

## Response to OMB Comments

### Comment 1: Objectives of the Full Study

ERS and FNS intend to use the collected data to address the following critical unanswered questions:

- How do food prices and household income influence American's food choices and the dietary quality of their purchased and acquired food?
- What is the influence of nutrition knowledge and attitudes on food purchases and acquisitions?
- 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, and cost per unit?
- How does food assistance program participation influence food purchases and acquisitions?
- How do access and retail outlet choice influence food purchases and the resulting dietary quality of purchases?
- How and why are food security status and the food purchases of SNAP participants different from SNAP-eligible nonparticipants?

More specifically, ERS and FNS will use the collected information to:

1. Describe the food and beverage purchase and acquisition patterns of the population and important subgroups (especially subgroups defined by income and SNAP participation).
2. Characterize the nutritional quality of households' purchased and acquired food.
3. Assess levels of knowledge about diet, nutrition and health, and their relationships to acquired foods.
4. Identify subject areas and groups of SNAP households for which additional information about diet, nutrition and health could have the greatest potential impact on improved food choices.
5. Characterize the nature of food access of the population universe and subgroups, both in terms of travel distance or time and the nature and relative prices of food available at local markets.
6. Estimate the influence of income and prices on food purchases including, to the extent feasible, income, own-price, and cross-price elasticities for purchased food items (both at home and away.)
7. Assess levels of food security of the population universe and subgroups using the 30-day, adult food security measure.
8. Assess why food purchase and food security outcomes differ for SNAP participants and low-income non-participants and identify the factors that account for those differences.

Section A1 is therefore revised and should be replaced with the following.

### **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 Field Test for the **National Household Food Acquisition and Purchase Survey** (aka **National Food Study**) in preparation for a later *full-scale* implementation of the survey in 2012.<sup>1</sup>

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 also 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 better serve this segment of the population with efficient and effective programs.

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 purchase information. The Consumer Expenditure Survey collects aggregate data on food expenditures, but lacks item-level quantities for nutrient analyses 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 information about participation and benefits received from USDA food assistance programs. No current data source provides detailed household-level information about food acquisitions, including 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.

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<sup>1</sup> A separate Supporting Justification for the full-scale **National Food Study** will be submitted to OMB in 2011.

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.<sup>2</sup> 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 diet quality.

Currently, about 30 percent of adult Americans are obese, which is roughly a 100 percent increase from 25 years ago.<sup>3</sup> Recent research has suggested a causal relationship between the food environment and body size;<sup>4</sup> and ERS has become involved in documenting and analyzing food deserts. 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 if it has access to current, accurate data on food acquisition, and the food prices and availability of healthful and less-healthful foods.

ERS plans to conduct a *full-scale* National Food Study designed to collect household information and food acquisition data from a nationally representative sample of 5,000 households over a six-month period from March 2012 through August 2012. The sample for the National Food Study will include three strata: households participating in the Supplemental Nutrition Assistance Program (SNAP);<sup>5</sup> low-income households not participating in SNAP and with income below 185 percent of the poverty guidelines; and

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<sup>2</sup> See U.S. Department of Labor (2006). “100 Years of Consumer Spending: Data for the Nation, New York City, and Boston.” Report 991.

<sup>3</sup> See Baum, C. 2007. “The Effects of Food Stamps on Obesity.” Economic Research Service, USDA. Contractor and Cooperator Report No. 34, September.

<sup>4</sup> For example, see Rundle et al. (2008)

<sup>5</sup> 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.

higher-income households with income above 185 percent of the poverty guidelines. 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.

If approved, the Field Test for the National Food Study will be conducted in winter 2011. The field test will collect data from a sample of 400 low income households selected from the two low-income strata defined for the full-scale survey. The primary purpose of the Field Test is to provide methodological information about two different approaches for collecting food acquisition data from households over a seven-day period. This information is needed because no prior survey has collected similarly detailed information about food acquisitions in both the “food-at-home” and “food-away-from-home” categories. Households will be randomly assigned to two alternate survey protocols and two alternate incentive levels. Data collected from the randomly assigned subgroups will be used to provide a two-by-two test of the estimated differences in response rates and data quality associated with different survey protocols and different incentive levels. Data quality will be measured by adherence to survey protocols and by reporting accuracy on items that can be validated. Information about differences in response rates and data quality among randomly assigned subgroups will be used to assess the efficacy of alternative approaches for the full-scale survey.

The Field Test will include all aspects of the data collection process and most aspects of data processing that are planned for the full-scale survey, thereby providing a test of all the systems designed for gathering data from study participants.

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 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.

### **Mapping objectives to Data Needs**

The questions above will be examined using the data specified below:

- Describe the food and beverage purchases and acquisition patterns of the population universe and subgroups.
  - I. Sources, quantities and prices of food-at-home (FAH) and food-away-from-home (FAFH) items purchased
  - II. Sources and quantities of non-priced items that are acquired

- III. Designation of USDA Food Pyramid Groups
  - IV. Detailed food expenditures
  - V. Identification of population groups (e.g., SNAP households, non-participating low-income households, and higher-income households) and detailed demographic information for household members
  - VI. Days of week when household members obtain subsidized school lunches
  - VII. Funding sources for acquired food (e.g., cash, credit, SNAP benefits via EBT card, WIC food instruments)
  - VIII. Amount paid for by cash, check, or cash benefits from an EBT card;
  - IX. Amount paid for by SNAP benefits from an EBT card
  - X. Amount paid for by credit card or credit account
  - XI. Timing of program benefits and income receipt relative to food acquisition patterns
- Characterize the nutritional quality of households' food purchases and acquired food.
    - I. Nutrient data for FAH and FAFH
    - II. Characterization of nutritional quality by population subgroups (e.g., SNAP households, non-participating low-income households, and higher-income households) and detailed demographic information
- Characterize the nature of food access of the population universe and subgroups.
    - I. Geographic distance between respondent and source/vendor locations
    - II. Characterization of food access by population subgroups (e.g., SNAP households, non-participating low-income households, and higher-income households) and detailed demographic information
    - III. Travel time
    - IV. Modes of travel
    - V. Costs of travel
    - VI. Participation in food assistance programs
    - VII. Type of store and vendor, and availability of nutritious foods
- Estimate the influence of income and prices on food purchases including, to the extent feasible, income, own-price, and cross-price elasticities for purchased food items (both at home and away.)
    - I. Date of trip
    - II. Name and type of destination
    - III. Sufficient address information to allow geocoding of location
    - IV. Number of food items acquired during trip
    - V. Total expenditure on all food items acquired, including tax
    - VI. Amount paid for by cash, check, or cash benefits from an EBT card
    - VII. Amount paid for by SNAP benefits from an EBT card

- VIII. Amount paid for by credit card or credit account
  - IX. Detailed price and quantities of items purchased
  - X. Description of items and quantities otherwise acquired, including imputed prices where available
  - XI. Household income and benefit levels
  - XII. Timing of income and benefits received
  - XIII. Prices of food substitutes and complements
  - XIV. Total non-food expenditures, by category (e.g., housing, medical, clothing)
  - XV. Identification of population subgroups (e.g., SNAP households, non-participating low-income households, and higher-income households)
- Assess levels of food security of the population universe and subgroups using the 30-day, adult food security measure.
    - I. Reported food security status
    - II. Characterization of food security status by population subgroups (e.g., SNAP households, non-participating low-income households, and higher-income households) and detailed demographic information
  - Assess levels of knowledge about diet, nutrition and health, and their relationships to acquired foods.
    - I. Reported knowledge about diet, nutrition, and health
    - II. Characterization of knowledge by population subgroups (e.g., SNAP households, non-participating low-income households, and higher-income households) and detailed demographic information
    - III. Characterization of the nutritional quality of items purchased or otherwise acquired
  - Assess why food purchase and food security outcomes differ for SNAP participants and low-income non-participants and identify the factors that account for those differences.
    - I. All of the above plus knowledge on diet, nutrition, and health

This matrix will be referenced in the first paragraph under Section A2, as indicated below. The matrix will be included in the OMB submission as Appendix B with all subsequent appendices renumbered.

## **A2. Purpose and Use of the Information**

The full-scale 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, assets, major categories of nonfood expenditures, food security, health status (including heights and weights), and dietary knowledge. This survey will

provide ERS with a comprehensive database to support the analysis of a wide variety of research questions, including patterns of shopping behavior and food choice; the influence of access and retailer choice on dietary quality; the magnitudes of income and price elasticities of demand for food; the influence of dietary knowledge on purchase patterns and food choice; the relationship between food acquisition patterns and levels of food security; and differences in food acquisition patterns for SNAP households and low-income households not participating in SNAP. Appendix B shows the relationship of collected data to each research question.

ERS is requesting permission to conduct a 400-case methodological field test of data collection procedures in preparation for carrying out the full-scale survey in 2012. [continue with next paragraph]

## Appendix B. Relationship of Collected Data to Study Objectives and Research Questions

Study Objective/Research Question	Data Source
<b>1. Describe the food and beverage purchases and acquisition patterns of the population universe and subgroups.</b>	
a. What food items do household members acquire from the following sources:	
i. Purchase from food retailers primarily for preparation and consumption <i>at home</i> (FAH), and	Food booklet, scanner data
ii. Purchase of prepared foods and beverages from food service establishments (e.g., restaurants, cafeterias, and vending machines primarily for consumption <i>away from home</i> (FAFH) (e.g., meals at restaurants, unsubsidized school meals, snacks or beverages from vending machines)?	Food booklets, telephone reporting of foods-away-from-home
b. What are the quantities and purchase prices (or implicit values) of the above foods, snacks, and meals?	<p>For food-at-home, the scanner captures item quantities and scanned barcodes are mapped to item package sizes. Prices are added from Nielsen price files, receipts, or imputed values.</p> <p>For food-away-from-home, quantities and prices are recorded in food booklets and/or indicated on receipts and reported during the telephone reporting of food-away-from-home.</p>
c. What non-priced food items do household members acquire for consumption either at home or away from home? What are the quantities and sources (e.g., food pantries, emergency kitchens, Meals-on-Wheels, home gardens or farms, fishing and hunting trips, gifts, compensation for work, meals at the homes of family or friends) of these foods and beverages?	<p>For food-at-home, the scanner captures items and quantities, and the source is recorded in the food book (blue page).</p> <p>For food-away-from-home, items and quantities are recorded in food booklets and reported during the telephone reporting of food-away-from-home.</p>
d. How are these foods characterized in terms of food groups and subgroups (including units of USDA food pyramid groups: grains, vegetables, fruits, milk, meat and beans, oils)?	Mathematica will map UPCs and food-away-from-home acquisitions to food groups, utilizing the food groupings in the UPC data dictionary and building on food group schema developed on other projects to apply to USDA food codes.
e. For each household member, what purchase/acquisition occasions occur during each day of the reporting period?	Acquisitions will be reported in food booklets (Daily Lists, Blue pages, Red Pages).

Study Objective/Research Question	Data Source
<p>f. For each household member (or guest), what meals and snacks (i.e., breakfast, morning snack, lunch, afternoon snack, dinner, evening snack, and other) are consumed each day of the reporting period?</p> <p>g. For questions <i>a</i> through <i>f</i> above, how do the food acquisition patterns vary by population group (e.g., SNAP households, nonparticipating low-income households, and higher-income households)?</p>	<p>Meals and snacks will be reported on the Meals and Snacks Form.</p>
<p>h. How do food acquisition patterns (e.g., days of week when household members obtain subsidized school lunches) and funding sources (e.g., cash, credit, SNAP benefits via EBT card, WIC food instruments) for purchased items vary throughout the month in relationship to when program benefits and/or other income are received?</p>	<p>Food booklets capture total purchase amount and funding source, and receipts will be used to fill missing data and for quality control. Timing of food assistance benefit receipt is asked during Household Interview #1 and confirmed by SNAP administrative data.</p>
<p>i. What are average weekly food expenditures? What share of average weekly household expenditures do food costs represent? How are weekly food expenditures allocated across food groups and subgroups? How do these measures vary by population group?</p>	<p>Average weekly food expenditures will be calculated from information reported in food booklets for FAH and FAFH, overall and by food group and subgroup. Average weekly non-food expenditures will be calculated from information collected in Household Interview #2.</p>
<p><b>2. Characterize the nutritional quality of households' food purchases and acquired food.</b></p>	
<p>a. Considering all sources of food acquisition, characterize the food choices and nutritional quality of households' acquired foods. What are the differences in USDA pyramid food group units and nutritional quality between food purchased primarily for at home (FAH) versus away from home (FAFH) consumption?</p>	<p>Acquired food items will be matched with nutrient data from USDA's Standard Referent Database (SR21). MyPyramid units will be merged by SR21 food codes.</p>
<p>b. How do these measures vary by population group (e.g., SNAP households, nonparticipating low-income households, and higher-income households)?</p>	<p>Above analyses by population group.<sup>1</sup></p>
<p><b>3. Characterize the nature of food access of the population universe and groups.</b></p>	
<p>a. Where do respondents shop for food (type of source/vendor and geographic proximity to household), and how do decisions about where to shop vary by household characteristics? How do decisions about where to shop vary by time of month relative to program issuance dates and/or pay dates? Do shopping choices of population groups vary and, if so, how?</p>	<p>FAH shopping locations are reported in the food books (Daily List and Blue pages) and observed on receipts. The exact location of usual shopping locations is also collected during Household Interview #1.</p> <p>FAFH locations are reported in food books (Daily List and Red pages) and reported and confirmed during telephone interviews. Proximity is based on calculated driving distance.</p> <p>Timing of food assistance benefit receipt is asked during Household Interview #1 and confirmed by SNAP administrative data.</p>
<p>b. How long does it take for shoppers to travel to their main food stores? What mode(s) of transport do they use? What costs (time and out-of-pocket) do households in the sample incur when they shop for food?</p>	<p>Household interview #1 includes questions about usual shopping behavior and modes of transport.</p>



Study Objective/Research Question	Data Source
<p>c. For both SNAP participants and nonparticipants, in what other food assistance programs do they and household members participate (e.g., WIC, school meals, snacks or meals in daycare, after-school programs, Food Distribution Program on Indian Reservations (FDPIR), Commodity Supplemental Food Program (CSFP), food kitchens, and food pantries), and with what frequency? What is the relationship of program participation to decisions regarding the source of food purchases?</p> <p>d. What are the characteristics of food outlets that are available to survey respondents? Do these characteristics (e.g., location, type of store, and availability of nutritious foods) vary by population group?</p>	<p>Household interview #1 includes questions about program participation, shopping behavior, and food access. Actual shopping destinations are reported in food books.</p> <p>The final database for the National Food Study will include characteristics of food outlets within proximity to each survey respondent. These characteristics will be provided in summary form (counts of retailers by type) after identifying retailers within certain radii of each survey respondent using a commercial directory of food stores and eating places loaded in mapping software.</p>
<p><b>4. Estimate the influence of income and prices on food purchases, including, to the extent feasible, income, own-price, and cross-price elasticities for purchased food items (both at home and away.)</b></p>	
<p>a. For the sample population as a whole, what are the income and price elasticities of major food categories and subcategories?</p> <p>b. How do the estimated elasticities above vary across SNAP participants, nonparticipating low-income households, and higher-income households?</p>	<p>Elasticities of demand for food can be estimated using: household income reported in Household Interview #2; FAH prices obtained from Nielsen data, receipts, or imputed; FAFH prices reported in telephone interviews, obtained from receipts, or imputed.</p>
<p><b>5. Assess levels of food security of the population universe and subgroups using the 30-day, adult food security measure.</b></p>	
<p>a. To what extent do levels of food security vary across different food acquisition patterns? For instance, do households that have lower levels of food security also have a higher propensity to obtain foods and prepared meals from friends or relatives?</p> <p>b. To what extent do levels of food security relate to measures of current food expenditures, program participation, access to and utilization of various types of stores, and frequency of food shopping?</p> <p>c. How do levels of food security vary among the population groups: SNAP participants, nonparticipating low-income households, and higher-income households?</p>	<p>Household Interview #3 includes the food security module. Sources of food are identified in food booklets.</p> <p>Household Interview #3 includes food security. Food expenditures and shopping frequency are derived from FAH and FAFH records. Household Interview #1 includes program participation. Food store access is derived from household and retailer locations in proximity to respondents.</p>
<p><b>6. Assess levels of knowledge about diet, nutrition, and health.</b></p>	
<p>a. What do responding households know about diet, nutrition, and health? What are the relationships between respondents' knowledge and the foods they purchase or otherwise acquire? To what extent do relationships between knowledge and food acquisition patterns vary by population group?</p>	<p>Household Interview #3 includes questions about diet, nutrition, and health knowledge.</p>
<p><b>7. Assess why food purchase and food security outcomes differ for SNAP participants and low-income nonparticipants, and identify the factors that account for those differences.</b></p>	

Study Objective/Research Question	Data Source
a. What are the roles of a household’s current socioeconomic characteristics, such as current income and current household structure?	Household Interview #1 will ask about household structure (household roster), and recent changes in composition;
b. What other dynamic factors at the household level might affect outcomes, including the role of income volatility and recent or unexpected household events, such as changes in household composition and changes in employment status?	Household Interview #2 will ask about current household income.
c. What are the roles of other broad components of household expenditures (e.g., medical expenses or housing costs) that might be large relative to those of other households of similar income or to the household’s past expenditure patterns?	Household Interview #3 includes questions about major life events (dynamic factors). Household Interview #2 includes questions about non-food household expenditures.

<sup>1</sup> Analyses by “population group” will compare SNAP participants with low-income and higher-income nonparticipants.

## Comment 2: Relevance of Existing Data

A number of databases exist which contain data relevant to the research objectives above. 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 the research community.

### *Consumer Expenditure Survey (CE)*

Despite the large amount of information on household expenditures, the CE has a number of limitations for ERS research needs:

- The Diary Survey does not capture information on prices and quantities—data elements that are needed to estimate price elasticities.
- Food item detail is limited to about 100 food categories and subcategories. This is sufficient for some program and policy analyses but is limiting for analyses of food quality and/or nutrient content.
- Food assistance program participation and benefits are severely under-reported. Myers and Sullivan (Dec. 2008) estimate that the 2006-7 CE captures only 38 percent of food stamp benefits, and the estimates have been getting progressively worse over time.
- Food expenditures reported by SNAP participants appear to often count only purchases with money and exclude those made with SNAP benefits. Thus, one cannot reliably estimate the effect of program benefits on food purchases.
- The CE does not over sample the low-income population.
- The CE does not measure free food acquired by the households from pantries, gifts, or donations, and school meals are not carefully measured.
- Purchases of food away from home do not assess quality, quantity, prices, or nutrient content.
- The Diary Survey does not include information on expenditures of many large nonfood expenditures--such as rent, utilities, and health care--that are typically captured in the

Quarterly Interview Survey (a different sample). Thus, one cannot estimate the impact of unexpected medical or housing costs on food item spending.

#### *Survey of Income and Program Participation (SIPP)*

- The main objectives of the SIPP are to collect information on: income by source; employment; program participation and eligibility; and general demographic characteristics.
- Variables include labor force behavior; income; participation in public programs; basic demographic characteristics; living arrangements; food adequacy or abbreviated food security module; participation at the individual level in the SNAP and WIC programs; and participation at the household level in the free, reduced-price, and full-price categories of the National School Lunch Program and School Breakfast Program.
- 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. Panel members report the details of each food shopping occasion at a wide variety of store types, including traditional food stores, nontraditional food retailers (such as supercenters, warehouse clubs, and dollar stores), and online merchants. The strength of these data collection efforts is that they collect extremely detailed information about purchased food items and prices. Limitations include:

- They rely on convenience samples, reducing the generalizability of their results;
- Information may not be collected on food items without barcodes (e.g., deli items, fresh produce, bake shop items);
- No information is collected on food acquired away from home;
- The survey does not oversample low-income households;
- Information on household participation in SNAP is collected only once per year; and
- The data are proprietary, and ERS use and dissemination of the data would be subject to the terms and the conditions of the purchase contract.

#### *Food Security Data Information*

ERS plays a leading role in Federal research on food security and hunger in U.S. households and communities. USDA has developed a standardized survey module for assessing food security status. This module is included on a number of national surveys, the most prominent of which is the Current Population Survey of the U.S. Census Bureau.

- In order to explore the relationship between household food security and patterns of food acquisition, both sets of information need to be collected from the same households at the same time, and no existing surveys do this.

### *National Food Stamp Program Survey (NFSPS)*

The NFSPS was conducted in 1996 by the Food and Nutrition Service, U.S. Department of Agriculture. The survey 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. In addition, information on dietary knowledge and attitudes and a 7-day household food use record was collected from a subsample of 1,000 of these households. Approximately 1,000 *non-participants* were contacted through random digit dial sampling to gather information on their experiences with the FSP and their reasons for nonparticipation.

- One major limitation of the NFSPS is that it primarily addressed only Food Stamp participants and did not include food information about other portions of the population.
- A second major limitation is that the data were collected about 15 years ago. Many important factors affecting household food acquisition decisions have changed since the data were collected. In particular, the data were collected prior to updated dietary standards and emphasis on “healthy eating”; household food acquisition patterns are changing, especially toward more food-away-from-home; and the food market environment has changed with larger numbers of both “dollar stores” and “supercenters.”

### *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. A major objective of the survey's nutrition component is to provide data for nutrition monitoring purposes, including tracking nutrition, identifying risk factors related to food insecurity, and estimating the prevalence of compromised nutritional status. A second major objective is to provide information for studying the relationships among diet, nutritional status, and health.

Although ERS participates in the NHANES and expects the data to be valuable for many research questions, NHANES primary focus is individual food intake. Information about household food purchases and other relevant economic data are limited.

### *School Nutrition Dietary Assessment (SNDA) Surveys*

The Food and Nutrition Service (FNS) of USDA has sponsored three rounds of a survey to provide up-to-date information on the school meal programs, the school environments that affect the food programs, the nutrient content of school meals, and the contributions of school meals to children's diets. The most recent survey, SNDA-III, was conducted during

the second half of school year 2004-2005 and included surveys of School Food Authorities (SFAs), individual schools within SFAs, and individual students within schools.

- The SNDA surveys collect no information on other food acquisition choices or on prices and quantities of acquired food.

#### *Panel Study of Income Dynamics (PSID)*

- The PSID, begun in 1968, is a longitudinal study of a representative sample of U.S. individuals (men, women, and children) and the family units in which they reside. It emphasizes the dynamic aspects of economic and demographic behavior, but its content is broad, including sociological and psychological measures. The strength of the PSID lies in its panel structure and duration.
- Its major weakness is that, like SIPP, it collects no detailed information on food purchases, rendering it of limited value for the research needs described in this solicitation.

#### *NPD Consumer Reports on Eating Share Trends (CREST)*

The NPD CREST dataset is a proprietary database collected and maintained by NPD Group, Inc. CREST tracks purchases in the commercial restaurant industry, as well as ready-to-eat foods/beverages purchased from other retail establishments such as convenience and food stores. The CREST dataset comprises a convenience sample of panelists that is geographically balanced across the nine census regions given census demographics. Panelists provide demographic and socio-economic information along with information regarding “yesterday’s” consumption of food away from home (FAFH). The information includes meal occasion, number of people in party, expenditures per meal or snack (total bill without tip), characteristics of the facility at which food was consumed, and use of promotional media.

The CREST data have the strength of providing somewhat detailed information on a component of food acquisition that is often overlooked in other data collections. Being a specialized data product, however, the database lacks information that is important for USDA research, especially:

- 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.

There are also some limitations on the FAFH data that are collected, including what products are purchased in what quantities and their nutritional value.

### **Comment 3: Modified Procedures and Mid-Course Adjustment Plans**

The June/July pre-tests were conducted after completion of cognitive testing of the food acquisition instruments with 16 households. The cognitive tests led to significant changes in data collection instruments and protocols for training households to use those instruments. The pre-test with 6 households allowed us to test the full study protocol and obtain burden estimates. Few changes to instruments were indicated from the pre-tests.

The development of the food reporting instruments was guided by two goals: (a) to provide flexibility so that respondents could use instruments in a way that worked for them, and (b) to include some amount of redundancy in an effort to minimize data loss. The instruments are flexible in two respects:

- Respondents may use a Blue or Red page to report an acquisition if it is unclear where to categorize the acquisition. Types of acquisition will be recoded during data processing to achieve a consistent coding of acquisitions across all respondents. The Blue and Red pages were designed to collect nearly identical data, and information that is “lost” through use of the “wrong” form can be retrieved from receipts.
- The multiple book protocol is designed to give a food booklet to each household member age 11 and older, so that each person records their own food acquisitions. Respondents are trained to use these food booklets in a way that works for them – combining acquisitions of multiple household members in a single food book if it is easier to do so.

The instruments also provide redundancy: items acquired for food-at-home (FAH) are identified on both the scanner and receipt; location of food acquisition and tender type are identified on both the Blue page and receipt; information about food-away-from-home acquisitions is collected via receipts and Red pages, which are used as a recall aid for telephone reporting. Redundancy results from use of multiple modes designed to minimize respondent burden and data processing costs. For example, respondents can report FAFH acquisitions during the telephone interviews by reading information off receipts, this minimizes burden because they do not need to write all food items on the Red page if they saved the receipt.

Because the data collection protocols rely on scanned barcodes and receipts to ensure complete and accurate data, it is not possible to test data quality without a large sample of varied food acquisitions. The FoodAPS field test is being run to test the quality of data obtained from these protocols. While it is true that the field test will include tests of two survey protocols and two incentive levels, we expect the survey protocols (single versus multiple book) to affect response of individual household members, and we expect the incentive levels to affect overall household response. The two survey protocols use the same forms and procedures (save receipts and scan groceries) so that we do not expect the two protocols to affect the quality of data collected beyond the affect on completeness resulting from household member response.

Pages 17, 18, and 19 of the pilot study report identified the following issues during the pre-test:

1. Did respondents alter their normal pattern of food acquisition during the study week?

Researchers had suspicions of altered behavior because of high variability of FAFH during the week. All respondents were debriefed and asked if they altered behavior and all said that they did not. A pre-test sample of even nine households would be too small to analyze food acquisitions patterns during the study week, holding day of week and time of month constant (absolute and relative to SNAP disbursement). One of the purposes of the field test is to obtain a large sample for examining this question.

2. Were there differences in data quality between the simple (single book) and comprehensive (multiple book) versions?

There appeared to be little difference in data quality across survey protocols. One household assigned to the multiple book protocol used the instruments according to a single book protocol, but the sample was not large enough to determine that the single book is preferred and would yield higher response. The field test will provide this information.

3. Did household members “take the easy way out” and report no food acquisitions every day to get the incentive?

There was some concern that some household members simply checked “nothing to report” at the top of the Daily List form each day to indicate participation. Instruments were revised following the pre-test to remove this checkbox so that there would be no reminder of this “easy way out.”

4. We realized that we need to provide greater clarification to households about what qualifies them for the call-in bonus.

Survey instruments were revised to indicate that “if you do not call us, you will not receive the telephone bonus.” We set the criteria that a household will receive the telephone bonus if they complete all three telephone calls and at least two of the three calls are “call-ins.”

**Mid-course adjustments:** The survey will be monitored closely during the field period to determine if mid-course adjustments are needed. Because we have designed the food reporting protocols to be flexible and somewhat redundant, we anticipate that changes will most likely be indicated for (a) training of respondents to use the food reporting instruments, and (b) amount of contact with respondents. However, changes to instruments may also be indicated and we will plan for this with limited print runs of the initial survey instruments.

Respondents will be trained to use the food reporting instruments during the first field interviewer visit. We have planned for mid-week re-training of respondents, if needed, by telephone interviewers who will be trained to use the food reporting instruments and will

practice by using these instruments themselves for one-week prior to the field test. Telephone interviewers must understand the instruments so that they can collect information during the telephone reporting phone calls; this training also allows them to re-train respondents as needed if a respondent is having trouble during the week. Telephone interviewers also have call logs to note problems that respondents are having, thereby notifying the telephone supervisor who will determine whether or not to authorize a field visit to an individual household.

The field test will also be monitored weekly at the aggregate level, through statistics on: screening rates, response rates, length of each interview, number of missed food reporting telephone interviews, length of the food reporting telephone interviews, number of field interviewer visits to households in mid-week, and number of household members participating. Every week, we will process the scanner files to examine the average number of “places” reported and the average number of items scanned per place. These indicators will tell us whether or not the target response rates are being met and whether respondents are having trouble with protocols (missed or lengthy phone calls to report food acquisitions; less scanner data than expected). Failure to achieve adequate response rates may require retraining of screening procedures. Indicators that respondents are having problems will be further investigated through examination of the telephone reporting call notes and supervisor monitoring of calls to detect issues that can be addressed with changes in field training of respondents. The field test has budgeted for extra household visits by field interviewers for 10 percent of households.

**Assuring Data Quality with Additional Staff Training:** During our discussions, OMB suggested that an additional pre-test could be conducted by asking field and telephone interviewers to follow the food reporting data collection protocols for one-week after training and prior to the field period, with Cambridge research staff conducting one telephone food reporting call with each FI. This protocol would serve two purposes:

- Research staff will learn about problems and questions that interviewers encounter with the data collection protocols prior to the start of the field period.
- Interviewers will gain additional knowledge of the data collection protocols, thereby increasing their effectiveness during the field period.

This additional pre-test of the food reporting instruments will provide information to make adjustments in the training scripts that FIs use for training households, and/or adjustments in the protocols for the food reporting telephone interviews. Changes to instruments may also be indicated by we will document those indications and assess them together with the results of the 50-case assessment at the start of the field period, which is described below.

We propose to adopt this additional pre-test, with one modification. Mathematica has suggested that that FIs receive a brief 2-hour training one-week in advance of the full field interviewer training. The 2-hour training will mimic the training that FIs provide to respondents; training time is longer than planned for respondents because FIs will be trained in a group



setting and the Q&A time in a group setting is longer than in an individual setting. After training, FIs will follow the food reporting data collection protocols for on-week, and arrive at the full training with background, knowledge, and questions about the food reporting protocols. This addition is tantamount to changing the scope of the contract and must therefore be approved by USDA Contract Office. The adoption of this pre-test will require additional funds which must be also approved by ERS, and will be subject to availability of funds. If this suggestion is acceptable, ERS will request a price quote from MPR.

Our proposed schedule for including the interviewer pre-test is:

- Jan 10-11: Provide multiple 2-hour training sessions for groups of field and telephone interviewers, consistent with the plans for respondent training.
- Jan 10-16: Interviewers track food acquisitions in food booklets
- Jan 12-14: Mathematica research staff will conduct a “food reporting call” with interviewers. The number of days of food acquisitions reported in this call will range from 2 to 4 depending on the timing of the call.
- Jan 17-18: Telephone Interviewer Training (includes debriefing on food reporting)
- Jan 19-21: Field Interviewer Training (includes debriefing on food reporting)
- Jan 26: Start of Field Test

Following the Jan 17-21 training sessions, Mathematica will compile a memo to ERS describing the interviewer pre-test and debriefing. This memo will be based on manual review of food booklets and will report: counts of food events with and without receipts, comparison of scanner data with receipts for a sample of households, percentage of additional household members that participated, and reported problems or suggestions for improvements voiced by the interviewers who used the food booklets. These items are shown in Table 1. The data collected in food booklets after the time of the telephone reporting call will not be entered into a database for analysis, but these data will be assessed through manual review and manual coding of the information needed to fill Table 1.<sup>6</sup>

**Assuring Data Quality with a Sequential Field Test:** One suggestion that was voiced by the TWG and raised by OMB is sequential pre-tests. OMB suggested that sequential testing of the data collection protocols could be achieved within the field test by imposing discrete stopping points at which we would assess data quality and make adjustments to the data collection protocols. As discussed above, Mathematica has developed a reporting system for weekly monitoring of field activities and data collections. Stopping and starting field activities imposes significant risks including the loss of trained field interviewers and unintended changes in FI administration of the data collection protocols after breaks from field activities.

Because of the risks to stopping field activities, we suggest imposing a discrete “stopping point” at which time we will analyze data collected thus far without halting field activities. Analysis would include examination of all of the regularly monitored items, plus analysis of scanned data

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<sup>6</sup> Telephone interviewers will enter their own information into the reporting system as a practice exercise during and after the Jan 17-18 training.

**Table 1. Measures for Assessing the Pre-Test with Interviewers (New)**

Metric	Interviewers with Single-Binder	Interviewers with Multiple Booklets
<b>Measures of Participation and Burden</b>		
Percentage of all household members participating in survey		
Percentage of respondents that completed all seven Daily List pages		
Average length of food reporting telephone calls?		
Percentage of respondents with any non-scanned items written on Blue pages		
Average number of items per household scanned from the Barcode Book		
Average number of FAH acquisitions per household		
Average number of FAFH acquisitions (per adult male equivalent)		
<b>Measures of Compliance with Survey Protocols</b>		
Do respondents save receipts?		
• % of all FAH purchases with a saved receipt		
• % of all FAFH purchases with a saved receipt		
Do respondents scan and record FAH items?		
• % of FAH items listed on receipts that are scanned or recorded on Blue page		
Percentage of Blue Page questions with missing response (item nonresponse)		
Percentage of FAH acquisitions with missing PLACE delimiter in scanner file		
Percentage of households with completed Meals and Snacks Forms; percentage with nonresponse for some household members		
<b>Reported Problems with Survey Protocols</b>		
Percentage of respondents requiring scanner retraining during telephone call		
Percentage of respondents requiring food booklet retraining during telephone call		
Percentage of respondents who said they changed food acquisition behavior because they had to keep track of acquisitions (Asked by anonymous postcard survey administered at the full training)		
Respondent rating of survey protocol on a 5-point scale from easy to difficult (Asked by anonymous postcard survey administered at the full training)		

and quality control reviews of completed food booklets. We will report on the same measures assessed after the pre-test with interviews (with the exception of the last two items in Table 1). And we will examine food patterns during the data collection week, with the measures listed in Table 2.

The timing of this initial assessment of data quality is important because SNAP households will comprise half of the sample, and their food acquisitions vary throughout the month relative to the SNAP benefit disbursement date. New Jersey SNAP issues benefits over the first 5 days of the month. With the field period beginning on January 26, SNAP households recruited to begin data collection on January 26-28 (with their weeks ending on February 1-4) will be observed in their last week of the SNAP issuance month and with no large FAH acquisitions. Thus we propose the following schedule:

- January 26 - Field interviewers begin data collection
- January 29 – February 4 = start dates for household data collection weeks for the 50 cases that we will analyze
- February 10 – Dump data for analysis of 50 cases
- Week of February 14 – analyze 50 cases

By the time we complete analysis on Feb 21, we can expect to have a total of 150 to 200 completes. Thus any changes to survey protocols may require a brief stop in field activities to ensure that changes in protocols are implemented for at least half of the field test cases.

**Table 2. Assessment of Data Quality after Obtaining 50 Completed Cases in the Field Test**

Question / Issue	Measure	Where and when to make assessment
Did respondents alter their normal pattern of food acquisition over the course of the study week	Run regressions on household level data: Household food acquisitions (\$) per adult male equivalent as a function of <ul style="list-style-type: none"> <li>• Day of week (Mon-Sun)</li> <li>• Days since start of reporting week</li> <li>• Days since SNAP disbursement</li> <li>• Household characteristics</li> </ul> Compare the coefficients on the days of the study week to determine if behavior changes over the course of the week.	1) 50-case assessment 2) End of Field Test
Were there differences in data quality between the simple (single book) and comprehensive (multiple book) versions?	Examine between group differences for all measures in Table 3, for groups defined by single binder and multiple booklet protocols.	1) 50-case assessment 2) End of Field Test
Does food acquisition data match typical behavior reported by households in Household Interview #1?	Compare FAH place with “Where (do you/does your household) do most of your food shopping? (HHint#1)”  Compare number of FAFH events per household member with  How many times (do you / does NAME) eat dinner out during an average week?  If HHSIZE>1: How many times do you eat dinner out as a group during an average week?	1) 50-case assessment 2) End of Field Test
Does the survey protocol (single binder versus multiple booklet) affect reporting by other household members?	Run regressions on person level data: Number of FAFH events as a function of <ul style="list-style-type: none"> <li>• Survey protocol</li> <li>• Indicator for main respondent</li> <li>• Age</li> <li>• Gender</li> <li>• Day of week</li> <li>• Days since start of reporting week</li> <li>• Household characteristics</li> </ul>	1) 50-case assessment 2) End of Field Test

These reviews could lead to changes in the following protocols:

1. FI scripts for training respondents
2. Protocols for food reporting telephone interviews
3. Number of field interview visits to the household
4. Number and timing of food reporting telephone interviews
5. Content of data collection instruments

The additional round of analysis and reporting is also tantamount to changing the scope of the contract and would impose additional costs, which will be subject to availability of funds. The first and second type of change would require minimal retraining costs for field or telephone staff (changes for field staff would be distributed to team leaders who would train their team). The third and fourth type of change would impose additional data collection costs which would be evaluated at the time that the data analysis is reported to ERS. We suggest adopting this strategy, including number 1 and 2 above. If this suggestion is acceptable, ERS will request a quote from Mathematica.

#### **Comment 4: Summary of Tests and the Associated Performance Metrics**

Our estimates of design effects for the entire study were based on a 2 stage sample design, assuming a maximum ICC of 0.05. Our sample, however, uses a 3 stage design, where SSUs are clustered within PSUs and households within SSUs. In estimating the design effect for this design we must assume (?) values for ICCA and ICCB where ICCA is the within PSU correlation among the SSUs and ICCB is the within SSU correlation among households. We estimate that a value of 0.30 of ICCB with 8 SSUs per PSU would be unlikely to lead to a design effect greater than a 2 stage design with an ICC of 0.05.

The estimate of the ICC will be quite variable. Its variability is a function of the number of variables over which it is estimated. We will select 15 to 30 measures and estimate the ICC for each. Here are some examples:

- Number of FAH and FAFH transactions and total # food acquisitions
- Dollar amount spent on FAH and FAFH, and total spent on food
- Percent of FAH spent at supermarkets
- Percent of FAFH spent on fast food
- Percent of FAH spent on fruits & vegetables (and other food groups)
- Percent of households that are food insecure
- Distribution of households by measures of nutrition knowledge
- Percent of households residing within 1 mile of supermarket

Rather than computing a confidence interval (which even with exact tests might be wide) or conducting a statistical test of a hypothesis, we will examine the distribution of the ICCs over the selected variables. If the sample median ICC is 0.30 or above we will either increase the number of SSUs for the main study or enlarge the size of the SSUs from Block Groups to Census tracts.

Table 3 summarizes the Field Test Performance Measures, that are the outcomes by which we will evaluate whether modifications are needed to the study design. The first column specifies the outcomes. The second column presents our criteria, which are minimum acceptable values except in the case of the intracluster correlation, which is a maximum. The other four columns

present ranges of minimum detectable differences (MDDs). An MDD is the smallest difference that the sample can be expected to detect for a specified level of power (the probability of detecting the difference).

The MDDs in Table 3 are based on 80 percent power and a 95 percent confidence level. However the third and fourth columns are based on a 1 tailed test while the MDDs in the fifth and sixth columns are based on a 2 tailed test. For example the MDD in the 3rd column for Percentage of sampled households that agree to screening is 3.9. Column 3 is based on a low design effect of clustering. So if the design effect is low (ICC = 0.01) the sample has an 80 percent probability of detecting as statistically significant a propensity to cooperate that is at least 3.9 percentage points less than the minimum acceptable screening cooperation rate of 70 percent. Similarly, with the low design effect of clustering there would be an 80% probability of detecting a difference of at least 7.6 percentage points in the screening rate between households assigned to the two incentive levels.

### **Weighting the Field Test Data**

For analysis of the field test data, it is appropriate that each PSU be given equal weight. We note that if the 2 field test PSUs had been selected with PPS, as the PSUs for the main study have been, the sums of the analysis weights for the households in each would be approximately equal (the composite MOS and non-response adjustments would introduce some differences). Within PSUs the field test analysis weights will adjust for differences in probability of selection and propensities to respond.

The field test weights will have 4 components:

- 1) The first component of a household's weight will be the inverse of its probability of selection. We will calculate the probabilities of selection for each household as the product of the selection probabilities of the SSU to which it belongs and the address at which it resides.
- 2) The next component will be a non-response adjustment that will be calculated separately within PSU for each frame: SNAP addresses and the ABS frame for non-SNAP households. Before constructing the weights we will use logistic regression models to determine if other factors should be used in adjusting for non-response, and whether a 2 stage adjustment (screening non-response and non-response occurring after screening).
- 3) The non response adjusted weights will be examined to determine if trimming is appropriate and if so, the weights will be trimmed, using the PSUs as the main trimming cells.
- 4) The weights will be scaled so that the sums of the weights are the same for each PSU.

**Table 3. Performance Measures and Metrics Being Tested By the FoodAPS Field Test**

Metric	Minimum Detectable Differences (MDD) in Percentage Points				
	Minimum acceptable value <sup>a</sup>	Overall <sup>b</sup> Low <sup>c</sup>	Overall <sup>b</sup> High <sup>c</sup>	Between Groups <sup>d</sup> Low <sup>c</sup>	Between Groups <sup>d</sup> High <sup>c</sup>
<b>Sampling</b>					
Intra Cluster correlation at SSU level	0.3	NA	NA	NA	NA
Percentage of adjacent addresses in sampling frame [Measure of frame completeness]	80%	3.3	5.9	NA	NA
<b>Response rates</b>					
Percentage of sampled households that agree to screening	70%	3.9	6.9	7.6	11.8
Percentage of eligible households that agree to participate (complete training and Household Interview #1)	80%	5.1	7.1	10.8	13.3
Percentage of eligible households that complete all components of data collection	70%	5.8	8.1	12.4	15.2
Percentage of all members of participating households that participate in survey	85%	4.6	6.3	9.6	11.8
<b>Validation of Survey Responses through Data Matching</b>					
Percentage of survey respondents accurately reporting SNAP participation (validated by match with SNAP caseload) <sup>e</sup>	NA	NA	NA	NA	NA
<b>Adherence to Survey Protocols</b>					
Do respondents complete telephone calls for food reporting?					
• % of all calls that are incoming	75%	5.5	7.6	11.6	14.3
• Number of completed calls as a percentage of expected calls	75%	5.5	7.6	11.6	14.3
Do respondents save receipts?					
• % of all FAH purchases with a saved receipt	80%	4.9	6.9	10.2	12.8
Do respondents scan and record FAH items?					
• % of all FAH items listed on receipts that are scanned or recorded	90%	3.6	5.2	7.6	9.6
<b>Match of FAH Data Items with Full Item Description and Price<sup>b</sup></b>					
Percentage of all FAH items matched with UPC data dictionary	90%	3.6	5.2	7.6	9.6
Percentage of all FAH items with price matched from Nielsen data or store receipts	90%	3.6	5.2	7.6	9.6

NOTES: NA = not applicable. SNAP participation will be validated for the full-scale survey, regardless of the findings of the pre-test. <sup>a</sup> For ICC the Value is the Maximum Acceptable. <sup>b</sup> Overall MDD is based on a one -tail test, 80% power and 95% confidence; it is based on the null hypothesis that the population value is at least the minimum. <sup>c</sup> Low is based on an ICC of 0.01 and High on an ICC of 0.05 (conservative for measures such as these). <sup>d</sup> Between Group MDD is based on a two -tail test, 80% power and 95% confidence; it is based on the null hypothesis that the difference between 2 groups of equal size is zero. <sup>e</sup> MDDs are not provided for the validation of reported SNAP participation with administrative data because this validation is used primarily to revise our sample allocation among the SNAP and non-SNAP strata.

## Comment 5: Low Incentives

OMB indicated that the base incentives may be too low given the burden of a one-week data collection and they expressed concern with the staggered plans for distributing incentives to households (base incentives at the end of the data collection week, with the telephone bonus and additional gift cards distributed by mail four to six weeks later). OMB also requested that we obtain additional expert consultation from Dr. Geraldine Mooney at Mathematica Policy Research.

The original low and high incentive structures provide a base incentive of \$50 / \$100 (low / high groups); a telephone bonus of \$25 if the household initiates all three food reporting calls; and an incentive of \$20 / \$25 (low / high) for additional household members over age 5. The maximum incentive for a one-person household is \$75 under the low incentive scheme and \$125 under the high incentive scheme. The average maximum household incentive, considering household size, is \$97 and \$152 for the low and high incentive groups, respectively.

The incentive structure was developed to meet the burden of three 30-minute interviews, tracking food acquisitions, and reporting food acquisitions three times in a 15-minute telephone call. The burden of reporting food acquisitions was based on estimates of the average number of FAH and FAFH acquisitions. Burden is not based on seven days of reporting because, while foods are consumed every day, they are not necessarily acquired every day. The incentive structure was developed prior to the development of a one-hour respondent training session during the first field interviewer visit. This training adds significant burden, thus we agree with OMB that the low incentive level is too low to compensate households for the lengthy initial household visit in addition to other data collection activities.

After initial discussions with OMB we made the following changes to the incentive structure:<sup>7</sup>

- Timing of providing gift cards to households – all incentives will be provided to the household at the end of the data collection week during the field interviewer’s final visit.
- Eliminated eligibility for “additional household member” incentive for children under age 11. This incentive is designed to motivate additional members to provide information. Children under age 11 are not expected to acquire food on their own, aside from school lunches.
- Revised the amounts of “additional household member” incentives: All children age 11-14 receive a \$10 gift card; persons age 15 and older (except for the main respondent) receive a \$20 gift card, with no difference for the low and high incentive groups.

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<sup>7</sup> OMB suggested a lower base incentive for one-person households to reflect their expected lower burden. We did not adopt this suggestion because there is no evidence that the burden is lower – one-person households may have more food away from home acquisitions, compared to larger households.



- Revised the structure of telephone bonus: provide this bonus on a per call basis as \$10 /call.

These changes increase the value of the telephone incentive by \$5 per household, and reduce the incentive based on household size by eliminating the payment for household members under age 11. These changes also eliminate the differential incentive for additional household members in the low and high incentive groups.

We simulated the average maximum household incentive using the SNAP quality control data for New Jersey to account for household size and age-group composition. The average maximum household incentive for the low and high incentive groups before and after the changes in the incentive scheme are:

- Original average incentives: \$98 / \$154 for low and high incentive groups
- Revised average incentives: \$88 / \$138 for low and high incentive groups

The revised incentive structure was discussed with Dr. Geraldine Mooney, who indicated that the incentive structure should address two primary concerns: (1) obtaining initial cooperation or agreement to participate, and (2) motivating households to stay engaged and complete the data collection week. The two alternate base incentives of \$50 and \$100 provide a test for the first objective (initial participation rate). To test levels of incentive that address “completeness” throughout the data collection week, Dr. Mooney suggested that we provide two levels of incentive for the telephone bonus. However, in order to determine the most efficient incentive level (acceptable response rate at lowest cost), OMB requested that we implement a higher telephone bonus incentive only as a sequential adjustment during the field test if needed.

Our final incentive structure is shown below.

	Low incentive group	High incentive group
Base incentive	\$50	\$100
Telephone bonus	\$10 / call	\$10 / call
Additional HH members		
• Age 11-14	\$10	\$10
• Age 15 and over	\$20	\$20

The base incentive is \$50 / \$100 (low / high groups); a telephone bonus of \$10 per call for both groups if the household initiates each of three food reporting calls; and an incentive of \$10 and \$20 for additional household members aged 11-14 and age 15 and above, respectively. The maximum incentive for a one-person household is \$80 under the low incentive scheme and \$130 under the high incentive scheme.

The incentive payment per household depends on the number of people in the household by age group. Table 4 shows the distribution of SNAP households by household composition, as it corresponds to the food booklets and incentives distributed by the study.<sup>8</sup>

**Table 4. Distribution of Types of Households**

Type of household defined by members eligible for incentive	Percent	Avg HHsize	Avg number of additional HH members eligible for incentive			
			Kids, age <11	Youth, 11-14	Teens, 15-18	Adults
Single adult Households						
1 One person household	43.5	1.0	0	0	0	0
2 No youth or teens	18.0	2.8	1.8	0	0	0
3 Youth only	7.0	3.3	1.1	1.2	0	0
4 Teens only	3.4	4.3	0.8	1.3	1.2	0
5 Youth and teens	5.3	2.8	0.6	0	1.2	0
Multiple adult households						
6 Adults, No youth or teens	14.6	3.3	1.3	0	0	1.1
7 Adults and youth	3.2	4.8	1.5	1.3	0	1.1
8 Adults and teens	2.1	5.8	1.1	1.3	1.3	1.2
9 Adults, youth, and teens	2.7	4.3	0.8	0	1.3	1.2

Table A.1 from OMB Part A is shown with the revised incentives. The average expected household incentive is based on the number of household members age 11 and older by type of household, as defined in Table 4.

<sup>8</sup> Estimates of SNAP household size and composition are based on USDA, Food and Nutrition Service, FY2009 SNAP Quality Control data.

**Table A.1. Incentive Levels to be Tested in the National Food Study Field Test**

Type of household	Percentage of Sample <sup>a</sup>	Average <sup>b</sup> Low Incentive	Telephone Bonus	Average Total Low Incentive	Average High Incentive	Telephone Bonus	Average Total High Incentive
1	43.5	50	\$10/call	80	100	\$10/call	130
2	18.0	50	\$10/call	80	100	\$10/call	130
3	7.0	62	\$10/call	92	112	\$10/call	142
4	3.4	86	\$10/call	116	136	\$10/call	166
5	5.3	73	\$10/call	103	123	\$10/call	153
6	14.6	71	\$10/call	101	121	\$10/call	151
7	3.2	82	\$10/call	132	112	\$10/call	162
8	2.1	117	\$10/call	147	167	\$10/call	197
9	2.7	101	\$10/call	131	151	\$10/call	181
<i>Average</i>		59		89	109		139

<sup>a</sup> Type of household is defined in Table 4. <sup>b</sup> Average incentive amounts are equal to the base incentive (\$50/\$100 for low and high) plus the average incentive based on number of household members by age group eligible for additional household member incentive (\$10 for children age 11 to 14; \$20 for persons age 15+).

As discussed under Comment 3, we will examine response rates and completion rates on a weekly basis throughout the data collection period. A 50-case in-depth assessment will be conducted early in the data collection period. We have a contingency plan for each component of the incentive scheme as follows:

1. **Base incentive for the low incentive group**– If
  - a. percentage of sampled households that agree to screening < 70%,<sup>9</sup> or
  - b. percentage of eligible households that agree to participate < 80%

Then the low base incentive will be increased from \$50 to \$75.

2. **Telephone bonus** – If
  - a. percentage of telephone calls that are incoming from either the **low** or **high** incentive group < 75%, then the telephone incentive will be raised from \$10/call to \$15/call for that group.
3. **Additional household members** – If
  - a. percentage of participating additional household members age 15 and older in the low and high incentive groups combined < 85%, then increase the gift card for age 15 and older from \$20 to \$25;

<sup>9</sup> Households do not receive an incentive after completing the screener. If, however, after reading the advance letter and description of incentives, fewer than 70% of households agree to be screened for eligibility, we will increase the offered incentive amount for participation in hopes of increasing the percentage of households that are willing to be screened.

- b. percentage of participating additional household members age 11-14 in the low and high incentive groups combined < 85%, then increase the gift card for age 11-14 from \$10 to \$15.

Our contingency plan allows for up to four changes in the incentive structure. Each potential change will be assessed independently according to the conditions listed above. These conditions will be initially assessed after obtaining 50 completes, and again after 100 completes. If the conditions listed above are not met after 100 completes, changes to the incentives will be implemented after obtaining 200 completes so that any change in incentives is implemented for half of the sample. After completion of the field test, the effectiveness of the change in incentives will be assessed using the measures listed above and comparing those measures before and after implementing the change.

As noted, we will separately assess the separate components of the incentive structure. We will also assess the effectiveness of the telephone bonus separately for the low and high incentive groups because the effectiveness of the telephone bonus (received by the main food shopper) is not independent of the effectiveness of the base incentive (also received by the main food shopper). For example, persons who receive a \$100 base incentive may be less responsive to a small change in the telephone bonus, as compared to those who receive a smaller base incentive.

If all contingencies are exercised, the incentive structure will be as follows:

	Low incentive group	High incentive group
Base incentive	\$75	\$100
Telephone bonus	\$15 / call	\$15 / call
Additional HH members		
• Age 11-14	\$15	\$15
• Age 15 and over	\$25	\$25

**Comment 6: TWG Review of Pilot Design**

TWG members received copies of the data collection instruments in May 2010, after they were revised to incorporate findings from the cognitive tests. Two TWG members indicated verbally that they reviewed the materials and had no comments.

One TWG member (statistician) reviewed the sampling plan and discussed the plan with Mathematica and ERS via teleconference. No changes to the plan were required as a result of these discussions.

**Comment7:** Edited as suggested.

**Comment 8: Appendix C, Advance Letter description of study does not adequately describe the detailed collection of food acquisitions.**

The advance letter has been revised per OMB comment and also includes revisions in response to IRB comments. Appendix C has been resubmitted.

**Comment 9: Appendix O, Household Interview #2, Question A19a (Amount owed on owned vehicles) may be difficult for respondents to answer.**

Question A19a has been revised per OMB comments to ask for the number of monthly payments needed to pay off the vehicle. Appendix O has been resubmitted.

**Resubmitted Appendices**

Table 6 lists the appendices that have been revised in response to OMB or IRB comments, or to reflect revised incentive amounts. Appendices C, D and F have been resubmitted. Other appendices include minor changes and the affected pages are attached to this response.

**Table 6. Revised Appendices**

Appendix	Change
C Advance Letter and Study Brochure	Advance letter revised to include new incentive amounts and a more detailed description of food collection. Brochure description of incentive revised from “You can receive up to \$100 for being part of this study.” to “You can receive over \$100 for being part of this study.”
D Household Screener	Revised per IRB comments to explicitly ask for consent and to add confidentiality statement before INTRO2. Instrument was formatted for use in the field and Short Form for Nonrespondents (Appendix E) was incorporated at the end of this form.
E Short Form for Nonrespondents	This appendix is dropped – see above.
F Consent Form	Revised per IRB comments to add a sentence on the purpose of the study and explanation of who Mathematica is; add the expected minutes per study component, topics per household interview; add explanation that incentives do not affect SNAP benefits; ask for explicit consent for match with SNAP data; add information about the payment form of the incentives; add that there are no anticipated risks from participation; add contact information for IRB.
G Household Interview #1	Add confidentiality statement to introduction.
I Single Book for Reporting Food Acquisitions	Add consent language on front cover along with a place for each household member to provide initials affirming

		consent.
K	Adult Food Booklet	Add consent language on the front cover along with a place for household member to provide signature affirming consent.
L	Youth Food Booklet	Add consent language on the front cover along with a place for youth to sign name affirming consent. Revise dollar amounts provided on sample page #2. Change \$20 to “gift card” on first page.
N	Household Interview #2	Add statement on confidentiality before INTRO. Revised question A19b. Added response categories to question B5.
O	Household Interview #3	Add statement on confidentiality before INTRO. Add context for question F3b (citizenship).