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**Supporting Justification for OMB
Clearance of the National
Household Food Acquisition and
Purchase Survey**

Part A: Justification

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CONTENTS

A.	Justification	1
A1.	Circumstances Making the Collection of Information Necessary	1
A2.	Purpose and Use of the Information	3
A3.	Use of Information Technology and Burden Reduction.....	14
A4.	Efforts to Identify Duplication and Use of Similar Information.....	16
A5.	Impacts on Small Businesses or Other Small Entities.....	17
A6.	Consequences of Collecting the Information Less Frequently.....	17
A7.	Special Circumstances Relating to the Guidelines of 5 CFR 1320.5.....	17
A8.	Comments in Response to the <i>Federal Register</i> Notice and Efforts to Consult Outside the Agency	17
A9.	Explanation of Any Payment or Gift to Respondents	20
A10.	Assurance of Confidentiality Provided To Respondents.....	23
A11.	Justification for Sensitive Questions	24
A12.	Estimates of Annualized Burden Hours and Costs.....	24
A13.	Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers	28
A14.	Annualized Cost to Federal Government.....	28
A15.	Explanation for Program Changes or Adjustments.....	28
A16.	Plans for Tabulation and Publication and Project Schedule	28
A17.	Reason(s) Display of OMB Expiration Date is Inappropriate	33
A18.	Exceptions to Certification for Paperwork Reduction Act Submissions.....	33
	Appendix A: Relationship of Collected Data to Study Objectives	
	Appendix B: Field Test Results	
	Appendix C: Recommendations of the Technical Work Group for Adjustments to Field Test Procedures	
	Appendix D: Advance Postcard	
	Appendix E: Study Brochure	
	Appendix F: Household Screener	
	Appendix G: Consent Form	
	Appendix H: Initial Household Interview	
	Appendix I: Calendar Magnet	

CONTENTS (*continued*)

- Appendix J: Meals and Snacks Form
- Appendix K: Income Worksheet
- Appendix L: Image of Handheld Scanner
- Appendix M: Primary Respondent Book
- Appendix N: Adult Food Book
- Appendix O: Youth Food Book
- Appendix P: Sample Scripts for Telephone Calls Collecting
Information Recorded in Food Books
- Appendix Q: Final Household Interview
- Appendix R: Respondent Feedback Form
- Appendix S: Refusal Conversion Letter
- Appendix T: CIPSEA Pledge on Study Website
- Appendix U: Confidentiality Agreement Signed by all
Employees of Mathematica Policy Research
- Appendix V: Field Test Nonresponse Bias Analysis

A. Justification

A1. Circumstances Making the Collection of Information Necessary

The Economic Research Service (ERS), U.S. Department of Agriculture (USDA), is requesting Office of Management and Budget (OMB) approval to conduct the *National Household Food Acquisition and Purchase Survey* (aka the *National Food Study*). The mission of ERS is to provide timely research and analysis to public and private decision makers on topics related to agriculture, food, the environment, and rural America. To achieve this mission, ERS requires a variety of data that describe agricultural production, food distribution channels, availability and price of food at the point of sale, and household demand for food products. There is great need for the above information as it relates to low-income households. Domestic food assistance programs are an important and growing part of USDA's budget. The President's fiscal year 2011 budget request contains almost \$96 billion in budget authority to fund the nutrition assistance programs. This represents more than a threefold increase in funding in the last decade and reflects both the robust ability of the nutrition assistance programs to respond to changing economic and social conditions as well as the depth and breadth of need that currently exists within the Nation. At some point during the year, about 1 in 4 Americans participated in at least one of USDA's 15 domestic food and nutrition assistance programs.

It is critical for USDA to better understand the food acquisition behaviors of low-income, program-eligible households in order to effectively serve this segment of the population with efficient and effective programs. Section 17 [7 U.S.C. 2026] (a)(1) of the Food and Nutrition Act of 2008 provides legislative authority for the planned data collection. This section authorizes the Secretary of Agriculture to enter into contracts with private institutions to undertake research that will help to improve the administration and effectiveness of the Supplemental Nutrition Assistance Program (SNAP) in delivering nutrition-related benefits. Although ERS is the lead agency for implementing the National Food Study, the Food and Nutrition Service (FNS) of USDA is providing both staff and financial support. FNS is responsible for administration of SNAP at the Federal level.

Analysis of how USDA's policies and programs influence household economic behavior has been hampered by gaps in existing data. A number of existing databases contain data relevant to the ERS data needs described above; however, each has important limitations for addressing ERS' data and research objectives. For example, the National Health and Nutrition Examination Survey (NHANES) collects data on individuals' food consumption, but not household food purchases. The Consumer Expenditure Survey (CE) collects aggregate data on food expenditures, but lacks item-level quantities for nutritional analysis of food acquisitions. Proprietary food databases provide detailed information about food purchases and prices, but rely on convenience samples with insufficient representation of low-income households and no information about participation in and benefits received from USDA food assistance programs. No current data source provides detailed household-level information about food acquisitions, including both purchases and foods obtained at no cost. The absence of adequate data has made it difficult for ERS to provide accurate and timely economic information on food demand factors, such as income and price elasticities of demand for food, and nutritional characteristics of household food choices.

In addition to the lack of current data, the structure of the U.S. food economy has changed dramatically in the past decade making older surveys and estimates of food demand increasingly outdated and irrelevant. In the aggregate, American households acquire their food from a large variety of sources, including: “traditional” food store outlets like supermarkets and grocery stores; “big box” stores and supercenters; dollar stores; farmers’ markets; and other food store outlets like convenience stores, bakeries, meat markets, and produce stands. Restaurants and fast food shops have become increasingly important to food-away-from-home acquisition behaviors. Other food sources include school meals, institutional cafeterias, vending machines, food pantries, and “harvesting” (e.g., hunting, fishing, and growing your own food). Foods acquired as gifts or at special events like dinner parties and free meals or snacks eaten at other homes or provided at work also are relevant.

Nearly all of the above food sources have been available to American households for decades, but food acquisition behaviors have changed in response to changing markets, household structure, labor force participation, and other factors. According to the Department of Labor, approximately 21 percent of the household food budget was spent away-from-home in 1960-61. That share had increased to 40 percent by 2002-03.¹ And as food acquisition patterns have changed, America has come to face an epidemic of overweight and obesity which has led to demand for better data for understanding the relationship between food acquisition patterns and dietary quality.

Currently, about 30 percent of adult Americans are obese, which is roughly a 100 percent increase from 25 years ago.² Recent research has suggested a causal relationship between the food environment and body size;³ and ERS has become involved in documenting and analyzing food deserts.⁴ Food insecurity and food assistance program participation have also been cited as factors in the growing obesity epidemic. ERS will be in a better position to analyze these relationships and consider their implications for policy if it has access to current, accurate data on food acquisition, and the food prices and availability of healthful and less-healthful foods.

The National Food Study is designed to collect household information and food acquisition data from a nationally representative sample of 5,000 households over a six-month period from April 2012 to October 2012. The sample for the National Food Study will include four (4)

¹ See U.S. Department of Labor (2006). “100 Years of Consumer Spending: Data for the Nation, New York City, and Boston.” Report 991.

² See Baum, C. 2007. “The Effects of Food Stamps on Obesity.” Economic Research Service, USDA. Contractor and Cooperator Report No. 34, September.

³ For example, see Rundle A, Neckerman K, Freeman L, Lovasi G, Purciel M, Quinn J, Richards C, Sircar N, Weiss C. Neighborhood Food Environment and Walkability Predict Obesity in New York City. *Environmental Health Perspectives*. 2009; 117:442–447.

⁴ The 2008 Farm Bill defined a food desert as an “area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities” (Title VI, Sec. 7527).

subgroups: households participating in SNAP;⁵ households not participating in SNAP and with income below 100 percent of the poverty guidelines; households not participating in SNAP and with income between 100 and 185 percent of the poverty guidelines; and households with income above 185 percent of the poverty guidelines. In addition to examining food acquisition patterns for the national sample as a whole, subgroup comparisons of most interest are between SNAP households and non-participating, low-income households (including those estimated to be eligible for SNAP) and between lower- and higher-income households. This survey will provide data not currently available to program officials and researchers, thereby broadening the scope of economic analyses of food choices made by U.S. households and how those choices influence diet quality and decisions about participation in food assistance programs.

A2. Purpose and Use of the Information

The National Food Study will collect information about household food acquisitions, including foods purchased and foods obtained at no cost (e.g., home-grown vegetables). Information also will be collected about household characteristics, including demographics, income, major categories of nonfood expenditures, food security, health status (including heights and weights), and dietary knowledge. This survey will provide ERS with information to support the analysis of a wide variety of research questions, including the following critical unanswered questions:

1. How do food prices and household income influence Americans' food choices and the dietary quality of their purchased and otherwise acquired food? To the extent feasible, what are the income, own-price, and cross-price elasticities for purchased food items both at home and away?
2. What is the influence of nutrition knowledge and attitudes on the nutritional quality of households' purchased and otherwise acquired food? How does nutrition knowledge and attitudes vary among population subgroups?
3. What is the nature of food access and retailer choice, both in terms of travel distance or time and the nature and relative prices of food available? How does food access influence food purchases and the resulting dietary quality of purchases?
4. How does food assistance program participation influence food purchases and acquisitions?
5. How and why are food security status and the food purchases of SNAP participants different from SNAP-eligible nonparticipants? What factors account for those differences?
6. What food items do SNAP participants buy? What are the characteristics of these foods with respect to type (e.g., store or national brand), store or coupon discounting, unit size, cost per unit, and nutritional content? Which groups of SNAP households could

⁵ Households are eligible for SNAP if gross household income is at or below 130 percent of the federal poverty guidelines, and income net of deductions is below the federal poverty guidelines (households with an elderly or disabled member are not required to meet the net income test). Most households must also meet certain resource tests.

potentially benefit most from additional information about diet, nutrition and health?
Which informational subject areas could provide most benefit?

To answer the research questions listed above, the National Food Study will produce nationally representative data about household food acquisitions. The collected data will include “event information” including the date, time, and place where food is obtained; how much is paid, by whom, and by what method (cash, check, credit, SNAP, coupons, other); and how far from home food is acquired. The collected data will also include “item information” including the name or description, quantity, size, and price of foods. This detailed information will be used by ERS to describe the food and beverage acquisition patterns of the population and important subgroups, and to answer the research questions listed above.

Appendix A shows the relationship of collected data to each study objective, as well as a prioritization of the importance to the study of different sets of data elements. To achieve the study objectives, the National Food Study will collect data from a nationally representative sample of households selected from an address-based sampling frame, as described in Part B of this submission. Households will be asked to report all foods acquired, from all sources, over a 7-day period using food books and a handheld scanner, and by saving receipts. Collected data will be processed to assemble complete information about the places where foods are acquired, and the specific items acquired. Food sources (places) will be coded by type. Food access will be measured by geographic distance from households’ place of residence to food acquisition locations.⁶ Food items will be characterized by matching scanned barcodes with food descriptions from a Universal Product Code (UPC) data dictionary or, when barcodes could not be scanned, by entering descriptions written in the food books or from saved receipts. Item prices (including coupon and store savings) will be obtained primarily from saved store receipts, or from imputation or extant average price data when store receipts are not available. Reported food items will be matched with nutrient data from government and commercial sources.⁷

ERS convened a Technical Working Group (TWG) to assist with the design of the National Food Study. The TWG was initially convened in January 2010 to review procedures for a field test of the National Food Study that was to be conducted in spring 2011. Many of the TWG recommendations were incorporated in the design of the field test.⁸ At the recommendation of the TWG, ERS also conducted, prior to the field test, cognitive tests of different versions of instruments for collecting food acquisition data from households. The TWG was convened again in

⁶ Driving distance will be calculated for food acquisitions from commercial establishments; this excludes acquisitions at school, work, and private residences.

⁷ Food-at-home items will be matched with USDA’s Standard Reference Database (SR21) and the MyPyramid Equivalents Database, where applicable. Commercial databases containing information from product nutrient facts panels will also be used as appropriate. Food-away-from-home items will be matched with USDA databases and available nutrition information for restaurant menu items.

⁸ The recommendations from the TWG meeting in January 2010, and findings from cognitive tests, were included as appendices to the Supporting Justification for OMB Clearance of the Field Test for the National Household Food Acquisition and Purchase Survey (OMB 0536-0066).

July 2011 to be briefed on field test findings and to comment on proposed revisions for the full-scale data collection. Findings from the field test and TWG recommendations for modifications for the full-scale survey are included in Appendices B and C of this submission. The field test results are also discussed later in this section.

Procedures for the National Food Study

The National Food Study will be conducted over a six-month period from April 2012 to October 2012. Data will be collected from 5,000 households selected across 50 sampled primary sampling units (PSUs) in 27 States (see Table B.1 for distribution). Within PSUs, 8 Secondary Sampling Units (SSUs), or 400 SSUs total, will be selected as local survey areas. Within SSUs, addresses will be selected from an address-based sampling frame obtained from a commercial vendor. The address frame will be matched with SNAP participants' addresses obtained from the state SNAP agencies. After matching these data, addresses will be sampled from two strata: addresses of SNAP households and addresses with no known SNAP household.⁹ All sampled addresses will be randomly grouped into replicate subsamples and assigned to one of three waves. Addresses will be released to the field in multiple batches from each wave (see section B1).

All sampled addresses will be sent a full-color advance postcard with information about the survey and the incentive for participation (Appendix D). Field interviewers will visit each sampled address to determine the presence of an occupied dwelling unit. At occupied units, the field interviewer will provide the study brochure (Appendix E) to an adult resident and ask him or her to complete a brief screener (Appendix F) to determine *income eligibility* for the survey (persons age 18 and older are eligible to complete the screener).¹⁰

All survey materials will be available in English, Spanish, Korean, and Vietnamese based on the population characteristics of sampled SSUs. Interviews will be conducted in these four languages according to the primary respondent's preference, with cases transferred to bilingual interviewers as needed. Households that do not have a member who is fluent in one of the four survey languages will not be included in the survey.

Household Screener

The screener for the National Food Study includes questions about household size, income, and SNAP participation. These questions are used to determine household eligibility within the income subgroups with target numbers of completes for the survey. Household size is defined according to USDA guidelines as the number of people "who live together and share food."

⁹ It appears that the SNAP agencies of several states in the sample will be unable to provide timely lists of SNAP participant addresses due to budgetary constraints. In those states the National Food Survey will use only one sample frame—a commercial list of all addresses in the sampled SSUs.

¹⁰ As discussed in Part B, the subgroup of non-SNAP households with income below the poverty guidelines is included in the sample at a rate disproportionate to their representation in the population. The screener is necessary to locate these households. Other subgroups will be easier to fill and will not be eligible for the survey in all sample replicates.

Household income is identified through two questions: (1) respondents identify all types of income received by the household via reference to a hand card; (2) respondents report the range of their total household income, from the reported types of income, via reference to ranges on a hand card.¹¹ The income questions on the screener are designed to assist the respondent to think about all possible sources of household income to avoid systematic underestimation of household income. The income categories define the income ranges for the three non-SNAP sampling subgroups.

The screener also includes questions to identify the primary meal planner and food shopper in the household. As eligible households are identified, the field interviewer will ask to speak with the primary food shopper; ask the food shopper to participate as the primary respondent for their household; explain what is expected of participants; and explain that participation is voluntary.

To encourage respondent cooperation in completing the screener, a small pre-paid token of appreciation will be offered (see Section A9). Follow-up letters will be sent to households that are contacted and refuse to complete the screener. After receiving the letter, these households will be contacted one more time by a field interviewer (either the original interviewer or one who has received extra training in refusal conversion) in an effort to complete the screener and determine the household's eligibility to participate in the study.

Survey-eligible households that refuse to participate in the study will be asked to respond to a set of four additional screener questions about household size and food shopping, which will provide data to help assess nonresponse bias. Field managers will call survey-eligible households that refuse to participate in the study to attempt refusal conversion.

To control costs and maximize the representativeness of the sample, the National Food Study will use two-phase sampling at the screening stage. Phase 1 for each batch of sample release will include all sampled addresses assigned to that batch. Field interviewers will visit sampled addresses up to eight times on different days of the week and times of day to attempt contact with a household member.¹² After eight unsuccessful attempts at contact, sampled addresses will be retired from Phase 1. Phase 2 will include a random sample of addresses retired from Phase 1 after maximum attempts. Cases that are re-released for Phase 2 will be worked up to a maximum of 18 total attempts (8 attempts in Phase 1 and 10 additional attempts in Phase 2). The main purpose of two-phase sampling is to obtain a representative sample of "hard to reach" cases for which no contact was made in the first phase. Aside from increased effort to find someone at home, no other data collection procedures will change in Phase 2 since these households did not experience any contact in Phase 1. The Phase 2 sample will be selected after every two batches are completed in the

¹¹ If the screener respondent is unable to report total household income within categorical ranges, the interviewer asks, "Was it [FILL] or more last year?" with the fills determined by household size. A second follow-up question is asked depending on the response to the first. (These follow-ups were used in income questions for the National Survey of Family Growth.)

¹² The National Food Study uses in-person screening and recruitment to maximize response. It is expected that the refusal rate to a proposed one-week study introduced by telephone will be significantly higher than when introduced in-person with study materials ready for demonstration.

field. For instance, we will sample for Phase 2 from cases retired from Phase 1 of batch 1 and 2 while Phase 1 of batch 3 is in the field. Phase 2 for batches 1 and 2 will be re-released with Phase 1 of batch 4, and so on.

Consent

For households that agree to participate, the primary respondent (identified as the primary food shopper) will be asked to sign a consent form (Appendix G) and complete the first interview (administered via CAPI¹³), which includes questions about household demographics, food assistance program participation, and food acquisition patterns (Appendix H). The field interviewer will then train the respondent to use the survey protocols for tracking food acquisitions during the survey week, including foods brought home and foods obtained and consumed away from home. This training is described later in this section.

Children age 11 and above and adults other than the primary respondent will be asked to report food acquisitions during the week using the Adult and Youth Food Books. These books include a consent paragraph on the front cover and a request for signature to indicate consent. These books are provided to the primary respondent, who is asked to invite other household members to participate and show them how to use the books.¹⁴

Survey Forms and Procedures

In addition to the Primary Respondent Book (described below), a primary respondent will be given two forms to complete during the week: (1) the Meals and Snacks Form (Appendix J) is used to report the meals and snacks consumed by each household member on each day of the study week; and (2) the Income Worksheet is used to report income received by each household member during the past month (Appendix K). The Income Worksheet is designed to improve data quality and reduce burden on primary respondents by allowing them to seek assistance from other household members and reference documents, as needed, and to record this information at their convenience and prior to the second interview when these data will be collected. This worksheet is modeled on the National School Lunch Program income application.¹⁵

The survey protocols include four complementary tools for tracking food acquisitions during the survey week: (1) a handheld scanner for scanning barcodes on acquired food items (Appendix L); (2) a Primary Respondent Book (for the primary respondent) with written instructions for scanning foods brought home, pictures and barcodes to scan variable weight items that might not have attached barcodes, data collection forms for reporting all places where foods are acquired each day (daily lists), data collection forms for reporting foods brought home (blue pages), and data

¹³ CAPI is computer-assisted personal interviewing.

¹⁴ IRB review indicated that parental consent forms are not required because children are invited to participate by their parent or guardian.

¹⁵ Respondents will be reminded to complete the Meals and Snacks Form and the Income Worksheet when they report food acquisitions by telephone during the week.

collection forms for reporting foods consumed away from home (red pages) (Appendix M); (3) Adult Food Book for adults age 19 and older other than the primary respondent, with data collection forms for reporting all places where foods are acquired each day (daily lists) and foods consumed away from home (red pages) (Appendix N); and (4) Youth Food Book (age 11-18) with data collection forms for reporting foods consumed away from home (red pages) (Appendix O).¹⁶

Household members will be asked to provide detailed information about food acquisitions including place where they got food, method of payment, use of discounts, and tip amount. They are also asked to save receipts and store them in the food books.

Respondents are asked to scan each food-at-home item with a handheld scanner. The scanner collects barcode information and item quantities for all items with barcodes¹⁷ and for variable-weight items (produce, deli, bulk) that are listed with barcodes in the Primary Respondent Book.¹⁸ The study will link barcodes with item descriptions and package sizes from extant data, thus reducing the burden on participants of writing this information.¹⁹ Respondents will be asked to write FAH item descriptions and quantities on data collection forms for items with no barcode in the Primary Respondent Book.

For FAH, the primary source of information on quantities purchased will be the scanned barcodes, which will be matched to a database of UPCs, item descriptions, and package sizes. If barcodes are not available, the auxiliary sources of information on quantities are the respondent's written list of non-scanned items on the blue pages of the Primary Respondent Book and saved receipts.

The survey is designed to capture information about culturally diverse foods as well as commonly purchased FAH items. First, if a barcode is present, it will be scanned and later matched to an extant database to obtain a full item description. If the item does not appear in the standard extant databases, further investigations (e.g., web search, store contacts) will be carried out for items that appear frequently in the data. For variable-weight products that cannot be scanned, the Primary Respondent Book includes pictures and barcodes for many culturally diverse foods (e.g., soy nuts, pastrami, bean sprouts, bok choy, cactus leaves, figs, dandelion greens, specialty mushrooms, and many others). For items not in the book, respondents are asked to list the food items on their blue pages.

¹⁶ Adults are asked to use their own food book (Primary Food Book or Adult Food Book) to report food consumed away from home by children under age 11.

¹⁷ For bar-coded items, quantities are determined by the number of times the same barcode is scanned.

¹⁸ For variable-weight items often purchased in multiple quantities, the food book include instructions for scanning a quantity code. This was tested and found successful during the field test.

¹⁹ The primary sources of extant data on item descriptions are Gladson UPC data and Nielsen Homescan data. The study is also contacting major retailers to request their databases of UPC codes and corresponding item descriptions.

The primary source of information on quantities of FAFH is saved receipts. If receipts are not available when FAFH is reported during phone calls to Mathematica’s Survey Operations Center (SOC), information on quantities and amount written on the red pages of household members’ food books will be used.²⁰ During these phone calls, telephone interviewers will also have access to the menus of national restaurant chains and a sample of establishments in the survey areas. When respondents report eating at these chain restaurants, interviewers will use the menu information to obtain more accurate data from the respondent on foods selected and their prices.²¹ *Ex post* matching to nutrient databases and vendor websites will also be used to determine common portion sizes of many restaurant items. When size or amount cannot otherwise be determined, it will be imputed from within-sample or extant data.

The primary source for price information of purchased food items is food receipts. Respondents are asked to attach receipts for both FAH and FAFH acquisitions to the data collection forms (blue and red pages, respectively) when receipts are available. Prices for items with no receipt will be imputed from within-sample price data from the same local store, extant store-level price data when available, or extant market-level price data. When receipts are not available for FAFH, or when they do not include all acquired food items, respondents are asked to write food items, quantities, and prices on data collection forms. Saved receipts therefore reduce burden for reporting FAFH acquisitions.

Training the Primary Respondent

To train respondents, field interviewers will follow a written script provided to them in laminated form for use throughout the field period. The script begins with review of the consent form. Field interviewers pause in their script to play a video (in either English, Spanish, Korean or Vietnamese) on their laptop for the respondent to view. This video explains the purpose of the study and teaches respondents how to use the food books and scanner. The video makes frequent reference to examples of food acquisitions and shows the filled-in data collection forms corresponding to those examples. At three scheduled points during the presentation, field interviewers will pause the video so that respondents can ask questions and fill sample pages in the food books, practicing what they learn from the video. During the pauses, respondents practice the protocols for reporting FAH by scanning practice food items that the field interviewer provides and filling a blue page based on a receipt from the field interviewer. Interviewers can also pause the video at any time if a respondent wants to ask a question. After the video presentation, field interviewers return to their script to review the week ahead with the respondent, via reference to a survey calendar magnet (Appendix I), and review the Meals and Snacks Form and Income Worksheet.

²⁰ Respondents will be asked to report “size or amount” on red pages only if they know it (for example, when it is written on a package or menu).

²¹ The sample of local establishments will be determined early in the survey period after review of where respondents are going for FAFH.

The training script and video focus on ensuring that the primary respondent knows how to properly use the barcode scanner and food books to collect accurate data on all food items acquired by all household members during the 7-day reporting period. The training and video also stress the importance of saving food receipts and taping them to the red and blue pages in their food books. The data elements captured by the barcodes, food books and receipts are the highest priority data items for the National Food Study, as indicated in Table A2 of Appendix A.

The video presentation was adopted to ensure consistent training of households across interviewers and over time. Monitoring of field interviewers' adherence to the household training protocol will be achieved by three means: (1) randomly selected households will be contacted and asked about their visits with field interviewers; (2) the scanner data collected from households will be monitored to identify households that failed to scan the practice items; and (3) food books will be reviewed to identify households that did not complete practice food book pages.

Prior to use in the field, the video presentation will be subject to cognitive testing with nine or fewer adults of differing ages, household incomes, and family composition. The purpose of the cognitive testing is not to test whether the video contains the correct content, but rather to assess how well that content is presented.²² The cognitive test therefore will mimic field conditions: a "field interviewer/tester" will sit with the respondent to watch the video, hand the respondent the food reporting books as the video introduces them, and pause and answer questions as needed. When the video says to pause and practice, the field interviewer/tester will follow the training script to lead the respondent through the practice pages in the food books. After the video finishes, a "cognitive test form" with two parts will be completed. The tester will fill in the first part of the form with observations about the practice sections of the training if the respondent had problems. The second part of the form will include the cognitive debriefing questions and questions assessing how well the respondent retained information from the video. Particular attention will be paid to respondents' understanding of how to provide accurate and complete information on food item descriptions, quantities, and prices--the highest priority data elements identified in Appendix A.

Respondent Reporting of Food-Away-From-Home (FAFH)

On days two, five, and seven of the survey week, the primary respondent for each household will be asked to complete a brief telephone interview to report FAFH acquisitions from all food books used by the household. Telephone interviewers will conduct this interview using a custom-designed data collection website. The website will have embedded internet queries so that interviewers can confirm the precise locations of places where food was acquired via a Google search. This system will also be preloaded with name-brand and generic menu items so that interviewers can probe for exact names of foods or menu items acquired and consumed away from home (Appendix P). During the telephone calls, respondents are asked to report acquisition information from receipts and from data collection forms. Interviewers will probe for acquisitions

²² The content of the training video mirrors the face-to-face training by field interviewers of primary respondents during the study's field test and was validated by that test.

that may not have been recorded in food books and ask respondents to report missing acquisitions from memory (acquisitions reported from memory are flagged in the database). The data collection system and interview protocols are designed to categorize each household member on each day in one of three states: (1) reported food acquisitions; (2) did not have food acquisitions; (3) not participating/refuses to report.

The telephone calls, especially the first call scheduled on day 2, provide information about households that may experience difficulty with survey protocols. Telephone interviewers have the capability, through the web-based data collection system, to notify field interviewers about these households, and field staff will make additional in-person visits to these households. When additional in-person visits are needed, field staff will assist respondents in completing data forms. Respondents will be asked to recall food acquisitions from memory, if needed.

End-of-Week Procedures

After completion of the survey week, a field interviewer will visit the household to review and collect survey instruments and interview the primary respondent (via CAPI) about consumer behavior; knowledge and attitudes on diet, health, and nutrition; special dietary needs; food security; household income and non-food expenditures; and health status, including self-reported height and weight (Appendix Q). Most questions in the Final Household Interview were taken from the National Health and Nutrition Examination Survey (NHANES). Questions about income closely follow the Income Worksheet, with questions asked only as needed while respondents report information from their worksheets. Questions about certain non-food expenditures are critical for determining SNAP eligibility and for understanding the resources households have available for food spending.

After completing the Final Interview and distributing incentives, interviewers will ask respondents to complete a self-administered Respondent Feedback Form (Appendix R). This paper questionnaire contains 4 questions: how often respondents completed the Meals and Snacks Form, whether it was easy to get other household members to participate, whether it was easy to track foods, and whether they changed food acquisition behavior because of the survey. Information from the feedback form will be used as covariates when analyzing patterns of food acquisition.

Field staff will transmit the initial and final household interviews, conducted by CAPI, to the contractor's office via secure data transfer. Field staff will transfer scanned barcodes from the handheld scanners to their secure computers via USB cable and then transmit these files to the contractor's office. All hard-copy forms, including the household screeners, consent forms, and food books, will be packaged in transmittal envelopes that contain ID numbers and no respondent names. Packaged materials will be transmitted to the contractor's office in Federal Express envelopes via traceable Federal Express delivery. The respondent will keep his or her Income Worksheet since this information is recorded in CAPI during the final household interview.

Field Test of the National Food Study

Procedures for the National Food Study were tested in a 400-case field test conducted from February through May 2011. The field test had three primary objectives: (a) randomly assign households to two alternate survey protocols for collecting food acquisition data; (b) randomly

assign households to one of two base incentive levels (\$50 and \$100); and (c) obtain estimates of response rates from a large scale test of survey methods. The goals of the field test were to determine the most effective survey protocol and incentive level, and determine whether protocols yield acceptable response rates

The two survey protocols that were randomly assigned to households in the field test were known as the “Single Book” and “Multiple Book” protocols. These two protocols included the same elements for collecting data on food acquisitions, but the reporting forms were packaged differently. The Single Book protocol provided the household with one binder containing all instructions and data collection forms for reporting food acquisitions for all members of the household. The Multiple Book protocol provided the household with one binder containing instructions and data collection forms for reporting FAH and additional books so that each adult (age 19 and above) and youth (ages 11-18) household member could report his or her own FAFH acquisitions.

The goal of the Field Test was to determine the relative data quality and response rates under two scenarios: (1) primary respondent is responsible for reporting all food acquisitions for the household in one book, and (2) multiple household members are individually responsible for reporting their own food acquisitions in individual books. The field test also proved that households could follow the survey protocols. Response to the respondent feedback form indicated that 70 percent of respondents found the survey easy or very easy, with another 19 percent reporting it was neither easy nor difficult. Field interviewers provided anecdotal reports that respondents like the scanner.

Appropriate sampling weights and statistical methods were used to analyze field test data and estimate differences between randomly assigned subgroups. Analyses of field test data were compiled in two memoranda and distributed to the survey’s TWG (Appendix B). TWG recommendations for methodological improvements for the full-scale survey are summarized in Appendix C. Field test data will not be disseminated to researchers or the general public because results from the field test PSUs are not generalizable and the results were obtained primarily for use in planning the full-scale National Food Study.

Four primary findings were obtained from the field test:²³

1. **Survey protocol:** The two survey protocols offered different advantages. Households receiving a Single Book reported more FAH acquisitions on average (normalized for household size) with less missing data; households receiving Multiple Books reported more FAFH acquisitions.
2. **Incentive level:** The response rate for the field test was nine percentage points higher for the high incentive group (\$100 base incentive) compared with the low incentive group (\$50 base incentive).

²³ Appendix P contains two memoranda presenting field test findings. These memoranda were provided to the TWG members in advance of the briefing held in July 2011.

3. **Response rates:** Rates of response and rates of cooperation among contacted households were lower than expected at each stage of household contact. The overall screener response rate was 58%; the percentage of eligible households agreeing to participate was 61%; and the overall percentage of sampled households that completed the survey (screener response multiplied by completion rate) was 32%.
4. **Reported household income:** On average, household income was underreported on the screener, compared with income reported in response to detailed questions in the household interview. Underreporting on the screener led to a misallocation of households to the income subgroups targeted for survey completes. In addition, respondents had difficulty responding to questions about detailed household income and there were high rates of item nonresponse for unearned income and income of household members other than the primary respondent.

Based on results from the field test, the TWG recommended and the study adopted the following protocols for the National Food Study:

- Development of a modified protocol of the Single and Multiple Book approaches that combines the strengths of the two protocols in collecting both FAH and FAFH information during during the field test. Thus, for the full-scale survey, the primary respondent now receives a Primary Respondent Book—a single book for reporting FAH for the entire household and FAFH for him- or herself (identical to the old Single Book binder but with no pages for reporting FAFH of other household members). Other household members receive separate books for reporting their own FAFH acquisitions (exactly the same books that were used for the Multiple Book protocol during the field test).
- Base incentive of \$100
- Methods to improve response rates, including: additional field interviewer training on screening procedures and refusal conversion methods (one day has been added to the training schedule); implementation of two-phase sampling to maximize screener response rates (described above); and revised refusal conversion procedures for eligible households that refuse to participate in the survey (a “no contact” period will be provided, followed by a refusal conversion letter (Appendix S) and a visit by a field interviewer).²⁴

²⁴ The field test did not use a refusal conversion mailing; refusals were revisited by the original field interviewer, or transferred to a team leader. The “no contact” period provides time to batch mailings to refusals and for the respondent to reconsider participation before being contacted again. Respondent may sometimes refuse to participate simply because of bad timing.

- Revised screener to include questions about sources of household income, total household income, and follow-up categorical questions about household income above or below cutoffs for categorizing households by strata.²⁵
- Income Worksheet for households to complete at their convenience during the data collection week.²⁶ The primary respondent may then refer to the worksheet when answering questions about household income during the Final Household Interview. The worksheet itself will not be collected.

A3. Use of Information Technology and Burden Reduction

In compliance with the E-Government Act, 2002, information technology has been incorporated into this field test wherever possible to reduce respondent burden. Computer-assisted personal interviewing (CAPI) and computer-assisted telephone interviewing (CATI) will be used to conduct all interviews except the household screener.²⁷ Both CAPI and CATI interviewing will automate skip logic to improve the pace and flow of the interviews.

A handheld barcode scanner will be given to each household for reporting food acquisitions (Appendix L). The scanner provides a “point-and-click” method for collecting universal product codes (UPCs) and other barcodes. UPCs can be linked to a UPC dictionary to obtain precise product names and product sizes of manufactured items; the GS1 Databar barcode precisely identifies produce items.^{28,29} The scanning process eliminates measurement error and the time-consuming process of writing down each food item so that respondents are asked only to write down items that cannot be scanned. The Primary Respondent Book will contain pictures and barcodes for variable-weight products including produce, service deli items, and bulk foods. These variable-weight products often do not have attached barcodes but scanning a barcode from the Primary Respondent Book reduces respondent burden compared with the alternative of writing down the names of these items. The use of hand-held scanners to record UPC/barcodes will provide accurate and complete information about most foods that households acquire for home preparation and consumption, thereby enabling more accurate matching of food items to nutrient information.

²⁵ Asking first about sources of income is a technique for reminding respondents to consider all income sources when estimating total household income.

²⁶ The Income Worksheet is modeled on income forms used when low-income households apply for their children to participate in the National School Lunch Program and the School Breakfast Program.

²⁷ The screener is a brief interview that will be administered to more than 25,000 households to determine their income eligibility for the survey. The burden associated with the screener is minimized by paper administration.

²⁸ The GS1 Databar barcode is designed to condense information in a barcode suitable for printing on small packages, such as produce.

²⁹ Scanned barcodes that are not UPCs or GS1 Databar, such as store-specific codes on deli items and packaged store bakery items, will be discarded and information about the product will be obtained from the receipt.

Information technology also will be employed for the telephone interviews conducted on days two, five, and seven. During these interviews, respondents will report information about FAFH acquisitions from the household's food books. Interviewers will conduct this interview using a custom-designed data collection website with access to the Google Maps search engine for obtaining and confirming the precise location of food acquisitions (address of store or restaurant). Interviewers will enter foods reported by respondents by choosing from a list of menu items preloaded in the data system for the top 30 full-service restaurants, top 30 fast-food restaurants, school menu items (reported to the School Nutrition and Dietary Assessment Study-III), and generic meal items compiled from NHANES. This "pick-list" approach will reduce interviewer recording time and the length of these interviews, and improve the precision of collected data.³⁰

The sampling and screening for this survey will be managed with a custom-built sample management website. Sample will be released and managed through this website, where field interviewers will log in and view their cases, report contacts with sample addresses, manage appointments for initial and final household visits, and transfer cases to other interviewers as needed. The retirement of cases from Phase 1 and re-release of cases for Phase 2 will also be managed through this system. Field managers will review case productivity and case outcomes through this system, and review all refusals to determine whether refusals are held for conversion or retired.

In addition to use of technology, respondents are encouraged to save receipts for all food acquisitions. Reporting burden for FAFH is reduced when respondents save receipts, as the data collection form instructs respondents to write food items and prices that do not appear on the receipt. Receipts for FAFH will be used by respondents as recall aides during telephone interviews on days two, five, and seven. Receipts for FAH (groceries) will be used to extract prices, thereby eliminating the burden on households for reporting item prices.

Information for the National Food Study will be gathered from existing data sources when feasible. The sampling frame of addresses within survey areas will be constructed from a commercially available address-based sample, matched with SNAP administrative data (where available) to facilitate sampling of SNAP and non-SNAP households and reduce the number of households screened for the survey. To assess quality of collected data, scanned barcodes collected from households will be matched with two types of data sources. First, barcodes will be matched with existing databases that link UPC codes with item descriptions. A database from Gladson Interactive was used for the field test to obtain product names, package sizes, and nutrient information. This database will be supplemented with additional UPC "data dictionaries" from retailers and trade organizations, to the extent possible. Second, although the survey's primary

³⁰ Text messaging was considered as an alternative to telephone reporting of food-away-from-home on days two, five, and seven. Text messaging may be less burdensome and less intrusive, thus encouraging response (with albeit less data quality), especially among teenagers within sampled households. Texting has been successfully used as a means of contacting respondents (with outgoing texts to respondents), but there are no known studies of its use as a reporting tool (with incoming texts from respondents). In addition, this alternate response mode would introduce bias in response rates because those with cell phones, texting capabilities, and familiarity with texting would be more likely to respond than those without the capabilities. Thus, this additional use of technology was rejected.

source for price data is store receipts, for households shopping at stores that participate in the The Nielsen Company's Scantrack survey, barcodes will be matched with Nielsen price files to obtain the price in effect during the data collection week at the store where food was obtained. The Nielsen price data should be a very good backup source of price information when receipts are not available or readable, but—unlike receipts—they do not reflect price discounts associated with manufacturer or store coupons or use of store loyalty cards.

A4. Efforts to Identify Duplication and Use of Similar Information

There is no similar data collection available. Current government and private data collections do not provide data for analyzing all food acquisitions by households from all sources. Every effort has been made to avoid duplication. ERS has reviewed existing federal government data collections. A number of databases exist which contain data relevant to the research objectives of the National Food Study. Each database, however, has important limitations. ERS does not expect the proposed new survey to address all limitations of existing data collection vehicles, but will make a substantive contribution to analyses supporting program management and policy development.

ERS reviewed the following databases and noted the limitations for addressing ERS' research objectives:

Consumer Expenditure Survey (CE). The Diary Survey captures information about food expenditures but does not capture quantities of food obtained, which are needed to estimate price elasticities. In addition, food item detail is limited to about 100 food categories and subcategories, which is not sufficient for analyses of food quality or nutrient content.

Survey of Income and Program Participation (SIPP). The main objective of the SIPP is to collect information on: income by source; employment; program participation and eligibility; and general demographic characteristics. The major limitation of SIPP is that it collects no information on food purchases.

Proprietary Food Purchase Data. Some private companies develop consumer-based surveys of food purchases from large panels of households. The primary limitation is that they rely on convenience samples, reducing the generalizability of their results.

National Food Stamp Program Survey (NFSPS). The NFSPS was conducted in 1996 and collected information on client satisfaction with services provided by food stamp offices and agencies, the monetary and non-monetary costs of participating in the Food Stamp Program (FSP), food shopping behaviors, items related to food security, and nutrient availability for a nationally representative sample of Food Stamp Program participants and potential participants. The major limitations are that the NFSPS was conducted 15 years ago and focused primarily on Food Stamp Program participants.

National Health and Nutrition Examination Survey (NHANES). NHANES is an ongoing survey conducted by the National Center for Health Statistics of the Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. The survey assesses the health and nutritional status of the population and monitors changes over time. NHANES' primary focus is individual food intake. NHANES does not provide information about household food purchases,

but household-level data are critical to assessing the impact of SNAP benefits which are distributed to households.

NPD Consumer Reports on Eating Share Trends (CREST). This proprietary database, collected and maintained by NPD Group, Inc., tracks purchases in the commercial restaurant industry as well as ready-to-eat foods and beverages purchased from other retail establishments such as convenience and food stores. The CREST data have the strength of providing detailed information about FAFH, which is often overlooked in other data collections. However, these data comprise a convenience sample of panelists and lack information about prices and quantities of food purchased for preparation and consumption at home; household food security status; and individuals' participation status in SNAP or other food assistance programs.

A5. Impacts on Small Businesses or Other Small Entities

Information being requested or required in this field test has been held to the minimum required for the intended use. No small businesses will be involved in this survey.

A6. Consequences of Collecting the Information Less Frequently

The National Food Study is a one-time data collection and is needed to achieve ERS's mission to provide research on food demand and economic behavior of participants in USDA food programs.

A7. Special Circumstances Relating to the Guidelines of 5 CFR 1320.5

There are no special circumstances. The collection of information is conducted in a manner consistent with the guidelines in 5 CFR 1320.5.

A8. Comments in Response to the *Federal Register* Notice and Efforts to Consult Outside the Agency

The Economic Research Service (ERS) published a notice in the *Federal Register* on October 5 2011, Vol. 76, No. 193, pages 61664-61666 seeking public comment on the National Food Study. No public comments were received during the 60-day comment period. ERS also consulted with non-Agency experts who provided input on the research design, data needs, survey content, and survey protocol. Individuals who contributed to these consultations include employees of the contractor.

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In July 2011, a technical working group of academic and government experts was convened to review the results of the field test of the National Food Study and provide recommendations for the full-scale survey. Individuals attending the meeting include the following:

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The complete OMB clearance package was reviewed by staff of the USDA National Agricultural Statistics Service (NASS), and their comments were addressed and incorporated in this document.

Materials about the field test were reviewed and approved by the Public/Private Ventures Institutional Review Board (IRB).³¹ Materials for the full-scale National Food Study were provided to the IRB in October 2011. The IRB contact person is

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³¹ P/PV is a 501(c)(3) nonprofit, nonpartisan research organization. Mathematica Policy Research regularly uses this external IRB, and one Mathematica staff member sits on the P/PV IRB.

A9. Explanation of Any Payment or Gift to Respondents

The National Food Study will offer households an incentive to complete the screener and participate in the study. It is essential to include an incentive in order to maximize the response rate. Incentives are particularly important for maximizing response with hard-to-reach populations and for gaining cooperation for a demanding data collection. In a seminal meta-analysis, Singer, et al. (1999) found that incentives in face-to-face and telephone surveys were effective at increasing response rates, with a one dollar increase in incentive resulting in approximately a one-third of a percentage point increase in response rate, on average. They found some evidence that incentives were useful in boosting response rates among underrepresented demographic groups, such as low income and non-white (Singer, et al., 1999). This is a significant consideration for this study because 70 percent of the targeted survey completes (3,500 of 5,000) will be with SNAP and non-SNAP low-income households.

The incentives planned for this study are designed to maximize response to the initial screener and encourage participation in the week-long survey. The planned incentives are consistent with those offered on other national surveys. The National Survey of Family Growth (NSFG) conducts an interview about marriage and divorce, having and raising children, health and health care. It lasts about 60-80 minutes and respondents receive \$40 as a token of appreciation.³² The School Nutrition Dietary Assessment (SNDA) IV offered a \$50 incentive to professional school food managers who were asked to compile data from existing records about school menus, including aggregate volumes of food items offered and served.³³ The National Food Study includes burden for two interviews (consistent with the burden of the NSFG) and reporting of all household food acquisitions over a one-week period (consistent with the week long data collection of SNDA-IV).

The National Food Study will offer a prepaid \$5.00 token of appreciation to all households that are contacted for screening. This incentive will be offered in cash when field interviewers introduce themselves and invite respondents to complete the screener. The incentive is provided unconditionally. Instead of converting refusals, it seeks to prevent them at the first point of contact. Prepaid unconditional incentives have been tested and found effective in improving response to other government surveys. For instance, the 1996 SIPP compared a \$10 and \$20 prepaid unconditional incentive provided as a voucher to be mailed back to Census in order to receive a check (only the \$20 incentive was effective). The 1999 Survey of Program Dynamics (SPD) provided an unconditional incentive in the form of a \$40 debit card. The 2005 Consumer Expenditure Survey

³² Groves RM, Mosher WD, Lepkowski J, Kirgis NG. Planning and development of the continuous National Survey of Family Growth. National Center for Health Statistics. Vital Health Stat 1(48). 2009. (See page 42 of 73 in the PDF).

³³ School food service managers were asked to collect information on foods offered and served during a randomly selected “target” week for reimbursable meals (“meals offered and served”) including menus, recipes, ingredients, production, and reimbursable servings. Training and extensive technical assistance was available by telephone.

tested prepaid unconditional incentives of \$20 and \$40, provided as debit cards (both were effective in improving response).³⁴

The National Food Study will provide the \$5 prepaid incentive for screening in the form of cash. A cash incentive will be used because of the small value of the incentive for screening. Other researchers suggest that small debit card incentives behave differently than small cash incentives because debit cards involve costs associated with reading instructions, remembering the PIN, and making a trip to an ATM machine, which may not be worth the small value of the gift (McGrath, 2006).

As described earlier, based on results from the field test, the TWG recommended and the study adopted the high incentive protocols for the National Food Study. Under this protocol, participating households will receive a multi-part incentive designed to encourage initial agreement to participate in the week-long survey, and motivate households to stay engaged and complete the data collection week. This multi-part incentive includes a base incentive for primary respondents, a telephone bonus to encourage primary respondents to initiate telephone calls for food reporting, and incentives for additional household members (age 11 and older) who track their food acquisitions. The full incentive consists of three components:

1. Base incentive – \$100 check
2. Telephone bonus – \$10 gift card per call (up to three)
3. Additional household members– \$10 gift card for ages 11-14; \$20 gift card for ages 15 and older

Wal-Mart or Target gift cards will be provided to respondents according to the store closest to the SSU where they reside.

A base incentive of \$100 will be provided to primary respondents. The primary respondent is asked to complete two interviews (averaging 30 and 40 minutes respectively), receive training on reporting food acquisitions (one hour), and track food acquisitions in the Primary Respondent Book for one week. The primary respondent also may receive up to three \$10 telephone bonuses for initiating telephone calls to report food acquisitions on days two, five, and seven of the data collection week (averaging 15 minutes each). This bonus is designed to increase data quality by providing respondents with an incentive to initiate telephone calls at times that are convenient for them; respondents interviewed at their convenience are less likely to provide incomplete reporting. These incentives also reduce overall data collection costs for the survey: interviews initiated by incoming calls from respondents are completed at significantly lower cost than outgoing calls with multiple callbacks to obtain these responses. Single-person households will receive a maximum of \$130 for participation.

³⁴ McGrath, David. "An Incentives Experiment in the U.S. Consumer Expenditure Quarterly Survey," December 2006. (www.bls.gov/osmr/pdf/st060030.pdf)

Multiple-person households will be asked to track food acquisitions in multiple food books. Adult Food Books will be provided for adults (age 19 and older) other than the primary respondent; Youth Food Books will be provided to youth age 11-18. Household members other than the primary respondent who complete food books will receive an incentive of \$10 (age 11-14) and \$20 (ages 15 and older). Findings from the cognitive tests indicated that teenagers, in particular, might be reluctant to participate without a targeted incentive.

During administration of the screener, field interviewers will identify the primary food shopper or meal planner in each household. To the extent possible, information about study eligibility and incentives will be communicated to the primary food shopper/meal planner at the time of screening. If unavailable at screening, the primary food shopper/meal planner will be contacted at a later date. The primary food shopper/meal planner will also be informed of the mode and timing of payment. The mix of check and gift cards serves two purposes: (a) households receive the largest part of the incentive as a check, which is the more liquid and fungible form of payment and provides the greatest flexibility for low-income households; (b) gift cards can be distributed among responding family members, eliminating respondent burden for distributing funds from a check for the total amount.

Households will receive all incentives at the end of the data collection week when the field interviewer visits the household to complete the final household interview and retrieve study materials. The \$100 base incentive will always be distributed by check at the end of the week. Gift cards will be distributed at the end of the week if the household completed telephone calls to indicate eligibility for the incentives. Eligibility for the telephone bonus is determined by logged calls from the household; eligibility for additional household member incentives is determined by household member participation (completion of food books). Operationally, eligibility for additional household members is determined by acquisition information logged for other household members during telephone calls (regardless of whether the call was initiated by the household).³⁵ The consent form contains information about the incentive amounts and timing of payment, and a copy of this form will be left with the household.

The three components of the incentive combine to provide a tiered incentive structure reflecting the additional burden of participation for larger households. As shown in Table A.1, 98.8 percent of low-income households have six or fewer members; there will be no cap on the incentive for the remaining households with more than six members.

³⁵ Field interviewers will not have discretion with regard to incentive payments. Field interviewers must get approval from their manager before distributing gift cards for any Books completed but not reported by telephone.

Table A.1. Incentive Levels for the National Food Study

Type of Household	Percent of Population	Average Household Size	Average Number of Additional HH Members Eligible For Incentive				Average Incentive
			Age <11	Youth, 11-14	Teens, 15-18	Adults	
Single Adult Households							
1 One person household	43.5	1.0	0	0	0	0	\$130
2 No youth or teens	18.0	2.8	1.8	0	0	0	\$130
3 Youth only	7.0	3.3	1.1	1.2	0	0	\$142
4 Teens only	5.3	2.8	0.6	0	1.2	0	\$153
5 Youth and teens	3.4	4.3	0.8	1.3	1.2	0	\$166
Multiple Adult Households							
6 Adults, no youth or teens	14.6	3.3	1.3	0	0	1.1	\$151
7 Adults and youth	3.2	4.8	1.5	1.3	0	1.1	\$162
9 Adults and teens	2.7	4.3	0.8	0	1.3	1.2	\$181
8 Adults, youth, and teens	2.1	5.8	1.1	1.3	1.3	1.2	\$197
Average							\$139

Note: The average incentive by type of household assumes eligibility for three telephone bonuses.

^a The distribution of types of households is based on the distribution of the SNAP caseload in 2008 (Source: USDA, FNS. *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2008*).

A10. Assurance of Confidentiality Provided To Respondents

Data for the National Food Study will be collected under the Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA). Study participants will receive assurances of confidentiality in the study brochure (Appendix E) and consent form (Appendix G). The consent form includes the shorter version of the CIPSEA pledge (Appendix G), and the long version of the CIPSEA pledge is included in the study's informational website at www.usdafoodstudy.org (Appendix T). Throughout the survey period, participants will be informed that their participation is voluntary and that they have the option to refuse to answer any questions. They also will be told that neither their decision to participate in the survey (or not) nor their responses to any questions will be identifiable, nor will their responses or participation affect their eligibility in any government programs.

All respondents' information collected during the study will be kept private and not disclosed to anyone other than the analysts conducting this research. The contractor will not disclose any information that permits identification of respondents, except as otherwise required by law.

Personally identifying information (names of household members and telephone numbers) will be collected by the contractor's field staff upon screening eligible households for the survey. Identifying information, including addresses, will be maintained on separate forms and files that are linked only by a sample case identification number. After a sample case is completed in the field,

access to the file linking sample identification numbers with respondent contact information is limited to a small number of staff that has a need to know this information. All hard-copy field materials will be transmitted to Mathematica Policy Research's Survey Operations Center via traceable Federal Express delivery. All members of the study team having access to the data are trained on the importance and procedures of confidentiality and data security. Additionally, all permanent and temporary employees of Mathematica who work on the study will sign the confidentiality agreement required by CIPSEA (Appendix U), taking an oath to protect the confidentiality of the data with disclosure subject to a jail term or substantial fine.

After survey materials are returned from the field, hard-copy documents will be stored in secured file cabinets and rooms; electronic data will be maintained on secured, password-protected computer servers. Discarded materials containing confidential information will be shredded. Both sources of data will be accessible only by approved contractor staff; such accessibility is limited to those who have direct responsibility for providing and maintaining sample locating information.

Survey data will be processed and stored on the contractor's password-protected local area network (LAN). The contractor, Mathematica, protects its LAN with several security mechanisms available through the network operating system. Access to private information stored on LAN directories is restricted to authorized project staff by means of IDs and passwords. In addition, network servers containing private information are kept in a locked area.

A11. Justification for Sensitive Questions

The National Food Study information collection includes questions that some respondents might find sensitive. All respondents will be informed that they can decline to answer any question they do not wish to answer and there are no negative consequences for not participating. Sensitive questions include household income, citizenship status, food security, and self-reported body weight. Information about these potentially sensitive topics is important to statistical uses under the study. Household income information is needed to determine eligibility for the study; income and citizenship status data are needed to determine SNAP eligibility among nonparticipants. Food security and body weight are important indicators of household members' health and well-being. The National Food Study will enable ERS to examine the relationship of these indicators with food access and food acquisition patterns.

A12. Estimates of Annualized Burden Hours and Costs

A total of 43,903.60 burden hours are estimated for this study. Table A.2 reports the expected number of respondents, frequency of response, hours per response, and the total burden hours for the data collected. Estimates of the percentages of respondents who will agree to complete the forms are based on the field test, other national field study cooperation rates, and the estimated impact of revised procedures.³⁶ Burden estimates for completed interviews were informed by

³⁶ National Health and Nutrition Examination Survey (NHANES) 2007-2008 interview response rate for all ages was 78.4 percent; National Health Interview Survey (NHIS) 2009 total household response rate was 82.2 percent; the National Survey of Family Growth, which used an address-base sample and two-phase sampling that has been adopted

experience during the field test for all instruments except the Income Worksheet, which is new. Burden estimates for attempted interviews reflect an estimate of the amount of time spent encouraging non-respondents to participate.

The Federal Register Notice for this data collection included a burden estimate of 37,562.55 hours. Estimated burden has gone up by 17 percent since publication of the Notice due to three factors: (1) the addition of one new instrument, the Income Worksheet; (2) accounting for the burden of the Household Training for Reporting Food Acquisitions; and (3) accounting for the burden of Review of Food Books during the Final Household Visit. These latter two factors do not represent actual increases in burden; instead they correct inadvertent omissions from the Notice. In addition, the burden for the Initial Interview was increased by 5 minutes (questions about disabilities and the ability to track foods without assistance were added to ensure the respondent's ability to complete all aspects of the survey), and the burden for the Final Interview was reduced by 5 minutes (a number of questions about non-food expenditures were eliminated).³⁷

For the households expected to complete the National Food Study, the average total reporting burden is 5.28 hours. The comparable *estimate* for the field test was 5.05 hours. Estimated burden increased by a net 14-15 minutes primarily due to: (1) a 6-minute increase in the burden of completing food books because field test households had higher-than-expected numbers of FAH acquisitions; (2) a 10-minute increase due to the addition of the Income Worksheet; and (3) a small decrease in estimated time to complete the household interviews.

Actual burden during the Field Test was measured for the household interviews and the three phone reports of FAFH, and a proxy measure was used for time spent scanning purchased groceries and filling out food books for FAH. Actual and estimated burden for these components were within a few minutes of one another. Thus, the expected burden for households completing the National Food Study is about 15 minutes higher than actually experienced during the Field Test.

Compared to the data collection planned when the Federal Register Notice was published, the following changes have been made to either improve data quality, reduce respondent burden, or both. These changes were informed by the prioritization of data elements described in Appendix A.

- Questions on physical and other disabilities were added to the Initial Household Interview to ensure that the National Food Study would not ask a person to perform data gathering activities beyond his or her abilities.

(continued)

for this study, attained an 80 percent screener response rate. We estimate an 80 percent screening response rate. This improvement over the field test will be derived from implementing a new screening management system, providing a \$5 pre-paid incentive at screening, and implementing two-phase sampling at screening.

³⁷ Data on non-food expenditures is of lower priority to the study than data on food expenditures (Table A2 of Appendix A), so these questions were dropped to reduce overall burden.

- The Income Worksheet was added to reduce levels of item non-response and to allow the primary respondent to gather the needed information from other household members at the most convenient time.
- The number of questions about non-food expenditures in the Final Household Interview was reduced by dropping questions about: vehicle loans and lease payments; auto insurance costs; cost of fuel for cars and trucks; costs for parking and tolls; and costs for cable, internet, and phone service.
- Questions about the following items were dropped from the Final Household Interview: time spent putting together ingredients for a meal; any household members told by a doctor or other health professional that their blood pressure or cholesterol level was too high; and any household members told that they had diabetes.

Table A.2. Reporting Burden for National Food Study

Instrument	Estimated Number of Respondents	Responses Annually per Respondent	Total Annual Responses	Estimated Average Number of Hours per Response	Estimated Total Annual Hours of Response Burden
Household Screener					
Completed interviews	19,740	1.00	19,740	0.17	3,290.00
Attempted interviews	4,935	1.00	4,935	0.08	411.25
Initial Household Interview					
Completed interviews	5,795	1.00	5,795	0.50	2,897.25
Attempted interviews	1,932	1.00	1,932	0.08	160.96
Household Training for Reporting Food Acquisitions					
Completed interviews	5,795	1.00	5,795	0.58	3,380.13
Attempted interviews	1,932	1.00	1,932	0.05	96.58
Income Worksheet					
Completed interviews	5,099	1.00	5,099	0.17	849.86
Attempted interviews	695	1.00	695	0.05	34.77
Final Household Interview					
Completed interviews	5,099	1.00	5,099	0.50	2,549.58
Attempted interviews	695	1.00	695	0.05	34.77
Reporting Food Obtained for Home Preparation or Consumption					
Completed reports	5,099	3.00	15,297	0.17	2,549.58
Attempted reports	695	1.00	695	0.05	34.77
Food Books					
Completed reports	12,225	7.00	85,573	0.25	21,393.27
Attempted reports	1,667	3.00	5,001	0.08	416.75
Telephone Reporting of Food Away from Home					
Completed interviews	5,099	3.00	15,297	0.25	3,824.37
Attempted interviews	695	1.00	695	0.08	57.95
Review of Food Books During the Final Household Visit					
Completed interviews	5,099	1.00	5,099	0.17	849.83
Attempted interviews	695	1.00	695	0.02	57.92
Meals and Snacks Form					
Completed interviews	4,925	7.00	34,477	0.02	574.62
Attempted interviews	869	1.00	869	0.02	14.49
Respondent Feedback Form					
Completed interviews	4,925	1.00	4,925	0.08	410.44
Attempted interviews	869	1.00	869	0.02	14.49
Total Responding Burden	24,675	8.96	221,211	0.21	43,903.60

Table A.3 shows estimated annualized hourly costs to respondents during the study. Respondents will include households in three survey strata: (1) households participating in SNAP (N=1500), and (2) very low and low-income non-SNAP households with incomes below 185 percent of the federal poverty guidelines (N=2000), and (3) non-SNAP households with incomes above 185 percent of the federal poverty guidelines (N=1500). Estimated annualized cost to respondents in the first two strata are based on the federal minimum wage rate (\$7.25), which provides earnings equivalent to 128 percent of the poverty guidelines for a full-time worker.³⁸ Estimated annualized costs to respondents in the third strata are based on average earnings of earners in households with incomes above 185 percent of the federal poverty guidelines in 2010 (\$14.61).³⁹ The weighted average of these two estimates (\$10.48) is used in Table A.3.

A13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers

There are no capital/start-up or ongoing operation/maintenance costs associated with this information collection.

A14. Annualized Cost to Federal Government

The total estimated cost of the data collection is \$9,594,322 over a 28-month period, for an annualized cost of \$4,111,852. This includes the costs associated with the contractor conducting the project and the salary of the assigned ERS project director. This cost includes all tasks for the National Food Study following completion of the field test in July 2011, including design, sample selection, recruitment, information collection, analysis, and report writing.

USDA's Food and Nutrition Service is supporting this effort by contributing 15.7 percent of the overall cost and by providing staff expertise.

A15. Explanation for Program Changes or Adjustments

This is a new collection of information resulting in a program change of 43,903.60 burden hours.

A16. Plans for Tabulation and Publication and Project Schedule

The contractor will process the collected data and match the data to extant data sources. The contractor will summarize the quality of collected data in four technical memoranda provided to ERS/FNS. The final compiled data will be provided in two sets of data files and documentation.

³⁸ SNAP quality control data for 2008 (the most recent year available) indicates that 29 percent of SNAP households had earned income. Those with earned income had average monthly earnings equivalent to full-time work for one person at just slightly above the minimum wage in effect that year.

³⁹ Average earnings is based on the distribution of households by income level in 2010, and the average number of earners per household, from the Current Population Survey, 2011 Annual Social and Economic Supplement (http://www.census.gov/hhes/www/cpstables/032011/hhinc/new01_001.htm).

Table A.3. Annualized Cost to Respondents for the National Food Study

Instrument	Estimated Number of Respondents	Estimated Average Number of Hours per Response	Estimated Total Annual Hours of Response Burden	Estimated Hourly Wage Rate	Estimated Respondent Cost
Household Screener					
Completed interviews	19,740	0.17	3,290.00	10.48	34,479.20
Attempted interviews	4,935	0.08	411.25	10.48	4,309.90
Initial Household Interview					
Completed interviews	5,795	0.50	2,897.25	10.48	30,363.18
Attempted interviews	1,932	0.08	160.96	10.48	1,686.84
Household Training for Reporting Food Acquisitions					
Completed interviews	5,795	0.58	3,380.13	10.48	35,423.71
Attempted interviews	1,932	0.05	96.58	10.48	1,012.11
Income Worksheet					
Completed interviews	5,099	0.17	849.86	10.48	8,906.53
Attempted interviews	695	0.05	34.77	10.48	364.36
Final Household Interview					
Completed interviews	5,099	0.50	2,549.58	10.48	26,719.60
Attempted interviews	695	0.05	34.77	10.48	364.36
Reporting Food Obtained for Home Preparation or Consumption					
Completed reports	5,099	0.17	2,549.58	10.48	26,719.60
Attempted reports	695	0.05	34.77	10.48	364.36
Food Books					
Completed reports	12,225	0.25	21,393.27	10.48	224,201.48
Attempted reports	1,667	0.08	416.75	10.48	4,367.56
Telephone Reporting of Food Away from Home					
Completed interviews	5,099	0.25	3,824.37	10.48	40,079.40
Attempted interviews	695	0.08	57.95	10.48	607.26
Review of Food Books During the Final Household Visit					
Completed interviews	5,099	0.17	849.83	10.48	8,906.25
Attempted interviews	695	0.02	57.92	10.48	606.97
Meals and Snacks Form					
Completed interviews	4,925	0.02	574.62	10.48	6,022.03
Attempted interviews	869	0.02	14.49	10.48	151.82
Respondent Feedback Form					
Completed interviews	4,925	0.08	410.44	10.48	4,301.45
Attempted interviews	869	0.02	14.49	10.48	151.82
Total Burden and Cost	24,675	0.20	43,903.60		460,109.78

Data Processing

The collected data will be processed into analytic files according to the following steps:

1. **Data Entry.** Data entry is needed for survey data collected on paper. Data will be entered from the household screener and “blue pages” (food book data collection forms for FAH). Price data will be entered from respondents’ saved receipts for FAH.
2. **Match Files.** Data will be matched with three extant data sources: UPC databases will be matched with scanned barcodes to obtain product names and packages sizes; Nielsen store-specific price files will be matched with scanned barcodes to obtain prices for FAH purchases without a saved receipt (matched by store, UPC, and date), where available; and SNAP records of electronic benefit redemptions will be matched with FAH acquisitions of SNAP households to validate and supplement acquisitions reported to the survey (matched by SNAP caseid).
3. **Nutrient coding.** The food items reported by respondents will be assigned food item codes unique to this study. Unique food items will be matched with nutrient databases to obtain corresponding standard food codes and nutrient information. Multiple data sources will be used to assign nutrients to acquired foods. Primary sources include the USDA National Nutrient Database for Standard Reference (for foods acquired for home preparation and consumption); Food and Nutrient Database for Dietary Studies (FNDDS) and MyPyramid Equivalents Database (MPED) (for foods acquired in their “as consumed” form). Product information (product description, nutrient facts, and ingredients) from a commercial UPC database will be used to help match items to the most appropriate USDA food item (for example, to distinguish “regular” from “reduced fat” products). Commercially available data on restaurant foods will also be used to supplement the standard reference databases where needed.
4. **Prepare Analytic Files.** Each survey data file will be checked for missing or inconsistent data and outliers, and then cleaned and recoded as necessary. For the CAPI surveys, data cleaning will be minimal because of established response options and controlled skip patterns. Two methods will be used to check prices entered from receipts for outliers that are potential data entry errors: the sum of prices on transaction will be compared to the transaction total, and individual prices will be compared with average prices for the same items in the Nielsen database.
5. **Prepare Sampling Weights.** The survey data will be weighted using sampling weights as described in Part B. Weights will be adjusted for nonresponse to the survey. A pseudo PSU identifier will be included in public-use files so that researchers may control for the sample design, and replicate weights also will be provided.
6. **Prepare documentation.** Documentation of the public-use and restricted-use data files (described below) will include a codebook and users’ guide. The users’ guide will explain the structure of the data files, the relationship between data files, correct procedures for merging data files, and correct use of sampling weights.

Technical Memoranda

Four memoranda will be prepared to summarize the quality of collected data and to document data processing at critical steps, as described below.

1. **Memorandum Assessing Data Quality** – This memo will provide an overview of the characteristics of the collected data. It will also provide an assessment of the representativeness, completeness, and quality of the raw and processed data. The following topics will be included and tabulations will be similar to those provided to the TWG following the field test (Appendix B):
 - Sample characteristics
 - Means, ranges, and distributions of key output variables by population group
 - Prevalence of item non-response on each instrument
 - Assessment of the consistency of response across instruments and data collection modes (e.g., scanned data, receipts, and data collection forms; income reported on Screener versus Final Interview), with special attention paid to the highest priority data elements identified in Appendix A
 - Distribution of FAH acquisitions by type (store type and nonpurchase types) and item nonresponse to questions about FAH acquisitions
 - Distribution of FAFH acquisitions by type (type of eating place and nonpurchase types) and item nonresponse to questions about FAFH acquisitions
 - Sampling weights and distribution of sampling weights
 - Assessment of non-response bias
 - Household response rates and the AAPOR components of the response rate. If the response rate is less than 80 percent, the memorandum will include an analysis of non-response bias.
2. **Memorandum on Prices for Individual FAFH Items** – This memo will provide a detailed assessment of the prevalence of missing item prices and total meal cost for FAFH; and the prevalence of non-missing prices, by type of FAFH place. It will include the data sources for extant prices and our algorithm for determining the number of extant price observations needed for price imputation.
3. **Memorandum on Price Estimation** – This memo will include a description of methods used for imputing item values for food obtained at no cost (for example, foods obtained from friends, relatives, or food banks).
4. **Memorandum on Matching Nutrient Data to the Study Database** – This memo will provide a description of foods that could not be matched to the USDA nutrient databases, or were matched but varied substantially in calorie or nutrient. The memo will also include a description of how “nonmatches” were resolved using extant data or imputation.

ERS will use the information provided in these memoranda to assess the relative confidence in the different types of data provided in the public-use files, and to provide guidance to data users on the appropriate use of the data.

Final Data Files

Two sets of data files will be provided to ERS: (1) public-use files that include no personal identifying information, and (2) restricted-use files that contain household geographic latitude and longitude coordinates (for analyses of food access). Both files will include constructed variables (e.g., total household income) and “raw” data items obtained directly from data collection instruments. These files will also contain sampling weights, pseudo PSUs, and replicate weights.

The public-use data file will not include any information that is confidential or contains personal identifying information. Household member names, phone numbers, and addresses will not be included in either the public-use or restricted-use file. The public-use file will not include geocodes (latitude and longitude), nor any information that could identify the PSU or SSU from which the household was sampled. (State identifiers will be included.) Prior to release of the public use files, ERS will conduct a thorough disclosure review to ensure that any combination of data values on a single record could not be used to identify the respondent household. This review will likely lead to decisions to either: (a) eliminate some variables from the public use files; or (b) collapse values into fewer categories (e.g., age).

Access to restricted use files will be subject to specific access criteria and associated procedures. ERS has over 25 years experience handling confidential data. ERS offices are located at 355 E Street SW, Washington DC 20024-3221 which is a GSA level 4 secured building. Armed guards are in the lobby and garage securing the building. Employees can only access the floors on which their agencies are located. Access is controlled by HSPD-12 ID cards. Visitors are screened and temporary visitors passes are issued once the purpose of a visit is confirmed; visitors must be accompanied by an ERS employee at all times. Most projects that can access confidential data are located in secure data labs. The data labs are locked with access granted to authorized individuals via their HSPD-12 ID cards and only on need-to-know basis. Data are analyzed on standalone PC's with no LAN access and can be used only within the lab. PC's run the Windows XP or 7 operating system with Symantec Endpoint protection version 11.0 or higher installed. Virus definitions and operating system patches are updated monthly.

Project Schedule

The planned schedule for the full-scale National Food Study, assuming receipt of OMB clearance by March 15, 2012, is as follows:

Activity	Schedule
Select PSUs for the National Food Study	September 2010
Select SSUs for the National Food Study	December 2011
Train Data Collectors for National Food Study	April 2012
Conduct Data Collection	April 16, 2012 through October 27, 2012 ^a
Submit Summary Memo Assessing Data Quality	March 2013
Submit Summary Memo for Prices for Individual FAFH Items	April 2013
Submit Summary Memo on Price Estimation	April 2013
Submit Summary Memo Matching Nutrient Data to the NHFPAS Database	May 2013
Submit Final Data Files and Documentation	May 2013

^a Data collection will begin on April 16 for half of the PSUs and April 30 for the other half; thus running through October 27 for half of the PSUs. This staggered start, two weeks apart, accommodates two separate trainings for field interviewers and maintains a schedule of sample release every two weeks, with all PSUs on the same schedule after the first two weeks.

A17. Reason(s) Display of OMB Expiration Date is Inappropriate

The agency plans to display the expiration date for OMB approval of the information collection on all instruments.

A18. Exceptions to Certification for Paperwork Reduction Act Submissions

There are no exceptions to the certification statement.