

APPENDIX G. STUDY DATA COLLECTION PLANS

4. Data Collection Plan

4.1. Overview

This document describes the data collection plan for the 2024-2025 National School Foods Study (hereafter referred to as “the study”). The study includes three components that were previously implemented as stand-alone studies. These include the second School Nutrition and Meal Cost Study (SNMCS-II), the fourth School Food Purchase Study (SFPS-IV), and an evaluation of the Fresh Fruit and Vegetable Program (FFVP). SNMCS-II also includes the Outlying Areas component that will examine meal costs in Alaska, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands (USVI). With an expansive data collection and extensive and wide-ranging set of research questions, the study will be the largest and most complex evaluation of the school-based Child Nutrition programs conducted to date. Furthermore, this study will provide a comprehensive, nationally representative picture of the context in which school meal programs operate.

Across the three components, there are six primary objectives; Objectives 1-4 for SNMCS-II, Objective 5 for SFPS-IV, and Objective 6 for FFVP. These objectives can be found in Table A.1 in Supporting Statement A. To address the objectives defined for the study, data must be collected from States, SFAs, schools, students and their parents, and through observations of plate waste on breakfast and lunch trays. Data collection activities will be spread across different groups of SFAs and schools. This approach will provide the desired levels of precision while distributing response burden so that few SFAs or schools are responsible for providing every data element for all substantive areas for the study.

The sections that follow describe the instruments and procedures that will be used to collect data for each of the study’s three components. Each section includes an exhibit that provides details on how the instruments and SFA groups align with the relevant study objectives and provides information on respondents, target completed sample sizes, mode, and burden. Later sections describe the schedule and procedures for on-site data collection and plans for achieving target sample sizes. The SNMCS-II and SFPS-IV sections of this document highlight differences, relative to SNMCS-I and SFPS-III, respectively, in instrumentation, data collection procedures, and methods used to achieve target sample sizes and promote data quality.

Data collection will span all SY 2024–2025, with follow-up data collection for some groups of SFAs in fall 2025. The anticipated timeline for recruitment and data collection is provided in Exhibit 4.1. Due to the anticipated OMB approval date provided by FNS (August 28, 2024), some activities will need to occur later than desired (i.e., July 2024). The study’s data collection timeline allows for food purchase data to be collected for all four quarters of the school year to address Objective 5.

4.2. Data Collection Plans for the SNMCS-II Component

This section describes plans to collect data that will be used to address Objectives 1-4 under

the SNMCS-II study component. Exhibit 4.2 provides details on how the instruments and SFA groups align with these objectives and provides information on respondents, target completed sample sizes, mode, and burden. Target response rates are among estimated released SFAs, schools, students and parents.

Exhibit 4.1. Study timeline for recruitment and data collection

Calendar Year	2024			2024			2025		
Month	July	August	September	October	November	December	January	February	March
SFPS-IV Food Purchase Data Quarter	Quarter 1			Quarter 2			Quarter 3		
Groups 1a and 1b			OMB clearance						
Q1 - SFPS-IV Food Purchase Data			Recruiting and FP Webinar		Compile FP Data SFA Survey SDA/FNS data on USDA Foods	Submit FP data	Initial FP data f/u	Review FP summary	
Q2 - SFPS-IV Food Purchase Data			Recruiting and FP Webinar			Compile FP Data	Submit FP data SFA Survey	Initial FP data f/u	Review FP summary
Q3 - SFPS-IV Food Purchase Data					Recruiting and FP Webinar				Compile FP data
Q4 - SFPS-IV Food Purchase Data								Recruiting and FP Webinar	
Group 1c - SFA Director Survey only					SFA survey				
Groups 2a (SNMCS-II) and 2b (FFVP-II)			Recruiting and data collection planning						
Groups 3 & OACS (SNMCS-II)			Recruiting and data collection planning						
								Data collection (primarily during TW); SFA survey after the TW	
								Data collection (primarily during TW); SFA survey after the TW	

Calendar Year	2025			2025			2025		
Month	April	May	June	July	August	September	October	November	December
SFPS-IV Food Purchase Data Quarter	Quarter 4								
Groups 1a and 1b									
Q1 - SFPS-IV Food Purchase Data									SFA Year-End Follow-Up Survey
Q2 - SFPS-IV Food Purchase Data	(SFA survey)								SFA Year-End Follow-Up Survey
Q3 - SFPS-IV Food Purchase Data	Submit FP data SFA survey	Initial FP data f/u	Review FP summary						SFA Year-End Follow-Up Survey
Q4 - SFPS-IV Food Purchase Data	SFA survey		Compile FP Data	Submit FP data	Initial FP data f/u SDA/FNS data on USDA Foods	Review FP summary			SFA Year-End Follow-Up Survey
Group 1c - SFA Director Survey only	(SFA survey)								
Groups 2a (SNMCS-II) and 2b (FFVP-II)									
Groups 3 & OACS (SNMCS-II)									Follow-up data collection

Notes: See text later in this appendix for more information on SFA data collection timing and names of the various SFA surveys for each group. The follow-up data collection in Groups 1a, 1b, and 3 may extend into early 2026, depending on when annual financial information is available. For Q4 SFAs FP activities may extend into the beginning of the following school year if SFA staff are not available over the summer. FP = food purchase; f/u = follow-up; RO = regional office; TW = target week.

Exhibit 4.2 Summary of the data collection plan for the SNMCS-II component

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Estimated starting sample	Comments
Objective 1: Food Service Operations and School Nutrition Environments—Groups 1a, 1c, 2a, and 3						
SFA Director Survey (SNMCS-II)	446 SFA directors: 48 in Group 1c; 133 in Group 2a; 265 in Group 3	Web	45 minutes	62	722	Target response rates and starting sample for Groups 2a and 3 are for all data collections; SFA survey target response rate for these groups is likely to be higher.
SFA Director Survey (SNMCS-II+SFPS-IV)	88 SFA directors in Group 1a	Web	1.5 hours	53	165	Target response rate and starting sample assume formal recruiting for SFA Director Survey and food purchase data.
Objective 1: Food Service Operations and School Nutrition Environments—Groups 2a and 3						
SNM Survey	1,061 SNMs	Web	20 minutes	95	1,117	Integrated in the web-based Menu Survey.
Principal Survey	955 principals	Web	30 minutes	85	1,117	Target response rate is among schools with a completed School Planning Interview.
Observation Guide	1,061 schools	On-site observation	20 minutes (SNM)	100	1,061	Field staff will collect meal prices and details about serving lines/stations from SNMs and will conduct the observations.
Objective 2: Nutritional Quality of School Meals and Competitive Foods Sold by Food Service Departments—Groups 2a and 3						
Menu Survey	265 SNMs (Group 2a only)	Web	9 hours (including training)	95	279	Supported by video training, telephone, and online technical assistance and follow-up.
Objective 3: Meal Costs and Revenues —Group 3 and Outlying Areas; and Costs Associated with Household Applications—Group 3						
State Agency Indirect Cost Survey	47 State Education or CN Agency finance officers	Web	10 minutes	96	49	Completed in states where Group 3 SFAs are located.
SFA On-Site Cost	294 SFA	In person	3.25 hours	66	446	The modules are (1) SFA Staff Salary and

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Estimated starting sample	Comments
Interview (G3)	directors/business managers					Time Allocation Grids, (2) Preliminary SFA Indirect Cost Survey, (3) Preliminary Food Service Expense Statement, (4) Off-Budget Staff Salary and Time Allocation Grids, and (5) Food Cost Worksheet.
FOA SFA On-Site Cost Interview	31 SFA directors/business managers	Remote	3.25 hours	91	34	. The modules are (1) SFA Staff Salary and Time Allocation Grids, (2) Preliminary SFA Indirect Cost Survey, (3) Preliminary Food Service Expense Statement, (4) Off-Budget Staff Salary and Time Allocation Grids, and (5) Food Cost Worksheet.
LOA Cost Interview	3 SFA directors/business managers	In person	1.5 hours	100	3	Target response rate is among SFAs with a completed SFA Director Planning Interview. The modules are (1) SFA Staff Salary and Time Allocation Grids, (2) Preliminary SFA Indirect Cost Survey, (3) Preliminary Food Service Expense Statement, (4) Off-Budget Staff Salary and Time Allocation Grids, and (5) Food Cost Worksheet.
SFA Follow-Up Web Survey (G3)	265 SFA directors	Web	30 minutes	90	294	Target response rate is among SFAs with a completed SFA On-Site Cost Interview.
FOA SFA Follow-Up Web Survey	31	Web	30 minutes	100	31	Target response rate is among SFAs with a completed SFA On-Site Cost Interview.
LOA SFA Follow-Up Web Survey	3 SFA directors	Web	30 minutes	100	3	Target response rate is among SFAs with a completed SFA On-Site Cost Interview.
SFA Follow-Up Cost Interview (G3)	261 SFA directors/business managers	Telephone plus screen sharing	2 hours	89	294	Target response rate is among SFAs with a completed SFA On-Site Cost Interview. The modules are (1) Food Service Expense Statement Follow-Up, (2) Food Service Revenue Statement, and (3)

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Estimated starting sample	Comments
						Food Service Indirect Cost Follow-up Questionnaire.
FOA SFA Follow-Up Cost Interview	30 SFA directors/business managers	Telephone plus screen sharing	2 hours	97	31	Target response rate is among SFAs with a completed SFA On-Site Cost Interview. The modules are (1) Food Service Expense Statement Follow-Up, (2) Food Service Revenue Statement, and (3) Food Service Indirect Cost Follow-up Questionnaire.
LOA SFA Follow-Up Cost Interview	3 SFA directors/business managers	In person	1.75 hours	100	3	Target response rate is among SFAs with a completed SFA On-Site Cost Interview. The modules are (1) Food Service Expense Statement Follow-Up, (2) Food Service Revenue Statement, and (3) Food Service Indirect Cost Follow-up Questionnaire.
Menu Survey	796 SNMs (Group 3 only)	Web	9 hours (including training)	95	838	The Menu Survey collects the information needed to (1) estimate nutrient and food group content of reimbursable meals and assess compliance with nutrition standards, (2) examine how competitive foods sold by school food service departments compare to Smart Snacks standards, and (3) calculate food costs for reimbursable breakfasts, lunches, snacks, and suppers. Supported by video training and telephone and online technical assistance and follow-up.
FOA Menu Survey	138 SNMs	Web	9 hours (including training)	95	145	Supported by video training, telephone, and online technical assistance and follow-up.
LOA Menu	3 SFA directors	Hardcopy	3.5 hours	100	3	Supported by telephone training,

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Estimated starting sample	Comments
Survey			(including training)			technical assistance and follow-up.
SNM Cost Interview ^b	796 SNMs	In person	90 minutes	95	838	
FOA SNM Cost Interview ^b	138 SNMs	Remote	90 minutes	57	242	
Principal Cost Interview	796 principals	In person	45 minutes	95	838	
FOA Principal Cost Interview	138 principals	Remote	45 minutes	57	242	
On-Site Self-Serve/Made-to-Order Bar Form ^c	120 schools	On-site observation	10 minutes	100	120	Completed by field staff in schools that have self-serve or made-to-order bars. The actual number of schools with such bars may vary.
Objective 4: Plate Waste—Group 3 (subsample)						
Plate Waste Observations	4,140 lunches and 2,120 breakfasts in 138 schools across 69 SFAs	On-site observation	10 minutes (SNM)	86	5,262 lunches, 2,705 breakfasts	SNMs will confirm menu items and portion sizes. Field staff will conduct the observations. The target completed sample size reflects the combination of completed tray observations and corresponding Menu Survey data.
Objective 4: Student Participation, Satisfaction, Dietary Intakes, and Food Security—Group 2a						
AMPM (24-Hour Dietary Recall)	3,302 students	In person or telephone	40 to 55 minutes, depending on students' age	50	6,604	Target response rate is among students who complete the recall and Student Interview, and whose parents complete the Parent Interview. Recalls with elementary school students will include parental assistance. Second recalls will be completed by telephone with a subsample (n = 653).
Student	3,302 students	In person	10 minutes	50	6,604	Target response rate is among students

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Estimated starting sample	Comments
Interview						who complete the recall and Student Interview, and whose parents complete the Parent Interview.
Objective 4: Student Participation, Satisfaction, Dietary Intakes, and Food Security—Group 2a						
Parent Interview	1,800 parents	Web or telephone	25 minutes	55	3,302	Target response rate is among parents of students who complete the recall and Student Interview.
Reimbursable Meal Sale Data Request Form	252 SNMs for 5,944 students	In person	10 minutes (SNM)	90	6,604 students from 279 schools	Target response rate is among students who complete the recall and Student Interview, and whose parents complete the Parent Interview. SNMs will provide POS report or complete hard-copy form to indicate whether sampled students obtained a reimbursable breakfast and/or lunch on the day referenced in the 24-hour recall.

^a Target response rates are among estimated released SFAs, schools, students, and parents.

^b Also includes interviews with SNMs and central kitchen supervisors in central and production kitchens that provide food to sampled schools to gather complete information about food service labor.

^c The target completed sample size is an estimate based on how schools in the sample operate meal service.

AMPM = Automated Multiple-Pass Method; CN = child nutrition; n.a. = not applicable; FOA = Full Outlying Areas; LOA = Limited Outlying Areas; POS = point-of-sale; SDA = State Distributing Agency; SFA = school food authority; SFPS = School Food Purchase Study; SNM = school nutrition manager; SNMCS = School Nutrition and Meal Cost Study.

4.2.1 Data Collection Plans for Objective 1

The instruments referenced in this section are the SFA Director Survey, SNM Survey, Principal Survey, and Observation Guide (Appendices F03.01, F04.01, F03.07, and F07). Contact materials for the staff surveys are in Appendices F03.03, F03.05, F03.06, and F03.08.

Objective 1: Describe the school environment, food service operating policies and practices, student participation, and other characteristics of SFAs and schools participating in the NSLP and SBP.

Objective 1 is designed to describe the school environment, food service operations, levels of student participation, and other characteristics of SFAs and schools participating in the National School Lunch and School Breakfast programs (NSLP and SBP, respectively). More than 30 research questions have been specified, organized around four broad topic areas: (1) SFA and school environments, (2) food service characteristics, (3) school meal program participation, and (4) student population characteristics of SFAs and schools. To capture information about these topics, data will be collected from 534 SFAs in Groups 1a, 1c, 2a, and 3, and 1,061 schools in Groups 2a and 3. Data will come from four main sources: (1) the SFA Director Survey, (2) the Principal Survey, (3) the SNM Survey, and (4) the Observation Guide (administered onsite).¹ The sections that follow describe the fielding of these staff surveys and observational tool.

a. SFA Director Survey

SFA directors in Groups 1a, 1c, 2a, and 3, and the certainty SFAs, will be asked to complete the SNMCS-II component SFA Director Survey to address Objective 1. SFA directors will receive an email with a request to complete the SFA Director Survey. The email will include a link to access the survey and instructions for completing the survey. SFA directors will have the ability to launch the survey and begin completing it with an option to save it and pick it up later. The survey will have a landing page that allows respondents to view the status of the survey sections and jump directly to each section, making it easier for multiple respondents to access and complete the survey. SFA directors that have either not initiated or not submitted the survey will receive email reminders. Upon completion, the survey will administer the incentive in the form of an electronic gift card emailed to the respondent.

Data collection for SNMCS-II began during SY 2021-2022 before the study was cancelled (OMB Control Number 0584-0648, expired 9/30/2022). , The prior study adapted and updated instruments from SNMCS-I to align with SNMCS-II research questions. Updates included dropping items linked to research questions that were no longer part of SNMCS-II, adding items linked to research questions that were added for SNMCS-II, and modifying existing items for research questions that changed between SNMCS-I and SNMCS-II. To address new topics of interest (for example, artificial sweeteners and menu planning and

¹ Data on such characteristics as SFA size, urbanicity, share of minority students, and child poverty rates will come from the sampling frame.

culturally relevant meals), the study team has worked with FNS to develop new research questions and survey questions for the SFA Director Survey.

b. SNM Survey

School Nutrition Managers (SNMs) in Groups 2a and 3 will be asked to complete the SNM Survey, which is embedded in the Electronic Menu Survey (EMS), prior to the target week. This will encourage early completion of this instrument, spread the response burden for SNMs over a longer period, and allow SNMs to focus on completing the Menu Survey during the target week.

c. Principal Survey

Principals in Group 2a and 3 schools will be sent invitations to complete the Principal Survey. Invitations will be sent after the target week to ensure principals are able to focus on the on-site data collection activities occurring during the target week. Nonrespondents will receive follow-up communications to urge them to complete the survey. To maximize the opportunity to reach nonrespondents, follow up will be done by both email and telephone.

d. Observation Guide

Information about characteristics of the cafeteria environment will be collected using the Observation Guide. This form will be fielded electronically and will be completed by field interviewers (FIs) during their time on-site. FIs will access the instrument on a lightweight, convertible laptop-tablet hybrid. The form will be programmed with validation checks to ensure all questions are answered and provide definitions to assist their observations.

4.2.2. Data Collection Plans for Objective 2

The Menu Survey and Fruit and Vegetable Questions and Meal Pattern Crediting Report referenced in this section are in Appendices F02.01 and F02.03.

Objective 2:

- **Determine the food and nutrient content of school meals and afterschool snacks and the overall nutritional quality of these meals.**
- **Determine whether competitive foods sold by school food service departments are consistent with Smart Snacks standards.**

To address the Objective 2 research objective about school meals and afterschool snacks, SNMs² in Group 2a and 3 schools will complete a Menu Survey that collects detailed information on foods prepared and served in NSLP lunches and SBP breakfasts and foods offered in NSLP afterschool snacks for one school week (the target week). The Menu Survey will collect all the information needed to estimate the nutrient and food group content of school meals and NSLP afterschool snacks and to assess the extent to which daily and weekly menus for school meals meet the nutrition standards (referred to as the “compliance

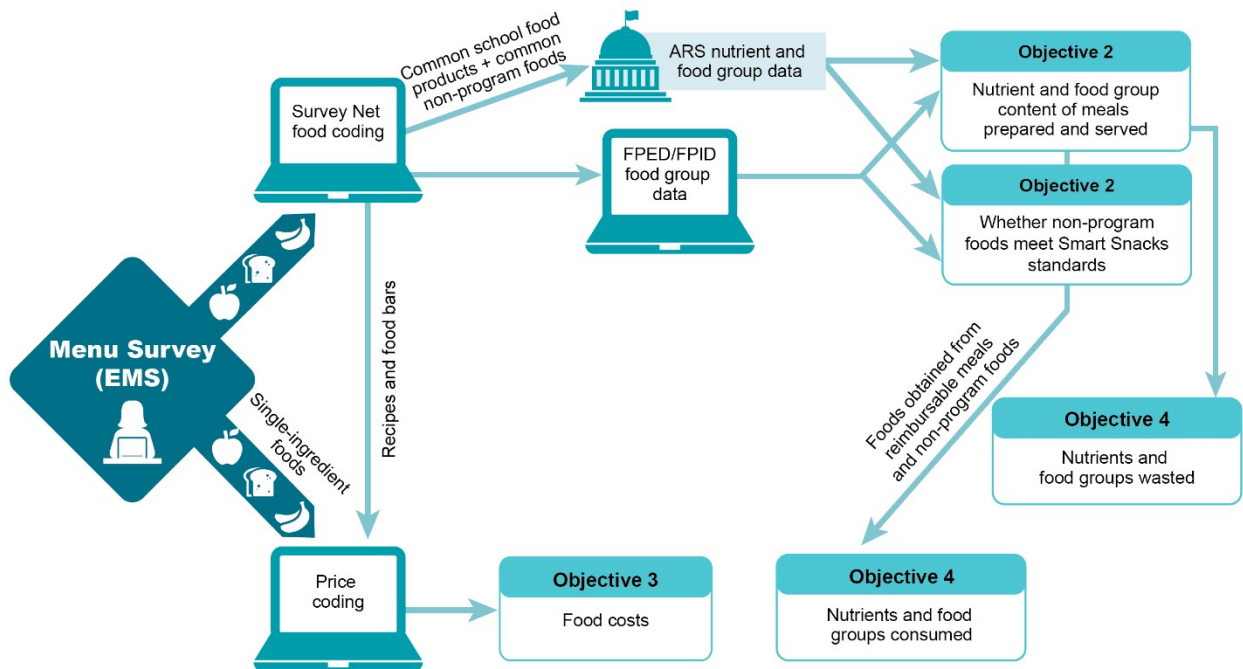
² The study refers to the respondent as the SNM for simplicity; for some schools, other respondents (such as the SFA director or other SFA staff) may complete the Menu Survey.

assessment”). To address the Objective 2 research objective about competitive foods, the Menu Survey will also collect detailed information about competitive foods sold by school food service departments during the target week. These data will be used to estimate the calorie and nutrient content of competitive foods and assess the extent to which they meet the Smart Snacks standards. The Menu Survey will also be used to examine levels of processing and convenience in foods offered in NSLP lunches and SBP breakfast.

The Menu Survey is the cornerstone of the study (Exhibit 4.4). It collects data that are key to addressing research questions under Objectives 2, 3, and 4. Detailed information on the foods offered in daily menus will be processed using USDA systems and databases to provide estimates of the nutrient and USDA Food Pattern food group content of NSLP lunches, SBP breakfasts, and afterschool snacks. Detailed information on competitive foods sold by school food service departments will be processed using similar procedures to estimate the calorie and nutrient content of these foods and compare them to Smart Snacks standards.

Further, to address Objective 3, foods reported in the Menu Survey will be matched to food price data to estimate food costs. When constructing the analytic database for Objective 4, which will be used to examine student’s dietary intakes, data from the Menu Survey will be incorporated to more accurately reflect the nutrient and USDA Food Pattern food group content of foods obtained from reimbursable meals or non-program foods. Lastly, the Menu Survey data will provide key data elements needed to examine the extent of plate waste in school meals under Objective 4.

Exhibit 4.4. Menu Survey data follow across study objectives



ARS = Agricultural Research Service; EMS = Electronic Menu Survey; FPED = Food Patterns Equivalents Database; FPID = Food Patterns Equivalents Ingredients Database.

The Menu Survey will be a self-administered web instrument referred to as the EMS. The EMS includes screener questions to identify which Menu Survey forms are relevant to each individual school (based on its food service program) and a task list (formerly referred to as the dashboard) so respondents can track their progress in completing forms each day and during the target week. The EMS includes a variety of validation checks to alert respondents to missing, out-of-range, or inconsistent data. If a respondent is unable or unwilling to complete the Menu Survey online using the EMS, hard-copy forms will be provided.

a. EMS/Menu Survey Forms

Exhibit 4.5 summarizes the Menu Survey forms that will be used to answer Objectives 2 and 3 research questions and the data elements collected on each form. The EMS will also collect additional information needed for the compliance assessment under Objective 2, including information on the maximum number of servings students are allowed to choose when multiple choices are offered, information on foods that are offered or available only with specific foods on daily menus, and identification of foods and/or portion sizes that are offered to students in different grade groups. The EMS will also collect detailed information on non-program (competitive) foods sold by school food service departments. Instructions on how to complete the EMS will be provided using brief, modular, online training videos. Each form in the EMS will also include on-screen instructions.

To address the research question under Objective 2 about competitive foods, a new instrument was developed—the Form for Non-Program Foods Sold by School Food Service. This form will collect detailed data on competitive foods and will also capture information about non-program foods needed for Objective 3³.

Exhibit 4.5. Summary of the Menu Survey forms included in the EMS

Instrument	Data to be collected
Menu Survey Screener	Whether the school participates in the SBP; provides reimbursable afterschool snacks through the NSLP and/or reimbursable afterschool snacks or suppers through the CACFP; and confirmation of the grades included in the school Whether the school’s food service department sends foods or meals off-site or sells foods outside of NLSP and SBP meals
Daily Meal Counts Form	Number of reimbursable lunches and breakfasts served, by reimbursement category and food sales from non-program foods
Reimbursable Foods Form for Lunch and Breakfast	Descriptive food details; portion size; number of portions prepared, served in reimbursable meals, sold à la carte or to adults, left over, wasted and sent off-site (if applicable); manufacturer/brand and produce code (for selected items); number of reimbursable meals prepared and served; foods paired/offered together; identification of foods or portion sizes offered to different grade groups; rules for

³ The Non-Program Foods Sold by School Food Service Form will replace the Non-Reimbursable Foods Form and Non-Reimbursable Foods Inventory that were included in the Expanded Menu Survey in SNMCS-I.

Instrument	Data to be collected
	visiting side salad and entrée salad bars
Recipe Form	Ingredient descriptions and amounts used in recipes
Self-Serve/Made-to-Order Bar Form	Description of foods offered on self-serve and/or made-to-order bars
NSLP Afterschool Snack Form	Descriptive food details including manufacturer/brand and product code (for selected items), recipes, portion size, number of portions prepared, served, and sent off-site (if applicable), and number of reimbursable snacks served
CACFP Afterschool Snack and Supper Form	Descriptive food details; portion size; number of portions prepared, served, and sent off-site (if applicable); manufacturer/brand and product code (for selected items); recipes; number of reimbursable snacks/suppers served
Form for Non-Program Foods Sold by School Food Service	Descriptive food details, portion size, manufacturer/brand, and product code (for selected items), recipes, number of portions sold, and availability during and/or outside of meal periods
Meal Pattern Crediting Report and Fruit and Vegetable Questions	For each unique food and portion size reported across the week, meal pattern contributions; maximum number of servings of fruits and vegetables that students are allowed to take at breakfast and lunch.

Note: The EMS also includes the SNM Survey that is used for Objective 1. Groups 2a and 3 will complete the same version of the Menu Survey. There are some minor differences between the prior Basic and Expanded versions used in SNMCS-I, but one version can capture all data needed for Groups 2a and 3.

CACFP = Child and Adult Care Food Program; EMS = Electronic Menu Survey; NSLP = National School Lunch Program; SBP = School Breakfast Program; SNM = school nutrition manager.

b. Menu Survey Data Collection Procedures

Highly trained technical assistants (TAs) will provide SNMs with intensive support and ensure prompt completion of the Menu Survey. For continuity, one TA will be responsible for all schools in an SFA and will provide respondents with technical assistance at key points during data collection. Before the target week, TAs will introduce SNMs to the Menu Survey, describe the EMS training videos, and answer initial questions. The TA will also administer the questions in Menu Survey Screener, which will determine which forms the respondent will complete in the EMS. Prior to the target week, SNMs will be asked to log into the EMS to complete the SNM Survey so they can focus their efforts during the target week on the Menu Survey forms.⁴ After the SNM views the training videos, the TA will call back to answer any additional questions and to remind the respondent to start completing the Menu Survey forms the following week. TAs will also discuss options for how the respondent will submit recipes and procedures for special circumstances, like how to complete the EMS for a school that shares a cafeteria with another school.

Each day of the target week, SNMs will log into the EMS and complete the Menu Survey forms listed on the EMS task list. As information is entered into the forms each day, the EMS generates a unique list of recipes that need to be submitted (via entry into the EMS, email,

⁴ If the SNM does not complete the SNM Survey prior to the target week, it will appear on the task list with all of the other Menu Survey forms that need to be completed during the target week.

fax, or mail). TAs will monitor the completion of the forms in the EMS throughout the target week and will check in with the SNM throughout the week via phone and email to answer questions and provide encouragement.⁵ TAs will also be available during the day at a toll-free number and by email to address any questions from SNMs about the EMS, instructions, forms, or procedures.

TAs will follow up promptly with SNMs who are not completing the forms each day and provide targeted assistance. For SNMs who have detailed questions or difficulty completing a form, the TAs will offer to set up a telephone call with screen-sharing capabilities (for example, through WebEx) so that the TA and SNM can view the forms and fields in the EMS at the same time.

The TA will log all contacts with the SNM in the EMS to facilitate monitoring of communications with each respondent. At the end of the target week, TAs will send SNMs a reminder to complete the EMS and submit recipes. After the target week, nutrition coders will review completed forms in the EMS and follow up with SNMs on critical missing data. This review and data retrieval happens immediately after the school finishes the Menu Survey (i.e., during the data collection phase of the study).

4.2.3. Data Collection Plans for Objective 3 and the Outlying Areas

SFAs and schools in the continental U.S. (the mainland; Objective 3) and in Alaska, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands (the Outlying Areas) will participate in activities to help estimate costs for producing reimbursable school meals. The section below describes the data collection plan for the mainland followed by the plan for the Outlying Areas.

Data Collection Plan for Objective 3

The instruments and data collection aids referenced in this section are the State Agency Indirect Cost Survey, SFA On-Site Cost Interview with Reference Guide, Food Cost Worksheet, SFA Follow-Up Web Survey, SFA Follow-Up Cost Interview with Reference Guide, School Nutrition Manager Cost Interview with Reference Guide, Principal Cost Interview with Reference Guide, and On-Site Self-Serve/Made-To-Order Bar Form (Appendices F05.01, F05.02/F05.03, F05.04/F05.05, F05.06/F05.07, F05.08/05.09, F05.10, F05.12, and F05.13). Contact materials for the State Agency Indirect Cost Survey and SFA Follow-Up Web Survey are in Appendices F05.11 and F05.14/F05.15. The School Planning Interview used to prepare for data collection (Appendix C22) is further described in Supporting Statement Part A.

Objective 3:

- **Determine the cost to produce reimbursable school lunches and breakfasts.**
- **Determine the costs associated with household applications for free and reduced-price meals, and examine the ratios of revenues to costs.**

⁵ For schools participating in the plate waste data collection, TAs will strongly encourage SNMs to complete the Reimbursable Foods Forms for breakfast and lunch soon after meal service.

Research questions under Objective 3 explore the reported and full costs of producing reimbursable school meals and the relationship of these costs to (1) reimbursements and revenues; (2) student, SFA, and school characteristics; and (3) food service and meal characteristics. The research questions also examine costs associated with collecting, processing, and verifying household applications for free and reduced-price meals. Data to address these objectives will be collected from 265 SFAs and 796 schools in Group 3, using instruments designed for State, SFA, and school staff.⁶

The instruments to be used in collecting data for Objective 3 will be administered via computer-assisted personal interviews (CAPIs). Skip logic, validations, and similar quality control features are programmed into CAPI to (1) prevent FIs from leaving critical questions unanswered; (2) standardize response formats (for example, entering percentages as whole numbers rather than as decimals); and (3) flag out-of-range or inconsistent responses for immediate correction. We also plan to collect data on direct delivered USDA Foods from SDAs.

The SFA On-Site and Follow-Up Cost Interviews will have interrelated modules so that the latter is populated with data from the former to reduce the risk of errors. The modules will also be flexible, to accommodate the complexity and need for follow-up to complete all data collection activities. FIs may exit one component or enter another as needed based on respondent availability and will be able to flag items that require follow-up. The module landing page will display FIs' lists of follow-up items, preventing any handwritten notes from being lost. This will allow for reviewing the data in real time to quickly identify any problems and provide rapid feedback to the FI. The study team will thoroughly test the instruments to verify that data flow and validation checks function as planned.

The sections that follow describe the approach to collecting the Objective 3 data in four phases: (1) data collection before the target week, (2) on-site data collection during the target week, (3) data collection with SDAs at the end of SY 2024–2025, and (4) follow-up data collection after the end of SY 2024–2025.

a. Data Collection before the Target Week

Concurrent with SFA and school recruitment, trained study staff will contact State Education or Child Nutrition (CN) Agency finance officers to complete the State Agency Indirect Cost Survey. The study team will send study introductory materials and a copy of the questionnaire to respondents, and trained recruiters will follow up as needed to interview respondents by telephone. This survey will gather information on SFAs' indirect cost rates and what the rates cover. This information is important for determining what SFAs' reported costs include and whether unreported costs are direct or indirect. One reason for seeking this information from state agencies is that SFA-level respondents may not know this information. Another reason is that if the SFA uses the state-calculated and approved rate or allocation plan, the SFA director and business manager do not need to complete the Preliminary SFA Indirect Cost Survey (part of the SFA On-Site Cost Interview) during the

⁶ Components of the Menu Survey also contribute data to be used in estimating meal costs.

target week visit, which reduces respondent burden.

Separately, after SFAs are recruited, the study team will contact SFA directors and SNMs to lay the groundwork for on-site data collection. The study team will send a post-planning email that asks SFA directors to (1) return a preliminary expense statement and (2) gather food price information (a complete set of price documents from all vendors for commercially purchased food items and USDA Foods) for collection during the visit. The study team will also email SNMs a link to the School Planning Interview and ask them to complete the web survey and gather records for the visit. Information gathered in these preparatory activities will inform plans for site visits, including arranging for additional cost interviews with staff of central kitchen serving sampled schools or schools that are unsampled production kitchens but serve sampled satellite kitchen schools (which are needed to collect complete information about labor costs) and observations of self-serve/made-to-order bars during meal periods.

b. On-Site Data Collection during the Target Week

FIs will visit Group 3 SFAs and schools during an assigned target week to conduct in-person interviews. For the largest SFAs, as well as those anticipated to pose challenges for on-site data collection, the study team will send senior staff and consider extending the number of days of the visit. (Plans for coordinating these interviews with other on-site data collection activities are discussed later in this appendix.) FIs will administer the SFA On-Site, SNM, and Principal Cost Interviews in person with the respective staff and will follow up in person and by telephone, as needed, to obtain records or information not available at the time of the visit.

In addition to conducting the cost interviews, FIs will use the Food Cost Worksheet to review for completeness the food price documents SFA directors were asked to compile in advance.⁷ The worksheet will identify vendors the SFA uses for standard categories of foods, such as fresh produce, bakery products, dairy, and frozen foods. FIs will indicate whether price information from each vendor was obtained or requires follow-up and will scan and transmit the documentation securely. Data receipt staff will use the same worksheet to verify that the transmitted materials are complete, and they will request via telephone or email any categories of missing price data.

In schools with self-serve or made-to-order bars available on visit days, FIs will complete the On-Site Self-Serve/Made-to-Order Bar Form to record information on the types and quantities of food used on the bar (referred to as “food disappearance data”). FIs will use paper forms because the format is more flexible for completing in a cafeteria setting. While they are on-site, FIs will scan and securely transmit completed forms to be uploaded into the EMS and linked to the school’s record.

As FIs complete their activities on-site, they will note any missing or incomplete data

⁷ Note that the food price documents will also be used in conjunction with the Menu Survey to examine processing and convenience levels under Objective 2.

collection components and follow up to complete their work before the end of the visit. If FIs cannot complete all the activities, study staff will continue to follow up after the visit to retrieve as much data as possible.

c. SDA Data Collection at the End of SY 2024–2025

For the SFAs in Group 3, the study will also collect data on direct delivered USDA Foods from SDAs to supplement the data provided by SFAs.⁸ Because the SDAs will be providing similar data for SFAs in Groups 1a and 1b for Objective 5, the study will use the same procedures to collect the USDA Foods data for Group 3. The discussion of data collection for the SFPS-IV component (Objective 5) describes these procedures (including data elements).

d. SFA Follow-Up Data Collection after the End of SY 2024–2025

The SFA follow-up data collection occurs in two phases: (1) a web survey plus submission of final expense and revenue statements and (2) a telephone interview with screen-sharing so that the interviewer and respondent can review financial data together in real time. The timing of the data collection is determined by when each SFA's final financial statements are available, as reported to the team during recruiting or the SFA Follow-Up Web Survey. Follow-up data collection will be completed from September 2025 through January 2026.

In the first phase, SFA directors will be invited to complete the SFA Follow-Up Web Survey to report food service operations summary data for SY 2024–2025, including the number of school meals and afterschool snacks that were claimed; the number of operating days; the number of meals prepared for non-school facilities; and cost information for the Fresh Fruit and Vegetable Program, if applicable. The invitation will also include instructions for gathering and transmitting the necessary financial records to be reviewed during the interviews. Respondents may choose to transmit financial statements electronically or by fax.

Trained staff will review and abstract financial information from the financial statements and schedule the SFA Follow-Up Cost Interview. These interviews will be conducted over the telephone using online meeting software with screen-sharing technology to ensure shared understanding of the revenues and expenses (and their subcomponents) and final indirect cost rates for SY 2024–2025.

Data Collection Plan for Objective 3: Outlying Areas

The instruments referenced in this section are the State Agency Indirect Cost Survey, SFA On-Site Cost Interview with Reference Guide, Food Cost Worksheet, SFA Follow-Up Web Survey, SFA Follow-Up Cost Interview with Reference Guide, School Nutrition Manager Cost Interview with Reference Guide, Principal Cost Interview with Reference Guide, and Menu Survey (Appendices F05.01, F05.02, F05.03, F05.04, F05.05, F05.06, F05.07, F05.08, F05.09, F05.10, F05.12, F02.01, and F02.02). Contact materials for the State Agency Indirect Cost Survey and SFA Follow-Up Web Survey are in Appendices F05.11, F05.15, and F05.14.

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Instruments and data collection procedures for the Outlying Areas are adapted from the mainland study to facilitate cost comparisons between the continental U.S. and the outlying areas. The most substantial adaptations are collecting cost data remotely for Alaska, Guam, and Hawaii, and simplifying the methodology to accommodate limitations of the available data for Puerto Rico and the U.S. Virgin Islands (USVI). The adaptations for Alaska, Guam, and Hawaii are called the “full” outlying areas approach (FOA), and those for Puerto Rico and USVI are called the “limited” outlying areas approach (LOA). Exhibit 4.6 summarizes the instruments and the components that will be administered in the Outlying Areas.

Exhibit 4.6. Instruments and Components Administered for the Full and Limited Outlying Areas

Instrument	FOA (AK, GU, HI)	LOA (PR, USVI)
Menu Survey		
Daily Meal Count Forms	✓ ^a	
Reimbursable Foods Forms	✓ ^a	✓ ^d
Recipe Forms	✓ ^a	✓ ^d
NSLP Afterschool Snack Form		✓ ^{d,e}
Self-Serve/Made-to-Order Bar Form	✓ ^a	
Non-Program Foods Sold by School Food Service	✓ ^a	
State Agency Indirect Cost Survey	✓ ^b	
SFA Food Cost Worksheet	✓	✓
SFA On-Site Cost Interview		
SFA Director Staff Salary and Time Allocation Grid	✓ ^c	
Preliminary SFA Indirect Cost Survey	✓	
Preliminary Food Service Expense Statement	✓ ^c	✓
Off-Budget Staff Salary and Time Allocation Grid	✓	
SNM Cost Interview	✓ ^a	
Principal Cost Interview	✓	
SFA Follow-Up Web Survey	✓	✓
SFA Follow-Up Cost Interview		
Food Service Expense Statement Follow-Up	✓ ^c	✓
Food Service Revenue Statement	✓ ^c	✓
Food Service Indirect Cost Follow-Up	✓	✓

^a In Guam, FSMC employees will assist SNMs in the FSMC-managed schools with completing the school-level data collection activity. SNMs in the non-managed schools will complete the activity independently.

^b Alaska only.

^c In Guam, the module will be completed twice. SFA staff will provide SFA data and FSMC staff will provide FSMC data. FSMC staff will not complete the other modules in the interview.

^d Form is adapted for use in LOA.

^e Puerto Rico only.

AK = Alaska; FOA = Full Outlying Areas; FSMC = food service management company; GU = Guam; HI = Hawaii; LOA = Limited Outlying Areas; NSLP = National School Lunch Program; PR = Puerto Rico; SFA = school food authority; SNM = school nutrition manager; USVI = U.S. Virgin Islands.

e. Key Differences between Outlying Areas and the Mainland Study

Like the mainland study, data collection in the Outlying Areas will occur from January to June 2025; the SFA Follow-Up Web Survey and the SFA Follow-Up Cost Interview will be administered from approximately September 2025 through June 2026 (for LOA). Menu Survey respondents will be offered the same incentives as decided upon in the mainland study. The rest of this section describes key differences in the data collection plans for FOA and LOA compared to the mainland study. Based on information provided by FNS during the study planning phase, we anticipate needing to provide Outlying Areas respondents with a higher level of support and technical assistance for the data collection activities (than in prior rounds of the study). This may include a variety of approaches depending on their situation – for example, extending the timeline for submitting the data or accepting production records from schools instead of complete data in the Menu Survey. For some areas, we won't know about the challenges until later – for example, whether USVI is really adopting a new point-of-sale (POS) system next year (which would mean more technical assistance would be needed) or whether the new Guam FSMC will cooperate. Alaska expressed concerns with study burden and lack of staff.

FOA Adaptations. The key differences are the set of respondents, including recruiting Guam's FSMC to participate, and collecting all the cost data remotely. Like the Menu Survey for the mainland study, the FOA Menu Survey will be administered remotely, and respondents can choose to complete it electronically or on hard copy.

FOA respondents will include the state education agency finance officer (Alaska only), SFA directors, district business managers, SNMs, and principals. In Guam⁹, FSMC staff will also participate. Specifically, the central FSMC manager will be asked to complete the SFA On-Site Cost Interview, SFA Food Cost Worksheet, and SFA Follow-Up Cost Interview. In addition, the four FSMC regional operations managers in Guam will be asked to help SNMs complete the FOA components of the Menu Survey and the SNM Cost Interview in FSMC-managed schools. The study team will use these data to help estimate the cost of producing school meals in Guam, excluding FSMC operating profits.

Although Guam's FSMC staff agreed to participate in the SNMCS-II study before it was called off, their participation is not guaranteed for the upcoming study. We anticipate challenges completing data collection activities with FSMC staff in Guam, especially given that it is a different FSMC. This is because the data they share will allow one to estimate the FSMC's profit margin, and FSMC staff might not want to disclose operational data to FNS or Guam. The FSMC data will be identifiable to FNS in the restricted-use data files and documentation.

FNS can partially address staff reluctance by not identifying the FSMC in any public reports, but readers might still be able to determine easily which company holds the contract. If the FSMC refuses to participate in the data collection, the study team may still be able to complete the data collection with the SFA and school staff and treat the SFA payments to

⁹ Note that Guam will be managed by a new FSMC in SY 2024-2025 so some procedures may vary from what is described here.

the FSMC as a direct cost. This is how such payments are treated in the mainland study.

The study team will collect all data remotely for Alaska, Guam, and Hawaii. Interviews will be conducted via phone or teleconferencing platform. If needed, the study team will send hard-copy materials to respondents; in the cancelled 2020 study, Guam FSMC staff preferred to use the electronic versions.

LOA Adaptations. Data collectors will work with Puerto Rico and USVI to collect the data needed to estimate reported costs. Reported costs include food, labor, other direct, and indirect costs charged to the school foodservice account. Therefore, all costs included on the SFAs' expense statements will be included in the reported cost estimate. As noted above, the spring data collection will occur at the same time as the mainland study and FOA data collections. The study team will conduct the follow-up data collection starting in fall 2025 after the final financial statements for each SFA are available (approximately September 2025 through June 2026).¹⁰ Scheduling will account for Carnival in USVI in the spring, and data will be collected in Spanish in Puerto Rico. Because the instruments and procedures are less like those planned for the mainland study and FOA, the rest of this section provides more detail about how LOA data collection will be completed.

To complete the LOA Menu Survey, SFA directors will complete adapted, hard-copy versions of four components based on one week of planned menus in the SFA: (1) the Reimbursable Foods Form for Lunch, (2) the Reimbursable Foods Form for Breakfast, (3) the Recipe Forms, and (4) the NSLP Afterschool Snack Form (Puerto Rico only).

Shortly after the SFA director is recruited into the study, the study team will work with the SFA director to identify a target week, which will be the week of planned menus that is the focus of data collection. Because the Menu Survey will be based on the SFA's planned menu, the Menu Survey data collection can occur retrospectively. That is, it will not be necessary for the SFA director to complete the data collection during the target week (unlike the data collection for the mainland study or FOA), although scheduling the visits for in-person cost interviews during or shortly after the target week will help with maintaining regular communication during data collection. The interviewers can encourage respondents to complete the forms and give them to the interviewers on-site. If the forms are not completed in time for interviewers to take them, the study team will request that the SFA directors return them within approximately two weeks of receiving them.

Menu Survey TAs will train respondents to complete the forms and will provide additional support and guidance as needed. Recruiters will support completion of the data collection by introducing respondents to the TAs to help build rapport, encouraging respondents to complete the forms, and reminding respondents to provide food price documentation for the

¹⁰ The reason for the extended data collection period is because we learned in the first feasibility assessment that Puerto Rico's audited financial statements are not available for at least nine months after the end of the fiscal year because of a reconciliation process with the Puerto Rico Department of Agriculture. If the timing is similar for SY 2024–2025, the schedule for the follow-up data collection and subsequent tasks—data processing, coding, analysis, and reporting—will need to accommodate this timing.

items reported in the Menu Survey (as described below). Given the communication constraints we faced during the feasibility assessments, we anticipate several rounds of follow-up via email and telephone will be needed to obtain responses.

TAs will contact the respondent regularly to check on their progress in completing the Menu Survey and answer questions. They will continue to follow up with respondents until the completed Menu Surveys are returned to the cost interviewers or shipped back to Mathematica. Supervisors will use the same procedures as the mainland study to monitor the TAs' work. Spanish-speaking regular-status staff will be available to assist with Puerto Rico data collection if we are unable to hire Spanish-speaking TAs.

To complete the Food Cost Worksheet, study staff will provide each SFA director with a detailed overview of the food price documentation that is needed for the study. This documentation, such as price lists or invoices for food items that are served in reimbursable breakfasts, lunches, and snacks, should include all the items included in the planned menus to ensure coverage of the items that are reported in the LOA Menu Survey. The study team will use online screen-sharing tools to facilitate the discussion. The interviewer will complete the worksheet during the call and email it to the SFA director to use as a reference aid to compile food price documentation. The SFA director will give the worksheet and the documentation to the cost interviewer, and the interviewer will review the materials for completeness.

Because we anticipate it may be challenging for each SFA to compile all the food price documentation amid other SFA tasks and priorities, the study team will attempt to establish a weekly conference call with each SFA to check in on their progress and address any questions they may have. Compiling the documentation may be especially challenging in Puerto Rico, where a large volume of food price documentation will be needed.¹¹ Based on results from the second feasibility assessment we conducted in 2019, we know that both the central SFA and the regional offices make food purchases. Although the central SFA places orders for most food, regional offices place orders for perishable items locally through contracts established by the central SFA (and tracked in the Department of Education-wide accounting system). The local vendors used in each region may vary. Therefore, to accurately calculate food costs, the study team will need to obtain food price documentation for vendors involved in both central and regional purchases. It is unclear how much overlap there will be in vendors across the central office and the various regions. Rough estimates based on data collected in the second feasibility assessment suggest that we may need to collect as many as 70 unique vendor documents. Although the study team will rely on the SFA director to compile this documentation, we may need to send the cost interviewers to at least some regional offices to assist with gathering the records.

To complete the SFA On-Site Cost Interview, the cost interviewer will schedule the in-person

¹¹ We learned in the second feasibility assessment that Puerto Rico planned to roll out a new POS system starting in SY 2019–2020. The SFA planned to implement the POS system in all schools by August 2020. If the system is fully implemented by SY 2024–2025, collecting the food price documentation may be less challenging than we are currently anticipating.

interview and request the SFA director provide the final financial statement for SY 2023–2024 in advance. This will allow the interviewer to abstract information from the statement into the Preliminary Food Service Expense Statement module of the SFA On-Site Cost Interview.

Two weeks before the data collection visit, the interviewer will send a reminder email to the SFA director to confirm the schedule and send the SFA Director Cost Interview Reference Guide. Each SFA director will participate in the cost interview along with the district business manager. We expect each interview to last 1.5 hours.

The SFA Follow-Up Web Survey procedures are essentially the same as for the mainland study and FOA. When we expect the final financial statement is available for each SFA (determined during the spring data collection), the study team will administer the SFA Follow-Up Web Survey. This survey will collect information including the number of school meals that were claimed and the number of adult meals that were served during SY 2024–2025 for the SFA overall and by school type (elementary, middle, and high). SFA directors will also be asked to submit the final financial statement for SY 2024–2025.

To complete the SFA Follow-Up Cost Interview, the study team will abstract the expense and revenue information from the final financial statements into the Food Service Expense Statement Follow-Up and Food Service Revenue Statement modules. The team will schedule an in-person visit to conduct the 1.75-hour interview with SFA directors and district business managers and send the SFA Follow-Up Cost Interview Reference Guide before the visit. If we do not receive the financial statements electronically before the visit, the study team will proceed with scheduling the visit and completing the modules on-site.

We anticipate additional challenges with completing the LOA data collection in the St. Croix SFA in USVI. This is because we found in the two feasibility assessments that the financial documents did not include substantial portions of the costs of operating school meal programs. For example, the financial statement for SY 2018–2019 did not include staff salary and benefits or most food costs. Because the SFA’s accounting procedures may have changed since then, the study team will attempt data collection with both the St. Thomas/St. John and St. Croix SFAs but will discuss any challenges encountered and potential solutions with FNS. One possibility is FNS may decide not to attempt the follow-up data collection with the St. Croix SFA.

4.2.4. Data Collection Plans for Objective 4

The instruments and data collection aids referenced in this section are the Student Interview, Parent Interview, Reimbursable Meal Sale Data Request Form, Automated Multiple-Pass Method (AMPM) 24-Hour Dietary Recall, School Sources of Food Form, Food Diary, and Plate Waste Observation Booklet (Appendices F08.01, F08.04, F06, F08.02, F08.03, F08.05/F08.06, and F09). Contact materials for the surveys are in Appendices F08.07/F08.08, F08.09/F08.10, and F08.11/F08.12. The SFA and School Planning Interviews used to prepare for data collection (Appendices C16 and C22) are further described in Supporting Statement Part A.

Objective 4:

- **Describe student characteristics, participation, student/parent satisfaction, and plate waste.**
- **Describe students' dietary intakes.**

Objective 4 research questions will examine four main topics: (1) student participation, (2) customer satisfaction, (3) food and nutrient intakes and other outcomes of school meal participants and nonparticipants, and (4) plate waste. To address research questions in the first three topic areas, the study will collect data from a target of 3,302 students and 1,800 parents in 265 Group 2a schools (in 128 SFAs).¹² The study team will also collect administrative data to document students' participation in the NSLP and SBP and their certifications status. To address research questions about plate waste, the study team will conduct plate waste observations in a subsample of 138 Group 3 schools (in 73 SFAs). These observations will yield a target of 4,140 observations of lunch trays and 2,120 observations of breakfast trays (an average of 30 lunch and 15 breakfast trays per school).

Data collection with parents and students will be conducted in English or Spanish. When finalizing plans for the on-site data collection, FIs will review with school liaisons the list of sampled students to identify potential language issues ahead of time. If sample members' preferred language is something other than English or Spanish, school liaisons or study participants will be asked to arrange for interpreters. Liaisons can arrange for assistance during in-school data collection. If a parent's preferred language is something other than English or Spanish, the study team will request that the parent have an interpreter present during the Parent Interview (and, for elementary school students, the parent-assisted portion of the 24-hour recall interview). Parents who complete the Parent Interview on the web can choose to complete it in either English or Spanish. The instruments and data collection procedures are further described in the sections that follow.

a. Student and Parent Interviews

Because the Objective 4 research questions in SNMCS-II are nearly identical to SNMCS-I, the Student Interview and Parent Interview for SNMCS-II will remain largely unchanged from the SNMCS-I instruments. The Student Interview will be CAPI-administered in school, in conjunction with the 24-hour dietary recall (described later in this section). School liaisons will arrange for interviews to take place in a private space. Interviewers will be trained to build rapport with students by taking steps such as explaining what will happen during the interview and giving students an opportunity to ask questions before starting.

For the Parent Interview, all parents will be offered the choice of completing the interview on the web or by telephone, and elementary school parents will be given the opportunity to complete in person in conjunction with the 24-hour dietary recall.

¹² The study team will select a random sequential sample of 16 students per school (possibly more depending on consent requirements and other restrictions placed on data collection procedures) to yield eight completes in each Group 2a participating school.

Offering multimode completion to parents has several advantages: (1) it may increase cooperation by offering parents greater flexibility because they will be able to access the survey on a mobile device and at all hours, (2) it will reduce telephone interviewers' (TIs') follow-up effort by eliminating the need to call those who prefer to complete on the web, (3) it may provide greater sample representativeness by gaining cooperating among sample members who do not care to talk on the telephone, and (4) it may encourage reluctant respondents to answer more sensitive questions about income or program participation than they would be willing to answer with an interviewer.

b. Reimbursable Meal Sale Data Request Form

The Reimbursable Meal Sale Data Request Form will document sampled students' certification status and whether they participated in the NSLP/SBP on the day referenced in the 24-hour dietary recall. FIs will collect this information from the school point-of sale (POS) system or directly from the SNM while on-site. If the data are not available while FIs are present, study staff will follow up to request this information after the target week.

c. 24-Hour Dietary Recalls

SNMCS-II will examine the contributions of school meals to students' dietary intakes, assess the adequacy and overall nutritional quality of students' diets, and assess the impact of school meal participation on these and other nutrition-related outcomes. The approach to collecting 24-hour dietary recall data will largely replicate the approach used in SNMCS-I, which is tailored to children's cognitive abilities. Planned enhancements to the approach are designed to achieve the target number of completes. To maintain consistency with other national data sets, including SNMCS-I and the National Health and Nutrition Examination Survey (NHANES), the study team will use USDA's Automated Multiple-Pass Method (AMPM) instrument to collect the 24-hour recalls. Students will report detailed information on foods and beverages consumed on the target day using a two-dimensional food model booklet and measuring cups and spoons to help with portion size estimation.

We will modify AMPM to capture details on food sources in schools (for example, lines serving reimbursable meals, à la carte lines, vending machines, and FFVP snacks) through the School Sources of Food Form (formerly named the POS Form). For SNMCS-II, the study team will also capture information about competitive foods that are obtained from sources such as classroom parties, fundraisers, and teachers. Before conducting 24-hour recalls in each school, FIs will complete the School Sources of Food Form (formerly referred to as the POS Form) to document the physical locations where students can obtain foods and beverages and assign codes to each location using a common coding structure to distinguish between locations that sell reimbursable and/or nonreimbursable items. AMPM will prompt the FI to ask the respondent for the specific source of each food obtained at school, and the FI will record the corresponding code from the School Sources of Food Form. Before conducting recalls, FIs will also complete the Milk Form¹³, which documents the type, flavor, fat content, and carton or bottle/cap color of all milks available to students. This information

¹³ The Milk Form is not included in this submission as it involves no public burden.

will be used to help students accurately identify the type of milk consumed.

Finally, FIs will collect printed school menus that list the items served on the target day. The menus will be used during the 24-hour recalls to help students accurately recall and describe foods eaten as part of a school meal, which facilitates matching these foods to items recorded in the school's Menu Survey. The menus are used only as a fallback when a student cannot describe or recall an item eaten in a school meal after the standard "passes" used in the AMPM software to identify items consumed. Interviewers will be trained to probe neutrally to avoid leading respondents. For example, interviewers will ask if the student ate something that is printed on the menu or something else.

Middle and high school students will complete the 24-hour recall in one in-person interview at school, reporting their dietary intakes for the prior school day, midnight to midnight. Elementary school students will complete the interview in two parts. The reporting period will also be midnight to midnight. They will be interviewed in person on the target day as soon as possible after lunch to report on foods consumed from the time they awoke through lunch. Conducting the recall immediately after lunch will maximize accurate recall—research has shown that younger children report their intakes more accurately when interviewed shortly after a meal (Baxter et al., 2004). The rest of the interview, which will capture information about foods and beverages consumed the rest of the day, will be completed with parental assistance on the following day.¹⁴ For example, if the reference day for a 24-hour recall is a Monday from midnight to midnight, a middle or high school student will be interviewed during the school day on Tuesday. An elementary school student will begin the interview on Monday after lunch and will report all foods and beverages consumed from the time they awoke to the time of the interview after Monday's lunch. Information about the remainder of the 24-hour period will be obtained on Tuesday, when the student and parent will be interviewed together and will report all foods and beverages consumed starting from the time of the Monday interview until midnight.

The parent-assisted part of the 24-hour recall for elementary school students will be conducted using a multimode approach. FIs will schedule and conduct these interviews in-person with parents at school. If the parent is not able or willing to meet in-person, they will have the flexibility to conduct the interview by telephone within 48 hours. The telephone option is being offered to improve completion rates and reduce burden on parents. Collection of 24-hour recalls by telephone is common—for example, NHANES 2015–2016 conducted 24-hour recalls by phone (Centers for Disease Control and Prevention [CDC], 2016). Research has shown that 24-hour recalls conducted in person and by telephone yield comparable results (Tran et al., 2000). If a parent indicates that they prefer to complete the interview by telephone, FIs will provide elementary school students with portion reference aids and a nonquantitative food diary to bring home to parents. In these situations, the study team will use several strategies to ensure that these materials reach parents. First, in

¹⁴ Most of the parent-assisted recall interviews will be completed on the following day. To allow parents greater flexibility, the study team will continue to attempt the interview up to 2 days after the target day. For example, if the child is interviewed on Monday, the study team will attempt to complete the parent-assisted portion on Tuesday or Wednesday.

working with school liaisons (who will escort students to and from the 24-hour recall interviews), FIs will emphasize the importance of liaisons helping students put the materials in their backpacks immediately after the interview. Second, the study team will prepare flyers for school liaisons to send home with students that instruct parents to check their children's backpacks for these materials. Third, the study team will text or email reminders to parents (with their permission). Finally, when the study team contacts parents to schedule an appointment for the parent-assisted portion of the elementary school student recall interview (and Parent Interview if not yet completed on the web), they will let parents know to check for the study materials that their child will bring home.

If parents do not have portion reference aids when they are contacted for the interview, TIs will suggest that parents use measuring cups, measuring spoons, and rulers available in the home and refer to any food packages or beverage containers. This is consistent with the procedures used in SNMCS-I and those used in NHANES for second dietary recalls conducted over the telephone.

To estimate distributions of usual nutrient and food group intakes, a second 24-hour recall is needed for a subsample of students. These second recalls will be conducted by telephone 3 to 10 days after the initial recall. Middle and high school students selected to complete the second recalls will be given portion reference aids to help in reporting portion sizes over the telephone. Parents of elementary school students will be provided with a second food diary.

d. Plate Waste Observations

To address research questions related to plate waste, the study team will conduct plate waste observations in a subsample of Group 3 SFAs and schools. FIs will use the visual observation methods used in SNMCS-I to document the foods and beverages taken by students and estimate the amounts of foods wasted. The volume of liquid waste will be measured.

To maintain consistency with SNMCS-I, schools sampled for the plate waste observations will meet the following criteria: (1) lunch and breakfast must be served and consumed in the cafeteria and (2) schools must serve at least 172 reimbursable lunches per day. These thresholds will help ensure that the target number of observations can be completed in each school during a one-day site visit.

In SNMCS-I, identifying the schools for the plate waste study sample was challenging because fewer schools than expected met initial eligibility criteria. Moreover, the plate waste sample was not fully identified before the start of data collection and information on eligibility for the plate waste study was not available from the sampled SFAs. Therefore, the plate waste sample was not entirely a probability sample and traditional sampling weights could not be constructed.

To address these issues in SNMCS-II, the study team will prioritize screening for plate waste eligibility during recruitment. The SFA Director Planning Interview asks Group 3 SFAs about the location of meal service in sampled schools and the number of reimbursable lunches

served per day. To reduce burden and promote cooperation, the interview will ask about the number of lunches using a cutoff. That is, the interview will ask whether the school's lunch volume is greater than or equal to (or less than) the minimum threshold to be eligible. Among plate waste-eligible SFAs, recruiters also will ask about plate waste eligibility of the sampled schools to help with planning the data collection and constructing the weights. To allow sampling weights to account for the probability of selection of student trays, the study team will attempt to give all trays an approximately equal probability of selection across all meal periods, and FIs will ask SNMs to report the total number of reimbursable breakfasts and lunches served on the day of the observations. Although daily counts of reimbursable meals will be collected in the Daily Meal Counts Form in the Menu Survey, FIs will ask about the observation day to guard against nonresponse in the Menu Survey.

Although these enhanced approaches to selecting schools for the plate waste study are expected to work, issues may arise. Key members of the study team will review the efficacy and initial results of these approaches on an ongoing basis, flagging any potential concerns at a 'smoke and not fire' stage. We will both examine the likely cause of any deviations from the expected results and extrapolate the potential implications to the sample. As needed, the team will creatively explore any ways to address the concerns, making minor procedural or training changes without delay. These in turn will be quickly examined for their effect to determine if worth continuing or refining. If issues with more serious impact are emerging, we will engage with FNS to assess the situation and propose alternate considerations.

e. Preparations for Data Collection

As noted above, the study team will determine which SFAs and schools are eligible for plate waste observations by collecting critical information in the SFA Director Planning Interview at the time of recruitment. After the plate waste sample is confirmed, the study team will collect details to inform planning these observations in the School Planning Interview. Questions include the number and timing of meal periods, the number of reimbursable lunches served on a typical day,¹⁵ and details about serving line configurations. FIs will pre-fill information about the length and timing of meal periods in the plate waste observation booklet before the visit and verify the information when they are on-site.

f. Data Collection Procedures

FIs will distribute plate waste observations evenly across meal periods and all lines serving reimbursable meals. Two FIs will conduct observations in each school, working in pairs to minimize disruptions to meal service. Before the meal period, FIs will list in the observation booklet all foods offered and served in reimbursable meals, using printed menus, information from staff, and observations of serving lines. FIs also will purchase portions of foods offered in reimbursable meals to use as visual points of reference for a single portion size.

¹⁵ Although SFA directors will have reported that the volume of lunches is above the cutoff, finer information is needed from SNMs to develop the tray tagging plan for each school.

During the meal period, FIs will stand where they can clearly observe and tag students' trays. FIs will tag observed trays that contain reimbursable meals, record the number of portions of each food taken, and instruct students to bring their trays to a designated area after eating and not to discard anything in the trash. FIs will record the meal period for each tray and obtain grade-level information for the meal period from the SNM.¹⁶ For all trays returned at the end of the meal, FIs will visually estimate the proportion of solid foods remaining by recording 0, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, or 1 to indicate the amount remaining. Using a liquid measuring cup, FIs will directly measure the amount of liquids remaining. Portioned servings of foods purchased by FIs will serve as visual points of reference. However, for consistency with other analyses of the nutrient and food group content of meals, the portion sizes used in the plate waste analyses will be those reported in the Menu Survey.

Foods and beverages observed in plate waste data will be linked with the corresponding foods reported in the Menu Survey on the observation day. This linkage is essential to obtaining nutrient and food group information for foods and beverages wasted. FIs will inform the Menu Survey TA assigned to each school about the day plate waste observations will be conducted. The Menu Survey TA will then notify the SNM and encourage him or her to complete the listing of foods offered in reimbursable meals that day, even if the SNM does not complete the rest of the Menu Survey until later. Observed foods will be matched to the corresponding foods reported in the Menu Survey during data processing.

4.3. Schedule and Procedures for Groups 2a and 3 Data Collection

On-site, telephone, and web data collection will be conducted in SFAs and schools in Group 2a and Group 3. On-site data collection in Group 2a will include student interviews, 24-hour dietary recalls, and in-school observations. Telephone data collection in Group 2a will include some parent-assisted dietary recalls with elementary school students, Parent Interviews, and second dietary recalls. Parents may complete the Parent Interview on the web rather than telephone. On-site data collection in Group 3 will include the cost interviews and in-school observations. Web and telephone data collection in Group 3 will include the SFA Follow-Up Web Survey and SFA Follow-Up Cost Interview, respectively. The following sections describe these plans in detail.

4.3.1. Group 2a SFAs

Group 2a procedures include sampling, recruiting, and obtaining consent and assent from parents and students; scheduling Parent Interviews; visiting schools to conduct interviews and observations; and conducting additional interviews over the telephone or web.

a. Student and Parent Sampling, Recruitment, and Consent

School liaisons will facilitate student sampling and the receipt of parental consent. They also will coordinate in-school data collection activities, including escorting students to and from the area where student interviews and 24-hour recall interviews will be conducted, and ensure that elementary school students take home the materials needed for the parent-

¹⁶ Grade may be reported as a range if multiple grades are dining together.

assisted portion of the dietary recall if appropriate. In recognition of the substantial time commitment these duties require, the incentives for school liaisons will vary, with the first payment depending on whether the parental consent is passive or active. The second payment will follow successful completion of on-site data collection activities.

b. Scheduling Student and Parent Interviews

After a consent deadline of about 2 weeks has passed from the time welcome packets are mailed, the study team will share with school liaisons the list of sampled students so that they can begin scheduling on-site data collection. The study team will ask liaisons to schedule elementary school students' recalls as soon after lunch as possible to maximize data quality. Otherwise, the interviews will be arranged to avoid instruction or testing time, such as during study hall or before or after school. Liaisons will address any staff concerns about the study by answering questions and reiterating that a very small number of students will be interviewed. Liaisons will send home reminder flyers with sampled students the day before interviews to remind parents to look for food diaries and portion reference aids in their children's school bags if appropriate. FIs will reach out to elementary school parents ahead of the target week to schedule the second part of the 24-hour recall, conducted in person at school or by phone if requested.

c. Data Collection

The study team will schedule visits to Group 2a SFAs for 2 or 3 consecutive days during the target week, depending on the presence of an elementary school. School visit days will be randomized across Monday through Friday to capture the school nutrition environment and students' dietary intakes on a typical school day.¹⁷ Two- or three-person FI teams will visit each SFA. The team size allows for flexibility to accommodate factors such as the number of sampled schools, the presence of an elementary school, cafeteria size and configurations, distance between schools, and interviewing space, as well as unexpected circumstances such as weather disruptions or interviewer illness, to attain the highest possible response rates. At the same time, the team size minimizes potential disruptions to school days, prevents FIs from interviewing students alone, and allows us to work efficiently throughout the field period.

Exhibit 4.7 illustrates the schedule for on-site data collection in Group 2a SFAs. FIs will arrive at the elementary school in the morning and meet with the SNM, complete the School Sources of Food Form and Milk Form, collect a menu, and request reimbursable meal sales data. The team will work together to meet with the school liaison; identify the location for interviewing students; and complete the interview activities and the Observation Guide during the visit day.

FIs will attempt to interview eight students per school. Elementary school students will be interviewed on the target day (that is, *during* the 24-hour dietary intake period) as soon as

¹⁷ A subset of elementary school students (and their parents) and secondary school students will complete data collection activities on Saturday to capture dietary intakes on Fridays. These interviews may occur at school, home, or in a designated public place like a library.

possible following lunch. Because of the timing of these interviews, a four-person team will be needed in Group 2a elementary schools to complete all interviews in a single visit day. FIs will complete the elementary school student portion of the 24-hour recall followed by the student interview. After all data collection activities are completed, FIs will record the appointment time for the 24-hour recall on the elementary school student’s diary cover and give the student instructions for completing the diary. FIs will give students a gift card to take home, along with a new food diary if they are missing the one that was mailed to them ahead of the target week. Parents will record information about their child’s dietary intake for the rest of the target day in the diary. FIs will complete the rest of the elementary school student’s recall the next day, with parental assistance. Parents of elementary school students will also complete the Parent Interview at that time. Parents will receive a gift card after completing the Parent Interview.

Exhibit 4.7. Sample on-site data collection schedule in a Group 2a

	Elementary School Schedule				Middle/High School Schedule		
	FI #1	FI #2	FI #3	FI #4	FI #1	FI #2	FI #3
7:30-8:00 AM							
8:01-8:30 AM							
8:31-9:00 AM							
9:01-9:30 AM							
9:31-10:00 AM							
10:01-10:30 AM							
10:31-11:00 AM							
11:01-11:30 AM							
11:31-12:00 PM							
12:01-12:30 PM							
12:31-1:00 PM							
1:01-1:30 PM							
1:31-2:00 PM							
2:01-2:30 PM							
2:31-3:00 PM							

- Meet with the SNM, complete the POS and Milk Forms, collect a menu, and request reimbursable meal sale data.
- Complete the Observation Guide for breakfast (if applicable) and lunch.
- Meet with the school liaison and determine where student interviews will be conducted.
- Schedule/conduct Parent Interviews
- Interview elementary school students (dietary recall and Student Interview).
- Interview middle/high school students (dietary recall and Student Interview).

ES = elementary school; MS = middle school; HS = high school; POS = point-of-sale form - now referred to as the School Sources of Food Form; SFA = school food authority; SNM = school nutrition manager; FI = field interviewer; SNM = school nutrition manager.

Middle and high school students will complete the entire 24-hour recall and student interview in school the day *after* the target day, reporting all foods and beverages consumed the previous day from midnight to midnight. Because these dietary recalls can be completed any time during the school day, fewer FIs may be needed in SFAs with only middle or high schools. FIs will hand students a gift card following their participation. Middle and high school students interviewed on Saturdays will receive a higher incentive amount to acknowledge the greater inconvenience imposed upon them for participating. Parents of students will receive a gift card after completing the Parent Interview on the web or telephone.

The subsample of students selected for a second recall will complete it by telephone 3 to 10

days after the first recall. At the end of the in-person interviews, FIs will give elementary school students selected into this subsample an extra food diary along with the portion reference aids. FIs will give middle and high school students selected into this subsample a set of portion reference aids. The study team will schedule an appointment to conduct the second recall at the end of the first interview—in person for middle and high school students, and on the telephone for parents of elementary school students—and a TI will call at the scheduled time. Those who complete a second recall will be sent an additional gift card (see Exhibit 3.4).

4.3.2. Group 3 SFAs

In Group 3 SFAs, one FI will complete all the on-site interviews and observations on consecutive days in sampled schools during the target week, although the timing of activities may vary to accommodate staff schedules, meal periods, and other circumstances.

Visit days will vary across schools so that findings represent a typical school day. Visits in a typical SFA will occur over 3 days. Exhibit 4.8 illustrates a sample schedule. The FI will meet with the SNM upon arrival at the school to begin data collection; the SNM will provide information for the FI to complete the Observation Guide. During the FI's time in the school, they will also conduct the SNM and Principal Cost Interviews and complete the On-Site Self-Serve/Made-to-Order Bar Form (if applicable). FIs also will visit the SFA director and business manager at other times to complete the SFA On-Site Cost Interview. The sample schedule includes additional time for the FI to follow up on incomplete data collection activities while still on-site. Additional FIs may be sent to Group 3 SFAs to assist in data collection activities. In SFAs with multiple self-serve/made-to-order bars or central or production kitchens that supply sampled schools, an additional FI will join the visit to help complete additional observations or interviews, respectively. In the subsample of schools selected to participate in the plate waste observations, two additional FIs will visit to conduct the observations.

As described above, after SFAs' final revenue and expense statements are available, the study team will conduct follow-up cost interviews beginning in fall 2025. Interviewers will conduct these interviews over the telephone using screen sharing.

Exhibit 4.8. Sample on-site data collection schedule in a Group 3 SFA (with one field interviewer)

	Day 1: School 1	Day 2: School 2	Day 3: School 3
7:30-8:00 AM			
8:01-8:30 AM			
8:31-9:00 AM			
9:01-9:30 AM			
9:31-10:00 AM			
10:01-10:30 AM			
10:31-11:00 AM			
11:01-11:30 AM			
11:31-12:00 PM			
12:01-12:30 PM			
12:31-1:00 PM			
1:01-1:30 PM			
1:31-2:00 PM			
2:01-2:30 PM			
2:31-3:00 PM			

- Meet with the SNM, and complete the Observation Guide for breakfast (if applicable) and lunch.
- Conduct the SNM Cost Interview.
- Complete the On-site Self-Serve/ Made-to-Order Bar Form (if applicable).
- Conduct the Principal Cost Interview.
- SFA On-site Cost Interview.
- Follow up on any outstanding data collection while still on-site.

SFA = school food authority; SNM = school nutrition manager.

4.4. Data Collection Plans for the SFPS-IV Component

The data collection activities referenced in this section are the SFA Director Survey (Appendix F03.01); Food Purchase Planning Interview (Appendix C14); SFPS Purchase Data Webinar (Appendix C15); SFPS Quarterly Program Data Form and Food Purchase Data Request Email, SFPS Food Purchase Data Checklist, and SFPS Quarterly Program Data Form (Appendices F01.01, F01.02, and F01.03); Request to SDAs to Submit USDA Foods Data (Appendix F01.05); and SFPS SFA Year-End Follow-Up Survey Specifications (Appendix F01.04). Additional contact materials are in Appendices F01.06 through F01.12.

Objective 5:

- **Develop national estimates of the types, amounts, and costs of food purchases and USDA Foods.**
- **Describe changes in the mix of food acquired by schools since SFPS-III and the extent to which the costs of food have changed.**
- **Compare the mix of foods acquired by various subgroups.**
- **Describe school food purchase practices and identify relationships between food purchase practices/school district characteristics and the costs of foods.**

The SFPS-IV component of the study will address Objective 5, which focuses on the food acquisition practices used by SFAs and the types, amounts, and costs of foods acquired. Data to address this objective will be collected from SFAs in Groups 1a and 1b, along with

the certainty SFAs. Exhibit 4.9 provides details on how the instruments and SFA groups align with Objective 5 and provides information on respondents, target completed sample sizes, mode, and burden. The SFAs sampled for Groups 1a and 1b will be divided into four groups, with each group assigned to one quarter of the year for data collection. Each quarterly group will provide three consecutive months of food purchase data for the calendar year. This approach provides data for annual estimates of total food purchases while limiting the burden on individual SFAs. It also captures both the full variety of foods purchased (particularly seasonally available foods) and the variation in prices across the year. The data collection for the SFPS-IV portion of the study is fully remote.¹⁸

¹⁸ The Combined Study Plan noted the following: We considered whether following the SNMCS-II method of collecting food purchase documents on-site would improve response rates and initial data quality. Two factors led us to conclude that the remote option is better suited: first, the greater volume of documentation required compared to what is needed for Objective 3, and second, the lack of other requirements for on-site data collection.

Exhibit 4.9. Summary of the data collection plan for the SFPS-IV component

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^{a,b}	Starting sample	Comments
Objective 5: SFPS-IV—Groups 1a and 1b^b						
Quarterly Food Purchase Data	402 SFA directors	Electronic submittal	6 hours	59	683	Includes food purchase data webinar. Completion of the SFA Director Survey and Quarterly Program Data Form, and provision of Quarterly Food Purchase Data, are needed to consider an SFA complete for the planned analyses. The instrument samples are based on completing with 88 G1a and 276 G2b SFAs using this definition.
Quarterly Program Data Form	402 SFA directors	Web	15 minutes	59	683	Data on meals claimed, food expenditure, non-program revenues, and top selling non-program foods.
SFA Director Survey (SFPS-IV)	276 SFA directors in Group 1b	Web	1.25 hours	53	518	Target response rate assumes joint recruiting for survey and food purchase data.
SFA Director Survey (SNMCS-II+SFPS-IV)	88 SFA directors in Group 1a	Web	1.5 hours	53	165	Target response rate and starting sample assume initial recruiting for SFA Director Survey and food purchase data. Lower target response rate than SNMCS-I due to expanded SFA Director Survey.
SFA Year-End Follow-Up Survey	362 SFA directors	Web	15 minutes	90	402	Starting sample is comprised of SFAs that completed the Quarterly Program Data Form and provided Quarterly Food Purchase Data. Data on food expenditure and nonprogram revenue.
USDA Quarterly Data Request	USDA FNS	Electronic submittal	n.a.	n.a.	n.a.	USDA DoD Fresh Foods, processed foods ^c

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^{a,b}	Starting sample	Comments
SDA Quarterly USDA Foods data	49 SDA directors in States with Group 1a and 1b SFAs	Electronic upload	2 hours (30 minutes per quarter)	100	49	USDA Foods delivered for assigned quarter for sampled SFAs.

^a Target response rates are among estimated released SFAs, schools, students and parents.

^b Target response rate will likely be higher for the SFA Director Survey than the Quarterly Food Purchase Data and Quarterly Program Data Form. Additional attrition for the SFA Year-End Follow-Up Survey is also likely.

^c While USDA will provide data on volume of USDA Foods raw ingredients used in processed end products, data on prices and amount of product purchased will be provided by SFAs.

DoD Fresh = USDA's Department of Defense Fruit and Vegetable Program; FNS = Food and Nutrition Service; SDA = State Distributing Agency; SFA = school food authority; SFPS = School Food Purchase Study; SNMCS = School Nutrition and Meal Cost Study; USDA = U.S. Department of Agriculture.

We will make several updates to the instruments and data collection procedures for the SFPS-IV component of the study. These are summarized in the following bullets and described further in the section below.

- Adjust the timing of the food purchase data webinar to occur before the start of the SFAs' assigned quarter (when possible) to allow time for understanding the study's data requirements, adjust their procedures if necessary, and alert their vendors about their data needs for the study.
- Add a call at the end of the assigned quarter to check on the SFA's progress compiling the food purchase data. This should help with on time submission of data, improve data quality, and reduce follow-up questions for the SFA.
- Change the timing of the SFA survey to be during or after the SFAs' assigned quarter for providing their food purchase data to allow SFAs to focus first on the training and requirements for the food purchase data.

The study team will move some questions from the SFPS-III SFA Survey of Food Purchase Practices to a new Food Purchase Planning Interview to be administered during recruiting to gather information that will inform training and technical assistance related to the submission of food purchase data (see Section 4.4.1 for more detail). These questions are related to the use of a FSMC (and the name of the company and contact information), use of a food purchasing cooperative, and the list of vendors from which SFAs purchase foods, by food category. The study team will also develop a new SFA Year-End Follow-Up Survey to collect annual data to support additional checks for completeness and representativeness of the food purchase data. The survey will also permit new analysis of the distribution of food purchases over the school year (see Section 4.4.1.g). The burden will be minimal and comparable to the Quarterly Program Data Form.

For the SFA Director Survey (SNMCS-II+SFPS-IV), two broad topic areas in the SNMCS-II component overlap with questions in the SFPS-IV component: (1) SFA characteristics (e.g., meal programs operated, number of schools, enrollment, and number of students approved for F/RP meals), and (2) food purchasing practices including the following dimensions:

- Product specifications,
- Cooperative buying,
- Food purchase decisions,
- Procuring local,
- Farm to School Program,
- USDA DoD Fresh, and
- FSMCs/outside vendors for meals.

The existing SFA survey components have a combined burden of 2 hours. Several of the survey questions for the overlapping topics listed above will be de-duplicated or streamlined

to the extent possible.

4.4.1. Schedule and Procedures for Data Collection

a. SFA Director Survey—Groups 1a and 1b

The timing for the SFA Director Survey is shown in Exhibit 4.2. SFAs in Group 1a will complete the SFA Director Survey (SNMCS-II+SFPS-IV), and SFAs in Group 1b will complete the SFA Director Survey (SFPS-IV). The procedures for administering the SFA Director Survey will be the same across all groups and study components.

For Groups 1a and 1b, the timeline shown in Exhibit 4.2 reflects recommended adjustments to the timing of the SFA survey to be during or after the SFAs' assigned quarter for providing their food purchase data (rather than before, as was planned for SFPS-IV). As noted above, this will allow SFAs to focus first on the training and requirements for the food purchase data request. In addition, this timing of the SFA survey is needed for SFAs assigned to quarters 1 and 2 (Q1 and Q2) because several survey questions require data as of October 31 (e.g., enrollment and students certified for F/RP meals); thus, SFAs could not provide these data until midway through Q2. For SFAs in Q1, Q2, and quarter 3 (Q3), the window for completing the SFA survey will open after their assigned quarter ends. Because quarter 4 (Q4) extends past the end of the school year from some SFAs, the window for the SFA survey for Q4 SFAs will open during this quarter. In addition to reminder emails to complete the SFA Survey, the data collection technical assistants (DCTA) will also remind SFA directors to complete the survey during follow-up conversations about submitted food purchase data. DCTA staff will also conduct phone follow up as needed to ask SFAs to complete the survey as soon as possible.

b. Food Purchase Planning Interview

The study team will administer a new Food Purchase Planning Interview during SFA recruiting to gather information from SFAs on their food purchase records. This interview will inform training and technical assistance on compiling and submitting these data and the review and verification of the data submitted by SFAs. Below are examples of topics to be covered in the new Food Purchase Planning Interview. This includes several existing questions from the SFPS-III SFA Survey of Food Purchase Practices that will need to be asked earlier during this planning interview, because the SFA Director Survey will be fielded after the food purchase data collection:

- Confirm whether the SFA uses a FSMC and ask about their role in food purchasing (States will be asked at the beginning of the recruiting period to identify SFAs that use a FSMC);
- Whether the SFA receives prepared meals from vendors;
- Whether the SFA uses a food purchasing cooperative;
- How the SFA keep their food purchase records;
- List of vendors (number by food category);

-
- Whether the SFA receives cash in lieu of commodities and
 - Contact information for FSMCs, vendors, and purchasing cooperatives (if relevant).

c. Food Purchase Data Webinar

After successful recruitment and completion of the Food Purchase Planning Interview, SFAs will be invited to attend a quarterly food purchase data webinar. The webinar will ensure that SFAs are familiar with the study procedures and requirements. The webinar will provide a brief overview of the study including the purpose, data collection components, and timing of each component. The webinar will review the needed purchase data elements, and preferred/acceptable formats, and it will discuss scenarios of how to transmit the information in a form that is least burdensome to respondents. The webinar will emphasize the important role that vendors can play in obtaining the data and encourage SFAs to engage their vendors as soon as possible. The webinar will include several examples to reinforce what is needed for initial data submission and for later identifying USDA Foods and processed foods containing USDA Foods as ingredients. It will also include information about the sources of training and technical assistance available during data collection. Though the webinar will be targeted primarily to SFAs, SFAs will be encouraged to invite their vendors.

As described above, the study team will host the food purchase data webinars prior to the start of the quarter for SFAs assigned to Q2, Q3, or Q4. Because Q1 overlaps with the start of the recruiting period (given the timeline for OMB approval), SFAs assigned to Q1 will attend the webinar after the start of the quarter. The webinars will be recorded and accessible to any SFAs that are unable to attend the live sessions, and as a resource throughout the study.

We also dropped the initial overview webinar that was planned in SFPS-IV to reduce burden on SFAs. Because SFAs are being formally recruited into the study, they will be provided an overview during the recruiting call. This information and details about the data collection activities and timing will also be covered in the food purchase data webinar.

d. Quarterly Food Purchase Data

SFAs will be asked to submit the detailed purchase data within 4 weeks of the end of the assigned quarter. A DCTA will be available to SFAs during data collection to provide individual assistance, support, and training. An email reminding SFAs about the submission of purchase data will be sent about 2 weeks before the end of the quarter and will include a reminder about the availability of the recorded food purchase data webinar that explained data needs and procedures to submit the data. The email will also encourage them to contact the DCTA in case they have questions about their submission. At the end of the quarter, as a new feature, DCTAs will call SFAs to check in on their progress with compiling food purchase data and answer questions.

Nonrespondents will receive up to four reminder emails, 1 week apart. The first reminder will be sent 3 weeks after the request, recognizing that data compilation will take some time,

and subsequent reminders will be sent one week apart. DCTAs will call SFAs that have not submitted any purchase data one week after the fourth email reminder. They will continue calls until they are able to make contact with the SFA. During this phone call, the DCTA will inquire about their progress on data compilation, their timeline to submit the data, and answer their questions. If necessary, SFAs will be permitted to provide their quarterly data later, referencing purchase data from their randomly assigned quarter.

Consistent with procedures used in SFPS-III, SFAs may choose to provide the food purchase data through one of several ways including vendor summaries, velocity reports, invoices, inventory records, and bid specifications. Some SFAs may be able to provide the vendor summaries for small vendors as they are likely to have these on file or may be able to request duplicate copies of summaries for each month in the data collection from the vendor. SFAs may provide invoices alone or in combination with vendor summaries. Invoices are an accurate reflection of foods purchased and typically contain the needed information regarding pack size, brand, weights, product codes, and food item descriptions, quantities, and price paid. Invoices may be necessary to supplement price information, which is sometimes not included on vendor summaries. Vendor summaries and invoices are the most accurate forms of purchase data because they reflect food that was delivered to the SFA. Bid specifications, while they do not indicate which food was delivered to an SFA, may be necessary in some cases to obtain information on product price or other characteristics (e.g., unit size and weight information) not available in other documents.

Occasionally purchased foods or USDA Foods may be recalled because of safety or manufacturing reasons. SFAs will be asked to identify any recalled products, and these data will be entered as a negative purchase. This procedure will allow for a national picture of the effect of recalls on food purchasing practices.

Respondents will be encouraged to submit data in an editable format (i.e., an electronic data file or report) to the extent possible. This will reduce data entry omission and other entry errors. Investigations during the preparations for SFPS-IV indicated, however, that many SFAs will submit data (some or all) in a non-editable format, which will need to be input into the food purchase database.

Food Purchase Data Review and Follow-Up. After all purchase data are submitted, the study team will cross-reference the data submission against the vendor information provided in the Food Purchase Planning Interview, to verify that there are data from all listed vendors for all product categories. The data will also be reviewed to identify missing fields for any food item. If the verification reveals that the data are incomplete (for example, omissions of listed vendors or incomplete information regarding specific products), SFAs will receive an initial follow-up email requesting the information or clarifications. SFAs will also be asked to identify any purchased foods (end products) that contain USDA Foods as ingredients. The value/amount of USDA Foods used in these processed products will be obtained via the food purchase data from the SFA. Note that in the follow up to verify purchase data, SFAs will not be asked to identify whether foods are used for reimbursable meals or as nonprogram foods,

or estimate the proportion, as was done in SFPS-III. In addition, SFAs will not be asked to provide additional nutritional characteristics for food purchases during follow-up.¹⁹ Thus, the study will capture a limited set of food characteristics when available in food purchase documentation, but there will be no follow up with SFAs or additional searching for complete product characteristics (including nutritional characteristics).

Quarterly Program Data Form. In addition to the quarterly food purchase data, SFAs will be asked to submit additional data for their sampled quarter by completing the Quarterly Program Data Form. The form collects information on meals claimed, revenue from the sale of nonprogram foods and other food program sales, top 10 selling nonprogram foods, and total food expenditures for the quarter.

Timing for Q1 SFAs. As shown in Exhibit 4.2, SFAs assigned to the first quarter (July-September 2024) have a shorter window for recruiting, attending the food purchase data webinar, and starting to compile their food purchase data before the end of the quarter. This timing is not ideal but is unavoidable due to the anticipated date for OMB approval. If OMB approval is delayed or SFAs take longer to recruit (e.g., due to research applications or longer MOU negotiations), some Q1 SFAs may need to begin the data compilation process after the end of the quarter.

Timing for Q4 SFAs. SFAs assigned to the fourth quarter (April through June 2025) may pose a challenge given school calendars and the possible unavailability of SFA directors and staff. Schools in some parts of the country let out for the summer weeks before the end of this quarter, in some cases by the end of May. In addition, some SFA directors do not work the full year, especially in the smaller districts. The school calendar will be determined during the planning interview. The request for purchase data will be sent to SFAs assigned to the fourth quarter several weeks earlier than SFAs in the previous quarters. The team will accept partial data as available, but submission of complete purchase data may not take place until August or September, depending on the work schedule of the SFA personnel providing the data.

e. SDAs

After FNS notifies the SDAs of the study, the study team will send an email that includes a brief overview of the study and a letter of support from a large, national organization related to commodity distribution, and request their assistance with providing data for the study. The request will ask SDAs to provide quarterly data on direct delivered USDA Foods for the sampled SFAs from their state, about 6 weeks after the end of each quarter.

The email to SDAs will specify the data elements needed and, for SDAs that use Web-Based Supply Chain Management (WBSCM) system reports, reference the specific report(s) that should be run and submitted.. The email will ask SDAs to upload the data to a secure

¹⁹ The study will rely on the Menu Survey analyses from Groups 2 and 3 to examine nutritional characteristics of school meals and nonprogram foods offered in schools, and on the cost analysis for Group 3 to identify the share of SFA food expenses for these foods.

website or email it to the study team with password encryption. SDAs will also be invited to attend the first Food Purchase Webinar. SDAs will receive an email following each quarter to remind them of the SFAs for which data are needed for that quarter. The email will also include a “submit by” date to ensure that the data are received in a timely manner and include information on contacting the DCTA for any questions. Nonresponding SDAs will receive two follow-up email reminders, 1 week apart, and follow up by phone to request data submission and determine the timeline.

f. Data from FNS

USDA will provide data on the value of USDA Foods used in processed foods via Summary End Product Data Schedules (SEPDS) and data on foods provided through the USDA DoD Fresh program. These data will be requested on a quarterly basis, to be provided within 4 weeks of the end of each quarter.

g. SFA Year-End Follow-Up Survey

In the fall of 2025, SFAs will be asked to respond to a brief, follow-up web survey to provide data on annual food expenses, use of USDA Foods, revenues, and meal counts. Procedures will be the same as for the Quarterly Program Data Form. Most SFAs have completed financial statements available in the fall, but some may not be able to provide data until the winter (i.e., early 2026). This information will support additional checks on the completeness of food purchase data and analysis of the how the share of food purchases in each quarter varies across SFAs.

4.4.2. Training and Technical Assistance

A DCTA will be available to SFAs and SDAs during data collection to provide individual assistance and support. We anticipate that some SDAs will be subject to multiple data requests because their State includes SFAs sampled in multiple groups or quarters. The study team will combine requests and streamline the data collection as much as possible by assigning DCTAs to States and SFAs such that the SDA and their SFAs have a single point of contact throughout data collection. Study participants may reach the DCTA through phone or email. Contact information will be in study materials.

4.4.3. Data Verification

To ensure consistency in understanding reporting requirements and collecting high-quality, accurate data in a standardized manner, continuous quality control measures will be implemented for purchase data verification. The data from SFAs, SDAs, and FNS will be compiled, and SFAs will be asked to review and attest that the data are complete. Upon receipt of an initial data submission, a DCTA will review the data for completeness and elevate any questions to a senior staff member. The study team will implement the following procedures to process and check all receipted data:

- Log hard-copy submissions, including the source of the data.

-
- Run an SFA-level data completion check to verify that data from all vendors and all food types reported in the Food Purchase Planning Interview are submitted.
 - Cross-check USDA Foods data provided by SDAs with that provided by the SFA.
 - Review the data to verify that it covers the entire quarter and that all product level information (i.e., pack size, price information, etc.) is included.

If the data verification procedures reveal that data are missing, the DCTA will email the SFA to request the missing information.

4.5 Data Collection Plans for FFVP Component

The instruments referenced in this section are the FFVP SNM Survey, Observation Guide, FFVP Menu Survey, Student Interview, AMPM (In-school Intake Dietary Recall), Reimbursable Meal Sale Data Request Form, and School Sources of Food Form (Appendices F04.02, F07, F02.04, F08.01, F08.02, F06, and F08.03). Reminder materials for the student survey are in Appendices F08.07 and F08.08.

Objective 6:

- **Describe characteristics of SFAs and schools participating in the FFVP.**
- **Describe methods schools use to implement the FFVP.**
- **Assess levels of student participation in the FFVP and describe the characteristics of students who participate in FFVP and nonparticipants.**
- **Assess satisfaction with the FFVP.**
- **Examine differences in students' in-school dietary intakes between students in FFVP schools and those in non-FFVP comparison schools.**

The FFVP provides fresh fruits and vegetable snacks to students in elementary schools with the goal of increasing overall acceptance and consumption of these foods among younger children. To be eligible for the program, an elementary school must also participate in the NSLP. Priority is given to schools with a high proportion of free and reduced price (FRP) certified students, as children from lower-income families tend to have less access to fresh produce (USDA, 2017).

The FFVP component of the study will address Objective 6 and will provide FNS with a comprehensive picture of the FFVP (Exhibit 4.10). Data collection for the FFVP component will include SFAs, schools, and students in Group 2b. Data collection procedures will generally mimic those used for Group 2a. This includes administration of parent and student data collection instruments in Spanish. The timeline for Group 2b recruitment and data collection will be the same as the timeline for Group 2a, as shown in Exhibit 4.1.

Exhibit 4.10. Summary of the data collection plan for the FFVP component

Instrument	Target completed sample size/ respondent	Mode	Estimated respondent burden	Target response rate (%) ^a	Starting sample	Comments
Objective 6: FFVP- Group 2b						
FFVP SNM Survey	100 SNMs	Web	30 minutes	90	111	Stand-alone survey, separate from the web-based Menu Survey administered in Group 2a. The sample sizes for the individual G2b instruments are based on completing the data collection with 100 SFAs, 100 schools, and 800 students for the planned analyses.
Observation Guide	100 schools in Group 2b	On-site observation	20 minutes (SNM)	100	111	Field staff will collect observational information about where FFVP snacks are served and eaten, who serves the snacks, nutrition promotion, and student consumption of snacks.
FFVP Menu Survey	100 SNMs	Hard copy	30 minutes	100	111	The FFVP Menu Survey will collect information needed to accurately code dietary recall data.
AMPM (In-School Intake Dietary Recall)	800 students	In person or telephone	18 minutes	50	1,600	
Student Interview	800 students	In person	12 minutes	50	1,600	
Reimbursable Meal Sale Data Request Form	100 SNMs for 800 students	In person	10 minutes	90	111 SNMs	Target response rate is among students who complete the recall and Student Interview. SNMs will provide POS report or complete hard-copy form to indicate whether sampled students obtained a reimbursable meal on the day referenced in the dietary recall.

^a Target response rates are among estimated released SFAs, schools, students and parents.

AMPM = Automated Multiple-Pass Method; POS = point-of-sale; SFA = school food authority; SNM = school nutrition manager; FFVP = Fresh Fruit and Vegetable Program

4.5.1. Staff Surveys

For the FFVP component, SNMs will be asked to complete the web-based FFVP SNM Survey. Invitations to complete this survey will be distributed in spring 2025, in advance of on-site data collection at the school.

All three of the staff surveys will be standalone web surveys. SNMs in FFVP and non-FFVP schools will respond to different survey modules that contain slightly different questions, adapted to whether their school participates in FFVP. However, the content and structure of the questions will be as similar as possible, to facilitate comparisons of FFVP and non-FFVP schools.

4.5.2. Observation Guide

The Observation Guide is described in Section 4.2. In Group 2b schools, FIs will complete the FFVP Observation Guide, which will contain modules to collect data on administration of FFVP, nutrition promotion practices and materials, and whether students are eating the FFVP fruits and vegetables.

4.5.3. FFVP Menu Survey

FIs will work with SNMs to complete a hard-copy FFVP Menu Survey at each school, which will collect information on foods served in reimbursable meals and FFVP snacks, including recipes. The menu survey data will be used to accurately code dietary intake data. Before the site visit, Group 2b SNMs will be provided with information about the questions they will be asked so they can be prepared with the necessary resources, such as recipes. If SNMs are not able to provide all information needed to complete the FFVP Menu Survey for a given day, nutrition coders will follow up with SNMs on critical missing data.

4.5.4. Student Interview

Procedures for administering the Student Interview for the FFVP component will follow those described in Section 4.2 for the SNMCS-II component. Students sampled as part of Group 2b will be in grades 1-6. They will receive additional questions about knowledge of and attitudes and preferences toward fruits and vegetables, and how often the student participates in FFVP.

4.5.5. Dietary Recalls

The dietary recalls will be administered in-person to students in grades 1-6. The recalls will collect data on students' dietary intake while at school ("in-school intakes") on one day. Focusing on in-school intakes will reduce operational challenges and conserve resources²⁰

²⁰ Eliminates the need for (1) FIs to be onsite for multiple days or two non-consecutive days, given that FFVP snacks may not be offered every day; (2) FIs to return the following week to collect second

(for other study activities), while addressing key research questions from FNS on whether the FFVP influences students' intakes of fruits, vegetables, and calories while at school.

Following similar procedures as Group 2a, students will be interviewed after lunch. They will be asked to recall all foods and beverages consumed since arriving at school. Interviewers will have SBP, NSLP, and FFVP menus available for reference during the interviews, and AMPM will include FFVP snacks as an eating occasion (or source of food) at school. Before students leave for the day, interviewers will check in with students about whether they consumed any items after the interview.

4.6. Schedule and Procedures for Group 2b Data Collection

On-site, telephone, and web data collection will be conducted in Group 2b schools. Data collection will be similar to Group 2a, and will include student interviews, dietary recalls, and in-school observations.

4.6.1. Student Sampling, Recruitment, and Consent

As in the SNMCS-II component, school liaisons will facilitate student sampling and the receipt of parental consent. They will also coordinate in-school data collection activities, including escorting students to and from the area where student interviews and dietary recall interviews will be conducted. In recognition of the substantial time commitment these duties require, the incentives for school liaisons will vary, with the first payment depending on whether the parental consent is passive or active. The second payment will follow successful completion of on-site data collection activities.

4.6.2. Scheduling Student Interviews

After a consent deadline of about 2 weeks has passed from the time welcome packets are mailed, the study team will share with school liaisons the list of sampled students so that they can begin scheduling on-site data collection. The study team will ask liaisons to schedule elementary school students' recalls as toward the end of the school day. Otherwise, the interviews will be arranged to avoid instruction or testing time. Liaisons will address any staff concerns about the study by answering questions and reiterating that a very small number of students will be interviewed.

4.6.3. Data collection

Visits to Group 2b SFAs will last between one and four days during the target week, depending on the number of sampled schools in the SFA. School visit days will be randomized across Monday through Friday to capture the school nutrition environment and students' dietary intakes on a typical school day to the extent possible. However, after identifying the visit days, the study team will take an additional step to check with FFVP schools on whether FFVP snacks are planned for that day. If not, the schedule will be modified to ensure FIs are on site during days when FFVP snacks are being served. Two-

dietary recalls; and (3) parents to help report intakes outside of school.

person teams of FIs will visit each SFA. Exhibit 4.11 illustrates a schedule for on-site data collection in a Group 2b SFA with two schools.

Exhibit 4.11. Sample on-site data collection schedule for Group 2b school

	Schedule	
	Field Interviewer #1	Field Interviewer #2
7:30-8:00 AM		
8:01-8:30 AM		
8:31-9:00 AM		
9:01-9:30 AM		
9:31-10:00 AM		
10:01-10:30 AM		
10:31-11:00 AM		
11:01-11:30 AM		
11:31-12:00 PM		
12:01-12:30 PM		
12:31-1:00 PM		
1:01-1:30 PM		
1:31-2:00 PM		
2:01-2:30 PM		
2:31-3:00 PM		

- Meet with the SNM, collect menus, complete the POS and Milk Forms, complete FFVP Menu Survey, and request reimbursable meal sale data.
- Complete the Observation Guide for FFVP snack
- Meet with the school liaison and determine where student interviews will be conducted.
- Interview students (in-school intake dietary recall and Student Interview).

FIs will arrive at the school in the morning and meet with the SNM, complete the School Sources of Food Form and Milk Forms, collect FFVP, SBP, and NSLP menus, request reimbursable meal sales data, and complete the FFVP Menu Survey. In the morning, the field staff will briefly meet with the students selected to complete a dietary intake and explain how to use a simple food diary to record the foods and drinks they consume during the school day. This will serve as a memory aid for the interviewer-administered dietary recall interview. The team will work together to meet with the school liaison; identify the location for interviewing students; and complete the interview activities and the Observation Guide during the visit day.

FIs will attempt to interview eight students per school. Students will be interviewed in the afternoon. FIs will complete the dietary recall followed by the student interview.

4.7. Schedule and Procedures for Data Collection with Certainty SFAs

As noted previously, certainty SFAs have a substantial response burden because they will be asked to participate in all data collection activities for the study. The burden is already high for Group 2 and 3 SFAs, so it is important to carefully consider additional data collection activities and their impact on cooperation and data quality for certainty SFAs. The certainty SFAs will need a tailored recruitment approach to ensure they understand all data collection

activities and their timeline. Offering these SFAs different timelines for completing some of the data collection activities could increase cooperation. Some of the certainty SFAs may prefer to separate the SFPS-IV component data collection activities for their assigned quarter from the SNMCS-II and FFVP component data collection activities that primarily occur during a target week (during Q3 or Q4).

We anticipate that the certainty SFAs will require a longer recruiting process (to establish MOUs and approve research applications) that may extend through Q1, so it will be challenging to include certainty SFAs in Q1 for the food purchase data collection. However, this will be feasible if the SFAs have the necessary records already in place since the data submission for Q1 will occur in Q2. The Food Purchase Planning Interview, conducted during recruitment, will collect information on SFAs’ food purchase record keeping practices to prepare for data collection. Exhibit 4.12 shows some potential timeline scenarios for the certainty SFAs depending on their assigned quarter for the food purchase data collection. The objective is to avoid having the most intensive food purchase data collection during the period of the most intensive SNMCS-II data collection, but some SFAs may prefer to “get it all over” in one quarter. Also, having the on-site price data collection for the SNMCS-II component during or shortly after the assigned quarter for the SFPS-IV component might be beneficial. The on-site data collection provides an opportunity for FIs to review the food purchase/food price documentation in-person with the SFA director and follow up immediately for missing vendors or missing prices for groups of foods. This on-site presence would likely improve data quality for the food purchase documentation and limit remote follow up.

Exhibit 4.12. Data collection timing options for certainty SFAs, based on assigned SFPS-IV quarter

SFPS-IV assigned quarter (submission in the following quarter)	SNMCS-II and FFVP data collection (during/after the target week)
Q1	Q3 (preferred) or Q4
Q2	Q3 or Q4 (preferred)
Q3	Q3 or Q4 (SFA choice)
Q4	Q3 or Q4 (SFA choice)

FFVP = Fresh Fruit and Vegetable Program; SFPS = School Food Purchase Study; SNMCS= School Nutrition and Meal Cost Study

Study materials will be updated and customized for the certainty SFAs, including recruitment materials, recruiter training materials, data collector training materials, and data collection instruments and procedures. They will reflect the potential timing scenarios listed in Exhibit 4.12.

4.8. Plans for Achieving Target Sample Sizes

Achieving target sample sizes is critical to the study’s success. One key strategy is effective implementation of the recruitment plan. Another key strategy is training data collectors well and monitoring their work. The trainings will emphasize strategies for gaining respondent

cooperation and effectively administering surveys, interviews, and observation instruments. Telephone and field supervisors will communicate with their teams regularly to identify and resolve problems quickly, and a portion of each TI's time on the telephone will be monitored so that feedback for improvement can be given. The approaches to recruiting, gaining consent, and instrument design and data collection capitalize on proven strategies used on many prior studies. If any problems arise during data collection, the study team will discuss issues with FNS and work collaboratively to identify and implement solutions.

Several key adjustments were made to the procedures used in SNMCS-I to minimize item and unit nonresponse rates:

- Collecting SFAs' and schools' Provision 1, 2, or 3, CEP, or other HSMFA status from state CN agencies to reduce SFA burden and avoid nonresponse to these critical questions.
- Having FIs collect meal price data in the Observation Guide to avoid SNM nonresponse.
- Enhancing the user interface of the EMS and increasing TA outreach to promote more timely and complete data collection.
- Requesting help from other staff to encourage or facilitate participation. For example, SFA directors can urge SNMs to complete the Menu Survey. Similarly, school liaisons can provide updated principal contact information to more effectively request completion of the Principal Survey.
- Offering to complete the parent-assisted portion of elementary school student dietary recalls on the telephone instead of in person, if needed.
- Offering parents the choice to complete the Parent Interview on the web or by telephone instead of by telephone only.

The study team will implement several additional plans during data collection. First, project staff involved in FI training will visit up to 12 SFAs after data collection has begun to ensure that FIs are following study procedures and engaging effectively with district and school staff and students. The visits will be used to adjust any interviewer behaviors or procedures that appear to be adversely affecting cooperation. The study team will continue to monitor for issues by checking in regularly with FIs throughout data collection to identify potential opportunities for improvement and adapt procedures in response.

Second, the study team will accommodate the schedules of SFA and school staff when scheduling planning interviews, review of food purchase data summaries, and cost interviews, and the study team will strive to minimize disruptions to staff and students when working in schools. This flexible approach to completing on-site activities is designed with sample members' needs foremost. We will leverage recruiters' relationships with SFA contacts during data collection to address any logistical issues that may arise.

Third, incentives will be offered to respondents for several data collection activities. The amount and structure of the incentives reflect a careful consideration of the burden of participation in various activities. Some planned incentives are also incremental to

encourage ongoing participation in the data collection activities. Supporting Statement A and Appendix [J] include a more thorough breakdown of incentives.

Finally, the study team will monitor the numbers of completes closely and adapt the design to accordingly. The study team may target subgroups with relatively lower participation for more frequent or intensive follow-up (for example, by calling select sample members instead of sending an email reminder) to avoid any potential bias resulting from differential nonresponse.