1SUPPORTING STATEMENT
U.S. Department of Commerce
U.S. Census Bureau
Commodity Flow Survey Component of the 2027 Economic Census
OMB Control Number 0607-0932

PART B. Collections of Information Employing Statistical Methods

1. Universe and Sample Selection

The sample for the 2027 Commodity Flow Survey will be selected using a stratified three-stage design in which the first-stage sampling units are establishments[1], the second-stage sampling units are groups of four 1-week periods (reporting weeks) within the survey year, and the third-stage sampling units are shipments.

First Stage – Establishment Selection

The first stage sample of approximately 140,000 employer establishments will be selected from a sampling frame extracted from the U.S. Census Bureau's Business Register. The Business Register is a comprehensive centralized database of business establishments located throughout the United States and its territories. It is based upon information from the Economic Census and is updated using Annual Integrated Economic Survey (AIES) results and administrative data from other government agencies, such as the Internal Revenue Service.

The universe of employer establishments in-scope to the CFS consists of approximately 1,500,000 establishments. This is an increase of approximately 800,000 establishments from the 2022 cycle. The universe has been expanded this cycle to provide more complete coverage of the Retail Trade Sector. This expansion has no effect on overall respondent burden.

For sampling purposes, the universe will be stratified by geography and by industry. Geographic stratification will primarily be state and major metropolitan areas. Industry stratification will be at the three-or four-digit North American Industry Classification System (NAICS) level, as defined by the 2022 NAICS definitions. Some special strata will be created to produce better estimates of shipments of hazardous materials and certain rare modes. Establishments whose estimated annual value of shipments exceed designated shipment value thresholds will be selected with certainty. The remaining establishments will be selected using simple random sampling within substrata based on estimated value of shipments. Studies were conducted to determine the optimal substrata boundaries for desired levels of reliability.

Second Stage - Reporting Week Assignment

The frame for the second stage of sampling consists of 52 one-week periods from January 2027 to December 2027. Each establishment selected into the 2027 CFS sample will be systematically assigned to report for four reporting weeks--one in each calendar quarter of 2027. Each of the four weeks will be in the same relative position of the quarter. For example, an establishment might be requested to report data for the 5th, 18th, 31st, and 44th weeks of 2027. In this instance, each reporting week corresponds to the 5th week of each quarter.

Third Stage - Shipment Selection

For each of the four reporting weeks in which an establishment is asked to report, the respondent will be requested to construct a sampling frame consisting of all shipments made by the establishment in the reporting week. Each respondent will be asked to count or estimate the total number of shipments comprising the sampling frame and to record this number on the questionnaire.

Each respondent will be given the option of either reporting data about all the shipments they made in the week, or reporting data about a sample of the shipments they made in the week.

If they choose to select a sample, then the respondent will be asked to do the following:

For each assigned reporting week, if an establishment makes more than 40 shipments during that week, the respondent will be asked to select a systematic sample of the establishment's shipments and to provide information only about the selected shipments. Sampling rates are designed to produce a sample size between 20 and 100 shipments.

If an establishment makes 40 or fewer shipments during that week, the respondent will be asked to provide information about all these shipments (i.e., no sampling will be required).

Estimation

Estimates of totals (e.g., total value of shipments, total tons of shipments, and average miles per shipment) will be produced as the sum of weighted shipment data. Estimates of percent change and percent-of-total will be computed using the appropriate estimates of totals. Estimates of average miles per shipment will be computed by dividing the estimate of the total miles traveled by the estimate of the total number of shipments.

Each shipment will have associated with it a single tabulation weight, which will be used to compute all the estimates to which the shipment contributes. The tabulation weight is the product of seven different component weights. A description of each component’s weight follows.

The shipment weight and shipment non-response weight ensure that the sample of reported shipments represent all of an establishment’s shipments in the reporting week. The quarter

weight and quarter non-response weight inflate an establishment's estimate for the weeks reported to reflect an entire year's worth of shipments. The establishment-level adjustment weight will use 2027 Economic Census data to correct for individual establishment sampling and non-sampling error. The establishment or first stage sample weight is the reciprocal of the probability of being selected into the first stage sample. Finally, the industry by state adjustment weight will use 2027 Economic Census summary tabulations at the NAICS by state level to account for establishment non-response and changes to the universe of establishments between the time of first stage sample selection and the data collection year.

2. Procedures for Collecting Information

In January 2027, the pre-screener survey will initiate contact with approximately 45,000 establishments across select industries to identify those with no shipping activity ("non-shippers"). These establishments will be in industries where it is more likely that individual establishments have no shipping activity at all. Establishments confirmed as non-shippers will be excluded from further contact for the remainder of the year and they will have no shipment activity reflected in our estimates.

In March 2027, approximately 140,000 establishments selected for the CFS will be sent a notification letter. This letter will identify the shipping address for which data should be reported, as well as indicate the specific reporting weeks for each quarter in 2027. All selected establishments will have the option to either report all their shipments, or a sample of their shipments, for a specific one-week reporting period. If a sample of shipments is selected, the sample will be based on the total number of shipments made by the establishment during that week. Mail out will occur once a quarter.

Responses are submitted to the Census Bureau using an on-line reporting instrument.

A response rate from 65% of the establishments is expected.

3. Methods for Maximizing Response

The Census Bureau interviewed approximately 30 respondents to the 2022 CFS to identify ways to reduce burden. This research was conducted under a generic clearance for questionnaire collection instrument pretesting research (OMB number 0607-0725).

Based on findings from this research and the Bureau's considerable experience with business data collection, this information collection will maximize response through the following

actions:

- Survey materials that emphasize the mandatory and confidential nature of U.S. Census reports, as provided by Title 13, U.S.C.

- The pre-screener questionnaire will remove any ineligible establishments before the main survey begins.

- Improved questionnaire and instructions that incorporate clear reporting directions. The improvements will be field tested around September 2026.

- Electronic reporting instrument available for all four quarters. The electronic instrument will also compute the shipment sampling interval for respondents choosing to sample their shipments.

- Toll-free telephone assistance for any business that has questions about completing its CFS questionnaires.

- Information on the CFS website will provide respondents with additional information about the survey, including answers to frequently asked questions and additional assistance with survey reporting.

- Systematic due date reminder and follow-up letters or emails for non-response, supplemented by telephone follow-up for selected companies.

- Working with respondents to establish special reporting arrangements, including a consolidated reporting option, and time extensions when necessary. This will include communication with a limited number of respondents before initial mail-out to establish special and consolidated reporting arrangements. Flexibility in reporting options, combined with early communication, will help reduce burden for these companies.

4. Tests of Procedures or Methods

The U.S. Census Bureau will use procedures based on results of cognitive testing, experience gained from the 2022 CFS and prior CFS cycles, as well as the considerable body of experience

with related economic censuses and surveys.

5. Contacts for Planning, Implementation and Data Collection

The 2027 planning and implementation is conducted under the direction of:

Jennifer N. Whitaker
Assistant Division Chief
Commodity Flow and Health Surveys
Economy-Wide Statistics Division
U.S. Census Bureau
Washington, D.C. 20233
(301) 763-2823

Statistical methodology is developed under the direction of:

William C. Davie, Jr.
Methodology Director
Business Register, Economic Census, and Related Surveys
Economic Statistical Methods Division
U.S. Census Bureau
Washington, D.C. 20233
(301) 763-7182

Attachments

A. Proposed Survey Materials

(1) Screenshots for On-Line Questionnaire (Pre-Screener Instrument)
(2) Screenshots for On-Line Questionnaire (Main Instrument)
(3) 2027 CFS Shipments upload spreadsheet columns document
(4) 2027 CFS-Q0 Letter
(5) 2027 CFS-L1 Initial Letter
(6) Upload Spreadsheet - CFS 2027_Locations_Template_CR
(7) Upload Spreadsheet - CFS 2027_Shipments_Template_SU
(8) Upload Spreadsheet - CFS 2027_Shipments_Template_CR
(9) 2027 CFS-L1R Due Date Reminder
(10) 2027 CFS-L2 Follow-up Letter

B. 2027 Commodity Flow Survey Centurion Questionnaire
(1) Pre-Screener Survey
(2) Main Survey

C. U.S.C. Excerpts

D. Letters of Support from Federal Register Presubmission
(1) BEA
(2) USACE
(3) USDA
(4) EIA
(5) PHMSA
(6) MARAD
(7) Academia
(8) Public Commenter #1
(9) Public Commenter #2

[1] All references to ‘establishment’ in this document refer to collections of establishments at the same physical address belonging to the same company.