	0	1	101	98,813	91	4	0	94,470	0	87	1,086
Kentucky	0	1	84	277,136	79	0	0	277,136	0	79	3,508
Louisiana	0	1	0	411,534	0	0	0	0	0	0	0
Maine	0	1	0	91,786	0	0	0	0	0	0	0
Maryland	0	1	0	459,185	0	0	0	0	0	0	0
Massachusetts	0	1	0	517,289	0	0	0	0	0	0	0
Michigan	0	1	0	676,272	0	0	0	0	0	0	0
Minnesota	0	1	94	217,581	90	2	0	212,745	0	88	2,418
Mississippi	0	1	55	197,836	47	0	0	197,836	0	47	4,209
Missouri	0	1	29	372,464	29	2	0	346,777	0	27	12,844

Table D.17. (continued)

State	Stratum	Sampling interval a	Stratum sampling size b	SNAP units in State (program ops data) e	Units with complete reviews g	Ineligible units h	Disqualification rate i	Adjusted SNAP units in State j	Failing units k	Stratum sampling size l	Stratum-specific units weight m
Montana	0	1	68	51,747	41	1	0	50,484	0	40	1,262
Nebraska	0	1	86	71,371	79	1	0	70,468	0	78	903
Nevada	0	1	109	251,790	93	4	0	240,960	0	89	2,707
New Hampshire	0	1	0	37,153	0	0	0	0	0	0	0
New Jersey	0	1	0	380,485	0	0	0	0	0	0	0
New Mexico	0	1	98	248,535	83	4	0	236,557	0	79	2,994
New York	0	1	0	1,592,924	0	0	0	0	0	0	0
North Carolina	0	1	89	721,002	81	2	0	703,199	0	79	8,901
North Dakota	0	1	0	22,070	0	0	0	0	0	0	0
Ohio	0	1	0	702,728	0	0	0	0	0	0	0
Oklahoma	0	1	11	292,559	11	0	0	292,559	0	11	26,596
Oregon	0	1	0	416,805	0	0	0	0	0	0	0
Pennsylvania	0	1	94	997,132	64	0	0	997,132	0	64	15,580
Rhode Island	0	1	0	87,231	0	0	0	0	0	0	0
South Carolina	0	1	90	293,921	78	1	0	290,153	0	77	3,768
South Dakota	0	1	0	36,959	0	0	0	0	0	0	0
Tennessee	0	1	110	426,474	82	3	0	410,871	1	78	5,268
Texas	0	1	111	1,729,330	88	4	0	1,650,724	0	84	19,651
Utah	0	1	90	69,988	85	4	0	66,694	0	81	823
Vermont	0	1	57	39,085	53	1	0	38,348	0	52	737
Virginia	0	1	0	388,954	0	0	0	0	0	0	0
Washington	0	1	0	537,955	0	0	0	0	0	0	0
West Virginia	0	1	88	162,080	68	2	0	157,313	0	66	2,384
Wisconsin	0	1	0	369,312	0	0	0	0	0	0	0
Wyoming	0	1	29	12,785	27	1	0	12,311	0	26	474
Guam	0	1	0	16,864	0	0	0	0	0	0	0
Virgin Islands	0	1	0	12,430	0	0	0	0	0	0	0

Table D.18. Stratification and weight calculation by State, September 2020

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Alabama	0	1	60	364,426	56	0	0	364,426	1	55	6,626
Alaska	0	1	0	51,351	0	0	0	0	0	0	0
Arizona	0	1	0	411,277	0	0	0	0	0	0	0
Arkansas	0	1	111	187,805	86	6	0	174,702	0	80	2,184
California	0	1	0	2,458,340	0	0	0	0	0	0	0
Colorado	0	1	116	279,026	73	3	0	267,559	1	69	3,878
Connecticut	0	1	102	219,073	74	3	0	210,192	0	71	2,960
Delaware	0	1	0	63,261	0	0	0	0	0	0	0
District of Columbia	0	1	0	80,454	0	0	0	0	0	0	0
Florida	0	1	0	2,200,841	0	0	0	0	0	0	0
Georgia	0	1	0	911,938	0	0	0	0	0	0	0
Hawaii	0	1	0	97,509	0	0	0	0	0	0	0
Idaho	0	1	0	65,449	0	0	0	0	0	0	0
Illinois	0	1	0	1,101,816	0	0	0	0	0	0	0
Indiana	0	1	0	300,326	0	0	0	0	0	0	0
Iowa	0	1	95	155,627	83	1	0	153,752	0	82	1,875
Kansas	0	1	99	97,896	83	2	0	95,537	0	81	1,179
Kentucky	0	1	94	281,413	86	0	0	281,413	0	86	3,272
Louisiana	0	1	0	425,060	0	0	0	0	0	0	0
Maine	0	1	0	89,837	0	0	0	0	0	0	0
Maryland	0	1	0	439,353	0	0	0	0	0	0	0
Massachusetts	0	1	0	520,589	0	0	0	0	0	0	0
Michigan	0	1	0	682,272	0	0	0	0	0	0	0
Minnesota	0	1	94	217,581	85	4	0	207,342	0	81	2,560
Mississippi	0	1	55	201,659	49	0	0	201,659	0	49	4,115
Missouri	0	1	12	362,014	11	0	0	362,014	0	11	32,910

Table D.18. (continued)

		Unedited SNAP QC data			Edited SNAP QC data						
		Sampling interval	Stratum sampling size	SNAP units in State (program ops data)	Units with complete reviews	Ineligible units	Disqualification rate	Adjusted SNAP units in State	Failing units	Stratum sampling size	Stratum-specific units weight
State	Stratum	a	b	e	g	h	i	j	k	l	m
Montana	0	1	75	47,512	37	2	0	44,944	1	34	1,322
Nebraska	0	1	79	71,489	64	2	0	69,255	0	62	1,117
Nevada	0	1	92	252,316	76	3	0	242,356	0	73	3,320
New Hampshire	0	1	0	36,965	0	0	0	0	0	0	0
New Jersey	0	1	0	390,276	0	0	0	0	0	0	0
New Mexico	0	1	0	246,410	0	0	0	0	0	0	0
New York	0	1	0	1,608,752	0	0	0	0	0	0	0
North Carolina	0	1	91	737,124	82	1	0	728,135	0	81	8,989
North Dakota	0	1	0	22,639	0	0	0	0	0	0	0
Ohio	0	1	0	701,745	0	0	0	0	0	0	0
Oklahoma	0	1	0	292,559	0	0	0	0	0	0	0
Oregon	0	1	0	396,809	0	0	0	0	0	0	0
Pennsylvania	0	1	95	1,007,323	78	1	0	994,409	0	77	12,914
Rhode Island	0	1	0	84,756	0	0	0	0	0	0	0
South Carolina	0	1	90	292,875	77	4	0	277,661	0	73	3,804
South Dakota	0	1	0	37,057	0	0	0	0	0	0	0
Tennessee	0	1	111	429,935	87	7	0	395,343	0	80	4,942
Texas	0	1	0	1,756,259	0	0	0	0	0	0	0
Utah	0	1	91	71,189	85	2	0	69,514	0	83	838
Vermont	0	1	57	39,308	57	0	0	39,308	0	57	690
Virginia	0	1	0	386,282	0	0	0	0	0	0	0
Washington	0	1	0	535,159	0	0	0	0	0	0	0
West Virginia	0	1	87	162,544	64	3	0	154,925	0	61	2,540
Wisconsin	0	1	0	369,893	0	0	0	0	0	0	0
Wyoming	0	1	30	12,580	27	1	0	12,114	0	26	466
Guam	0	1	0	16,482	0	0	0	0	0	0	0
Virgin Islands	0	1	0	12,611	0	0	0	0	0	0	0

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APPENDIX E

State and Region Codes

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Table E.1. State FIPS codes (STATE)

State	FIPS code	State	FIPS code
Alabama	01	Montana	30
Alaska	02	Nebraska	31
Arizona	04	Nevada	32
Arkansas	05	New Hampshire	33
California	06	New Jersey	34
Colorado	08	New Mexico	35
Connecticut	09	New York	36
Delaware	10	North Carolina	37
District of Columbia	11	North Dakota	38
Florida	12	Ohio	39
Georgia	13	Oklahoma	40
Guam	66	Oregon	41
Hawaii	15	Pennsylvania	42
Idaho	16	Rhode Island	44
Illinois	17	South Carolina	45
Indiana	18	South Dakota	46
Iowa	19	Tennessee	47
Kansas	20	Texas	48
Kentucky	21	Utah	49
Louisiana	22	Vermont	50
Maine	23	Virgin Islands	78
Maryland	24	Virginia	51
Massachusetts	25	Washington	53
Michigan	26	West Virginia	54
Minnesota	27	Wisconsin	55
Mississippi	28	Wyoming	56
Missouri	29		

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table E.2. SNAP region codes (REGIONCD)

REGIONCD = 1 (Northeast)	REGIONCD = 5 (Southwest)
Connecticut	Arizona
Maine	Arkansas
Massachusetts	Louisiana
New Hampshire	New Mexico
New York	Oklahoma
Rhode Island	Texas
Vermont	Utah
Virgin Islands	**REGIONCD = 6 (Mountain Plains)**
REGIONCD = 2 (Mid-Atlantic)	Colorado
Delaware	Kansas
District of Columbia	Missouri
Maryland	Montana
New Jersey	Nebraska
Pennsylvania	North Dakota
Virginia	South Dakota
West Virginia	Wyoming
REGIONCD = 3 (Southeast)	**REGIONCD = 7 (West)**
Alabama	Alaska
Florida	California
Georgia	Guam
Kentucky	Hawaii
Mississippi	Idaho
North Carolina	Nevada
South Carolina	Oregon
Tennessee	Washington
REGIONCD = 4 (Midwest)	
Illinois	
Indiana	
Iowa	
Michigan	
Minnesota	
Ohio	
Wisconsin	

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table E.3. Census region codes (REGION)

REGION = 1 (Northeast)	REGION = 3 (South)
Connecticut	Alabama
Maine	Arkansas
Massachusetts	Delaware
New Hampshire	District of Columbia
New Jersey	Florida
New York	Georgia
Pennsylvania	Kentucky
Rhode Island	Louisiana
Vermont	Maryland
REGION = 2 (Midwest)	Mississippi
Illinois	North Carolina
Indiana	Oklahoma
Iowa	South Carolina
Kansas	Tennessee
Michigan	Texas
Minnesota	Virginia
Missouri	West Virginia
Nebraska	**REGION = 4 (West)**
North Dakota	Alaska
Ohio	Arizona
South Dakota	California
Wisconsin	Colorado
	Guam
	Hawaii
	Idaho
	Montana
	Nevada
	New Mexico
	Oregon
	Utah
	Virgin Islands
	Washington
	Wyoming

Source: U.S. Census Bureau.

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APPENDIX F

FY 2020 SNAP Parameters

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Table F.1. SNAP gross income screen, FY 2020

| Unit size | Gross income screen (dollars per month) | | |
	Contiguous United States, Guam, and the Virgin Islands	Alaska	Hawaii
1	1,354	1,690	1,558
2	1,832	2,290	2,109
3	2,311	2,889	2,659
4	2,790	3,488	3,209
5	3,269	4,087	3,760
6	3,748	4,686	4,310
7	4,227	5,285	4,860
8	4,705	5,884	5,411
Each additional person	+479	+600	+551

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: The FY 2020 SNAP gross monthly income limits were based on the 2019 Federal poverty guidelines issued by the U.S. Department of Health and Human Services. FNS derived the FY 2020 gross income limits by multiplying the 2019 poverty guidelines by 130 percent, dividing the results by 12, and then rounding up to the nearest dollar.

Table F.2. SNAP net income screen, FY 2020

| Unit size | Net income screen (dollars per month) | | |
	Contiguous United States, Guam, and the Virgin Islands	Alaska	Hawaii
1	1,041	1,300	1,199
2	1,410	1,761	1,622
3	1,778	2,222	2,045
4	2,146	2,683	2,469
5	2,515	3,144	2,892
6	2,883	3,605	3,315
7	3,251	4,065	3,739
8	3,620	4,526	4,162
Each additional person	+369	+461	+424

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: The FY 2020 SNAP net monthly income limits were based on the 2019 Federal poverty guidelines issued by the U.S. Department of Health and Human Services. FNS derived the FY 2020 net income limits by dividing the 2019 poverty guidelines by 12 and rounding up to the nearest dollar.

Table F.3. Deduction amounts, FY 2020

Deduction	Contiguous United States	Alaska	Hawaii	Guam	Virgin Islands
Standard deduction (dollars)					
1 to 2 people	167	286	236	336	147
3 people	167	286	236	336	148
4 people	178	286	236	357	178
5 people	209	286	240	418	209
6 or more people	240	300	275	479	240
Maximum excess shelter expense deduction (dollars)	569	908	766	667	448
Homeless household shelter deduction (dollars)[a]	152.06	152.06	152.06	152.06	152.06
Earned income deduction	20%	20%	20%	20%	20%

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: MFIP relies on a separate SNAP benefit calculation procedure that does not include any deductions except for the earnings deduction, which was 50 percent. As a result, all the other deductions are coded as missing for MFIP participants in the SNAP QC database. Similarly, deductions are not used to assign benefits to units participating in SSI-CAP in States with standardized benefit amounts. Consequently, all deductions are coded as missing for SSI-CAP participants in these States. SSI-CAP States without standardized benefits (or standard shelter expenses) use some deductions, but not all. The deductions that are not applicable are coded as missing.

[a] In FY 2020, the value of the mandated homeless shelter deduction was $152.06, and States appeared to consistently round down the value in the SNAP QC data. As such, we identified households as receiving the homeless shelter deduction if the reported shelter deduction (SHELDDED) was $152.

Table F.4. Standard medical deduction demonstration, FY 2020

State	If medical expenses are less than or equal to (dollars)	Then medical expense deduction is[a] (dollars)
Alabama	175	140
Arkansas	138	103
California	155	120
Colorado	200	165
Georgia		
10/2019–2/2020	185	150
3/2020–9/2020	136	101
Idaho	179	144
Illinois[b]	200	165
Iowa		
10/2019–2/2020	140	105
3/2020–9/2020	145	110
Kansas	175	140
Massachusetts	190	155
Missouri	170	135
New Hampshire	150	115
North Dakota	175	140
Oregon	205	170
Rhode Island	176	141
South Carolina	210	175
South Dakota	200	165
Texas	137	102
Vermont	151	116
Virginia	235	200
Wyoming	138	103

Source: U.S. Department of Agriculture, Food and Nutrition Service.

[a] If medical expenses exceed the amount in column 2, the medical expense deduction is equal to the actual medical expenses minus $35.

[b] In Illinois, the standard medical deduction for residents of group homes or supportive living facilities was $485.

Table F.5. Maximum monthly SNAP benefit, FY 2020

Unit size	Maximum SNAP benefit (dollars)						
	Contiguous United States	Alaska Urban	Alaska Rural I	Alaska Rural II	Hawaii	Guam	Virgin Islands
1	194	238	304	370	356	285	249
2	355	437	558	679	654	524	457
3	509	627	799	973	936	750	654
4	646	796	1,015	1,235	1,189	953	831
5	768	945	1,205	1,467	1,412	1,131	987
6	921	1,134	1,447	1,761	1,695	1,358	1,184
7	1,018	1,254	1,599	1,946	1,873	1,501	1,309
8	1,164	1,433	1,827	2,224	2,141	1,715	1,496
Each additional person	+146	+179	+228	+278	+268	+214	+187

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: These maximum benefit values are based on the cost of the Thrifty Food Plan in June 2019 for a reference family of four, rounded to the lowest dollar increment.

Table F.6. Minimum monthly SNAP benefit, FY 2020

Unit size	Minimum SNAP benefit (dollars)						
	Contiguous United States	Alaska Urban	Alaska Rural I	Alaska Rural II	Hawaii	Guam	Virgin Islands
1 to 2 people	16	19	24	30	29	23	20

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: The minimum benefit, applicable to one- and two-person units, is equal to 8 percent of the maximum benefit for single-person units.

Table F.7. Standard utility allowances, FY 2020

State	Standard utility allowances (dollars)							
	HCSUA[a]	LUA[b]	Telephone allowance[c]	Electricity[d]	Water[d]	Sewer[d]	Trash[d]	Other standards[e]
Alabama	384	371	41					
Alaska[f]								
Central	401		34	108	51	53	39	116
Southeast	386		21	80	46	74	27	138
South central	479		23	132	55	71	47	151
Northern	591		24	140	33	39	84	271
Southwest	764		20	175	58	62	13	436
Northwest	843		31	161	68	58	23	502
Arizona								
1 to 3 people	289		36					
4 or more people	390		36					
Arkansas	286		25					
California	432	135	18					
Colorado	485	310	79	58	58	58	58	58
Connecticut	736	324	27					
Delaware	434	301	37	79	79	79	79	79
District of Columbia	327	292	69	74	74	74	74	74
Florida	361	291	50					
Georgia								
10/2019–3/2020	378	329	43					
4/2020–9/2020	371	329	43					
Hawaii								
1 person			27	233	46	91		
2 people			27	254	51	91		
3 people			27	293	57	91		
4 to 5 people			27	364	67	91		
6 people			27	428	77	91		
7 or more people			27	485	92	91		
Idaho	344	286	31	127	127	127	127	127
Illinois	478	328	30	74	74	74	74	74
Indiana								
10/2019–2/2020	419	251	30	55	55	55	55	55
3/2020–9/2020	412	250	31	55	55	55	55	55
Iowa	485	301	28					
Kansas	364	247	35					
Kentucky	328	279	38					
Louisiana	350	193	41					
Maine	782	264	45					
Maryland								

	Standard utility allowances (dollars)							
State	HCSUA[a]	LUA[b]	Telephone allowance[c]	Electricity[d]	Water[d]	Sewer[d]	Trash[d]	Other standards[e]
10/2019–12/2019	404	247	40					
1/2020–9/2020	392	240	40					
Massachusetts	646	396	45					
Michigan	518		30	126	94	94	22	30
Minnesota	490		49	143				
Mississippi	286	207	33					
Missouri	394	311	63	128	128	128	128	128
Montana	546	198	31	167	167	167	167	167
Nebraska	490	256	46	52	52	52	52	52
Nevada	280	246	25	56	56	56	56	56
New Hampshire	718	262	28	154				
New Jersey	548	330	29					
New Mexico	340	136	44					
New York								
New York City	800	316	30					
Long Island	744	292	30					
Rest of New York	661	268	30					
North Carolina								
1 person	434	254	38					
2 people	482	282	38					
3 people	530	310	38					
4 people	578	338	38					
5 or more people	626	366	38					
North Dakota	611	233	32	200	200	200	200	200
Ohio	548	355	38	79	79	79	79	79
Oklahoma	355	305	48					
Oregon	444	337	68	54	54	54	54	54
Pennsylvania	594	308	33	58	58	58	58	58
Rhode Island	636		23					
South Carolina	298	212	25					
South Dakota	750	210	48	87	87	87	87	87
Tennessee								
1 person	317	136	28					
2 people	328	136	28					
3 people	341	136	28					
4 people	353	136	28					
5 people	364	136	28					
6 people	376	136	28					
7 people	387	136	28					
8 people	399	136	28					
9 people	413	136	28					

State	Standard utility allowances (dollars)							
	HCSUA[a]	LUA[b]	Telephone allowance[c]	Electricity[d]	Water[d]	Sewer[d]	Trash[d]	Other standards[e]
10 or more people	423	136	28					
Texas	355	324	38					
Utah	364	290	71					
Vermont	822	235	36					
Virginia								
1 to 3 people	303		61					
4 or more people	379		61					
Washington	437	343	58					
West Virginia	412	267	73	73	73	73	73	73
Wisconsin	456	318	30	141	87	87	22	36
Wyoming	397	270	52					
Guam								
1 person			28	97	36	27	30	30
2 to 3 people			28	111	47	27	30	30
4 people			28	111	65	27	30	60
5 people			28	132	79	27	30	60
6 people			28	149	103	27	30	60
7 people			28	171	126	27	30	90
8 people			28	194	138	27	30	90
9 people			28	202	157	27	30	90
10 people			28	216	157	27	30	90
11 or more people			28	222	162	27	30	90
Virgin Islands			32					

Source: U.S. Department of Agriculture, Food and Nutrition Service.

[a] HCSUA is a Standard Utility Allowance used for units with heating and cooling expenses not included in rent. The HCSUA generally includes all utilities, including telephones.

[b] LUA is a Standard Utility Allowance used for units that do not have heating and cooling expenses separate from rent. The LUA generally includes all utilities, including telephones.

[c] The telephone allowance is a Standard Utility Allowance used for units that have telephone expenses but do not have any other utility expenses.

[d] Single-utility standard.

[e] A single utility is standard for gas/fuel unless otherwise noted.

[f] Alaska has six HCSUAs determined by utility regions.

Table F.8. Minnesota Family Investment Program (MFIP) benefits, FY 2020

Unit size	Family wage level (1.1 * transitional standard) (dollars)	Transitional standard (cash portion and food portion) (dollars)	Cash portion (dollars)	Food portion (dollars)
1	462	420	250	170
2	826	751	437	314
3	1,084	985	532	453
4	1,320	1,200	621	579
5	1,525	1,386	697	689
6	1,763	1,603	773	830
7	1,924	1,749	850	899
8	2,123	1,930	916	1,014
9	2,320	2,109	980	1,129
10	2,511	2,283	1,035	1,248
Each additional person	+189	+172	+53	+119

Source: Minnesota Department of Human Services (http://www.dhs.State.mn.us/).

Table F.9. Arizona SSI-CAP (AZSNAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
$0 to $99	20
$100 to $199	60
$200 to $299	95
$300 or greater	145

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.10. Kentucky SSI-CAP (KYSAFE) benefit criteria, FY 2020

Unit size	Shelter expenses	Benefit (dollars)
One person	Less than $200	33
	$200 or greater	75
Two people	Less than $108	60
	$108 or greater	123

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: When necessary, the data for units identified as KYSAFE participants have been edited to follow the pattern presented in this table.

Table F.11. Louisiana SSI-CAP (LaCAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
Less than $425	35
$425 to less than $749	82
$749 or greater	173

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.12. Maryland SSI-CAP (MSNAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
Less than $506	60
$506 or greater	144

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.13. Michigan SSI-CAP (MiCAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)	Gross income[a] (dollars)
October 2019–December 2019		
$1,000 or less	100	785
Greater than $1,000	190	785
January 2020–September 2020		
$1,000 or less	100	797
Greater than $1,000	190	797

Source: U.S. Department of Agriculture, Food and Nutrition Service.

[a] In FY 2020, Michigan had an SSI supplement of $14, making the combined Federal and State SSI amount $785 for October 2019 through December 2020 and $797 for January 2020 through September 2020.

Table F.14. Mississippi SSI-CAP (MSCAP) benefits by income and shelter expense patterns, FY 2020

Income type and shelter expenses	Benefit level (dollars)	Gross income (dollars)
October 2019–December 2019		
SSI only		
$335 or less	22	771
Greater than $335	69	771
SSI and other unearned income		
$335 or less	16	791
Greater than $335	60	791
January 2020–September 2020		
SSI only		
$335 or less	17	783
Greater than $335	63	783
SSI and other unearned income		
$335 or less	16	803
Greater than $335	54	803

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: When necessary, the data for units identified as MSCAP participants have been edited to follow the pattern presented in this table.

Table F.15. New Jersey SSI-CAP (NJ SNAS) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
$563 or less	30
Greater than $563	135

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.16. New York SSI-CAP (NYSNIP) benefit criteria, FY 2020

Income and shelter expenses	Monthly benefit amount (dollars)		
	New York	Long Island	Rest of State
SSI only			
With positive utility costs			
Rent $257 or less	194	183	158
Rent greater than $257	194	194	194
With no utility costs			
Rent $257 or less	16	16	16
Rent greater than $257	16	16	16
With no shelter costs	16	16	16
SSI and other unearned income			
With positive utility costs			
Rent $257 or less	191	174	149
Rent greater than $257	194	194	194
With no utility costs			
Rent $257 or less	16	16	16
Rent greater than $257	16	16	16
With no shelter costs	16	16	16

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.17. North Carolina SSI-CAP (NCSNAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
Less than $200	65
$200 or greater	105

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.18. Pennsylvania SSI-CAP (PACAP) benefit criteria, FY 2020

Income type and shelter expenses	Benefit (dollars)
October 2019–December 2019	
SSI only	
Shelter expenses less than $196	109
Shelter expenses $196 or greater	150
SSI and other unearned income	
Shelter expenses less than $196	100
Shelter expenses $196 or greater	141
January 2020–September 2020	
SSI only	
Shelter expenses less than $196	92
Shelter expenses $196 or greater	119
SSI and other unearned income	
Shelter expenses less than $196	86
Shelter expenses $196 or greater	113

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.19. South Carolina SSI-CAP (SCCAP) benefits by income and shelter expense patterns, FY 2020

Income type and shelter expenses	Benefits (dollars)	Gross income (dollars)
October 2019–December 2019		
SSI only		
Shelter expenses $420 or less	44	771
Shelter expenses greater than $420	54	771
SSI and other unearned income		
Shelter expenses $420 or less	35	791
Shelter expenses greater than $420	45	791
January 2020–September 2020		
SSI only		
Shelter expenses $420 or less	44	783
Shelter expenses greater than $420	54	783
SSI and other unearned income		
Shelter expenses $420 or less	35	803
Shelter expenses greater than $420	45	803

Source: U.S. Department of Agriculture, Food and Nutrition Service; FY 2020 raw SNAP QC data file.

Note: When necessary, the data for units identified as SCCAP participants have been edited to follow the pattern presented in this table.

Table F.20. South Dakota SSI-CAP (SD IN) benefit criteria, FY 2020

Earnings and medical expenses	Benefits (dollars)			
	Individuals with shelter expenses of $690 or greater	Couples with shelter expenses of $690 or greater	Individuals with shelter expenses less than $690	Couples with shelter expenses less than $690
No earnings				
Medical expenses less than or equal to $35	171	194	40	119
Medical expenses greater than $35	172	269	115	136
Earnings				
Medical expenses less than or equal to $35	149	169	23	21
Medical expenses greater than $35	174	120	120	192

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.21. Texas SSI-CAP (SNAP-CAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
$440 or less	75
Greater than $440	130

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: When necessary, the data for units identified as SNAP-CAP participants have been edited to follow the pattern presented in this table.

Table F.22. Virginia SSI-CAP (VaCAP) benefit criteria, FY 2020

Shelter expenses	Benefit (dollars)
October 2019–March 2020	
Less than $500	66
$500 or greater	140
April 2020–September 2020	
Less than $500	60
$500 or greater	135

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Table F.23. Florida (SUNCAP), Massachusetts (BAY STATE CAP), and Washington SSI-CAP (WASHCAP) shelter allowances, FY 2020

Rent/mortgage cutoff for high/low standard rent allowance	Standard rent/mortgage allowance (dollars)
Florida (SUNCAP)	
$305 or less	130
Greater than $305	325
Massachusetts (BAY STATE CAP)	
Less than $481	223
$481 or greater	481
Washington (WASHCAP)	
Less than $320	210
$320 or greater	425

Source: U.S. Department of Agriculture, Food and Nutrition Service.

Note: We only use the WASHCAP cutoffs for high and low standard rent allowances in our file editing process. The SUNCAP and BAYSTATECAP cutoffs are listed for reference.

APPENDIX G

Quality Control Review Schedule

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U.S. Department of Agriculture - Food and Nutrition Service

QUALITY CONTROL REVIEW SCHEDULE

PRIVACY ACT/PAPERWORK REDUCTION ACT. According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-0299. The time required to complete this collection is estimated to average 1.056 hours per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. This report is required under provisions of 7 CFR 275.14. This information is needed for the review of State performance in determining recipient eligibility. The information is used to determine State compliance, and failure to report may result in a finding of non-compliance.

Section 1 - Review Summary

1. QC Review Number	2. Case Number	3. State	4. Local Agency	5. Sample Month and Year	6. Stratum

7. Disposition	8. Findings	9. SNAP Allotment Under Review	10. Error Amount	11. Case Classification

Section 2 - Detailed Error Findings

	12. Element	13. Nature	14. Cause	15. Error Finding	16. Error Amount	17. Discovery	18. Verified	19. Occurrence a. Date	b. Time Period
1									
2									
3									
4									
5									
6									
7									
8									

FORM FNS-380-1 (11-12) Previous Editions Obsolete

SBU

Electronic Form Version Designed in Adobe 9.1 Version
1

Section 3 - Household Characteristics

20. Most Recent Cert. Action
Month, Day, Year

21. Type of Action

22. Length of Cert. Period
#of months

23. Allotment Adjustment

24. Amount of
Allotment Adjustment

25. Number of
Household Members

26. Receipt of
Expedited Service

27. Authorized Representative
Used at Application

28. Categorical Eligibility

29. Reporting Requirement

Resources:

30. Liquid

31. Property
(excluding home)

32a. Vehicle

32b. Status
2nd Vehicle

33. Countable
Vehicle Assets

34. Other Non-liquid

Income:

35. Gross

36. Net

Deductions:

37. Earned Income

38. Medical

39. Dependent Care

40. Child Support

41. Shelter

42. Homeless

Additional
Information on
Shelter Costs:

43. Rent/Mortgage

44. Use of SUA
a. Usage   b. Proration

45. Utilities (SUA or Actual)

2

Section 4 - Information on Each Household Member

46. Person Number	47. SNAP Participation	48. Relation to Head of HH	49. Age	50. Sex	51. Race	52. Citizen Status	53. Edu. Level	54. Employment Status	Hours	55. SNAP Work Reg.	56. SNAP E & T	57. ABAWD Status	58. Dependent Care Cost

You may record information on up to 16 individuals using additional pages.

3

Section 5 - Income Identified by Household Member

59. Person Number	Source 1 60. Income Type	61. Amount	Source 2 62. Income Type	63. Amount	Source 3 64. Income Type	65. Amount	Source 4 66. Income Type	67. Amount

You may record income on up to 10 individuals by using additional pages.

Section 6 - Reserved Coding

68.	69.	70.	71.	72.	73.	74.	75.	76.

Section 7 - Optional For State Use

1.

2.

3.

4.

4