

## B. Collections of Information Employing Statistical Methods

### 1. Universe and Respondent Selection

The sample universe for the ITS is all persons 16 years of age and older in NCVS interviewed households. The NCVS sample of households is drawn from the more than 120 million households nationwide and excludes the military and barracks and institutionalized populations. The national sample of households consists of approximately 60,100 designated addresses located in 320 stratified primary sampling units (PSUs) throughout the United States. The sample consists of six parts, each of which is designated for interview in a given month and again at 6-month intervals. Beginning in 2005, new sample addresses were introduced based upon the 2000 Decennial Census of Population and Housing. Newly constructed housing since that census is also sampled.

The NCVS uses a rotating sample. The sample consists of six groups for each month of enumeration. Each of these groups stays in the sample for an initial interview and six subsequent interviews. During the course of a 6-month period, the length of time the ITS will be in the field, a full sample of six rotation groups will be interviewed (one-sixth each month). In addition, one rotation group enters the sample for its first interview each month.

Since the 2008 ITS, the NCVS sample has also undergone a 26% sample boost. In October 2010, BJS began to reinstate the sample that was removed in 2007 in order to reduce survey costs. The sample reinstatement increases the monthly sample from about 8,500 households to about 10,700 households. The sample reinstatement is an important component of BJS's effort to restore the capabilities of the NCVS to measure the impact of crime in the United States. It reduces the standard errors associated with violent crime by about 5 %, and enables more robust analyses of annual estimates of crime victimization and the characteristics of crimes and crime victims.

Each interview period the interviewer completes or updates the household composition component of the NCVS interview and asks the crime screen questions (NCVS-1) for each household member 12 years old or older. The interviewer then completes a crime incident report (NCVS-2) for each reported crime incident identified in the crime screener. Following either the screener or the administration of the crime incident report, depending on whether a crime was reported, each household member 16 years of

age or older will be administered the ITS. Each household member provides the information by self-response. Proxy respondents are allowable under very limited circumstances and represent less than 3% of all interviews. All forms and materials used to for the NCVS screener and crime incident report have been previously approved by OMB (OMB NO: 1121-0111). The ITS instrument is attached in Appendix A.

The first contact with a household is by personal visit and subsequent contacts may be by telephone. For the second through seventh visits, interviews are done by telephone whenever possible. Approximately 57% of the interviews conducted each month are by telephone.

For the core NCVS, interviewers are able to obtain interviews with about 88% of household members in 90% of the occupied units in sample in any given month. In 2012 and 2014, we assume that there will be about 86,800 persons age 16 or older in the sample and NCVS interviews will be obtained with 89% (the response rate for persons 16 or older) of these household members. Thus, we expect that approximately 78,000 persons 16 years of age and older will complete the core NCVS and be eligible for the ITS from July through December of 2012. Based on the 2008 ITS response rates, we anticipate that about 89%, or about 69,420 persons, will complete the 2012 ITS.

## 2. Statistical Methodology

The ITS is designed to calculate national estimates of identity theft victimization for the target population - the noninstitutional resident population aged 16 years and older. The ITS is administered to all age-eligible NCVS respondents during the 6-month periods from July-December, 2012 and July-December, 2014. The frame used to reach the target NCVS population is the list of addresses of all living quarters in the U.S. compiled from the most recent decennial census and lists of housing units constructed since that most recent decennial census. Sample selection for the NCVS, and by default the ITS, has three stages: the selection of primary sampling units or areas known as PSUs, the selection

of address units in sample PSUs, and the determination of persons and households to be included in the sample.

Survey estimates are derived from a stratified, multi-stage cluster sample. The PSUs composing the first stage of the sample are formed from counties or groups of adjacent counties based upon data from the decennial census. The larger PSUs are included in the sample automatically and are considered to be self-representing (SR) since all of them are selected with certainty. The remaining PSUs, called non self-representing (NSR), because only a subset of them are selected, are combined into strata by grouping PSUs with similar geographic and demographic characteristics, as collected in the decennial census from which the sample is drawn. For the NCVS, administrative crime data drawn from the FBI's Uniform Crime Reporting Program are also used to stratify the PSUs.

## **SAMPLING**

### **Stage 1. Defining and Selection of PSUs:**

**Defining PSUs** - Formation of PSUs begins with listing counties and independent cities in the target area. For the NCVS, the target area is the entire country. The counties are either grouped with one or more contiguous counties to form PSUs or are PSUs all by themselves. The groupings are based on certain characteristics such as total land area, current and projected population counts, large metropolitan areas, and potential natural barriers such as rivers and mountains. The resulting county groupings are called PSUs.

After the PSUs are formed, the large PSUs and those in large urban areas are designated SR. The smaller PSUs are designated NSR. Determining which PSUs are considered small and which are large depends on the survey's SR population cutoff. An SR PSU must be large enough in population to support at least one field representative with a full workload of approximately 32 cases. For the NCVS, all PSUs with population over 223,176 were labeled SR.

**Stratifying PSUs** - The NSR PSUs are grouped with similar NSR PSUs within census divisions (New England, Mid Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific) to form strata. Each SR PSU forms its own stratum. The data used for grouping the PSUs consist of decennial census demographic data and administrative crime data. As was stated earlier, NSR PSUs are grouped to be as similar or homogeneous as possible. Just as the SR PSUs must be large enough to support a full workload so must each NSR strata be of that size. The most efficient stratification scheme is determined by minimizing the between PSU variance and the within PSU variance.

**Selecting PSUs** - The SR PSUs are automatically selected for sample or "selected with certainty." One NSR PSU is selected from each grouped stratum. The NSR PSUs are sampled with probability proportional to the population size using a linear programming algorithm. Beginning with collection year 2006, the NCVS design consists of 183 SR PSUs and 146 NSR PSUs.

## **Stage 2. Preparing Frames and Sampling Within PSUs**

**Frame Determination** - To ensure adequate coverage for the target population, the Census Bureau defines and selects sample from four address lists called frames: the unit frame, the area frame, the group quarters frame, and the new construction or permit frame. Each address in the country is assigned to one and only one of these frames. Which frame an address is assigned to depends on four factors: 1) what type of living quarters are at the address, 2) when the living quarters were built, 3) where the living quarters were built, and 4) how completely the street address was listed. The main distinction between the frames is the procedures used to obtain the sample addresses.

Two types of living quarters are defined in the decennial census. The first type is a housing unit. A housing unit (HU) is a group of rooms or a single room occupied as separate living quarters or intended for occupancy as separate living quarters. A housing unit may be occupied by a family or

one person, as well as by two or more unrelated persons who share the living quarters. Before the 2000 decennial census, separate living quarters were defined as a space in which the occupants live and eat separately from all the other persons on the property and have direct access to their living quarters from the outside or through a common hall or lobby as found in apartment buildings. Beginning with the 2000 decennial census, the criteria for separate living quarters are that the occupants must live separately from any other individuals in the building and have direct access from outside the building or through a common hall or entry. Eating separately is no longer a criterion.

The second type of living quarters is group quarters (GQ). Group quarters are living quarters where residents share common facilities or receive formally authorized care. About 3 % of the population counted in the 2000 census resided in group quarters. Of those, less than half resided in non-institutionalized group quarters. About 97 % of the population counted in the 2000 census lived in housing units.

**Within-PSU Sampling** - All the Census Bureau's continuing demographic surveys, such as the NCVS, are sampled together shortly after the most recent decennial census. This takes advantage of newly available census data that shows population growth and demographic changes, as well as updated unit address lists. Roughly a decade's worth of sample is selected at that time. Selection of samples is done one survey at a time (sequentially) and one frame at a time (independently). Each survey determines how the unit addresses within the frame should be sorted prior to sampling. For the NCVS, each frame is sorted by geographic variables. A systematic sampling procedure is used to select housing units from each frame. For the unit and the GQ frames, actual unit addresses are selected and reserved for the NCVS. In the area frame, a specified number of living quarters in a specific geographic location are promised to the NCVS and after the address listing operation in that geographic area, the specific unit addresses are assigned. Similarly, in the permit frames, empty placeholders are selected for the NCVS within the PSU. Then over time as new permits are issued, the placeholders are replaced with actual newly built housing units/addresses.

Addresses selected for a survey are removed from the frames, leaving an unbiased or clean universe behind for the next survey that is subsequently sampled. By leaving a clean universe for the next survey, duplication of addresses between surveys is avoided. This is done to help preserve response rates by insuring no unit falls into more than one survey sample.

### **Stage 3: Sample Within Sample Addresses**

The last stage of sampling is done during initial contact of the sample address during the data collection phase. For the ITS, if the address is a residence and the occupants agree to participate, then an attempt is made to interview every person aged 16 or older who lives at the resident address and completes the NCVS-1. There are procedures to determine who lives in the sample unit and a household roster is completed with their name and other demographic information. If someone moves out (in) during the interviewing cycle, he or she is removed from (added to) the roster.

### **DATA COLLECTION**

The ITS supplement will be administered twice, first from July through December 2012 and second from July through December 2014. In keeping with the definition of identity theft utilized by the FTC and in the 2008 ITS, respondents are asked to report if they have experienced the misuse of an existing credit card, the misuse of another existing account (banking, savings, etc.), the misuse of personal information to open a new account, or the misuse of personal information for other fraudulent purposes in the 12-months prior to the interview.

While the 2008 ITS utilized a 2-year reference period in acknowledgement of the potential lag-time between when a misuse of personal information occurs and when it is discovered by the victim, research has shown that respondents are able to recall more accurately with a shorter reference period. In order to address both recall error and the potential under reporting due to the lag between the identity theft and its discovery, the

ITS now uses a shorter reference period and focuses on the discovery of the identity theft rather than when the incident occurred. Because a 6-month reference period, as used in the NCVS, could also lead to under-reporting of the consequences of identity theft, since serious incidents may take more than 6 months to resolve, the ITS now utilizes a 12-month reference period. To address any under-reporting of the consequences of identity theft, it also includes a new section designed to collect data on the long-term consequences of identity theft. The new section (section H in Attachment 1) will be administered to respondents who discovered the identity theft more than 12-months prior to the interview but are still experiencing financial, legal, emotional, or physiological consequences from the victimization. Other changes and revisions to the revised ITS are detailed in Attachment 4.

### 3. Methods to Maximize Response

Census Bureau staff mails an introductory letter (NCVS-572(L), NCVS-573(L)) (see Attachment 5 and Attachment 6) explaining the NCVS to the household before the interviewer's visit or call. When they go to a house, the interviewers carry cards and portfolios identifying them as Census Bureau employees. The Census Bureau trains interviewers to obtain respondent cooperation and instructs them to make repeated attempts to contact respondents and complete all interviews. The interviewer obtains demographic characteristics of noninterview persons and the race of noninterview households for use in the adjustment for nonresponse. ITS response rate reports will be generated on a monthly basis and compared to the previous month's average to ensure their reasonableness.

As part of their job, interviewers are instructed to keep noninterviews to a minimum. Maintaining a low nonresponse rate involves the interviewer's ability to enlist cooperation from all kinds of people and to contact households when people are most likely to be home. As part of their initial training, interviewers are exposed to ways in which they can persuade respondents to participate as well as strategies to use to avoid refusals. Furthermore, the office staff makes every effort to help interviewers reduce their noninterviews by suggesting ways to obtain an interview, and by making sure that sample units reported as

noninterviews are in fact noninterviews. Also, survey procedures permit sending a letter to a reluctant respondent as soon as a new refusal is reported by the interviewer to encourage their participation and to reiterate the importance of the survey and their response.

In addition to the above procedures used to ensure high participation rates, beginning in 2011, interviewers were required to complete a two-day refresher training course designed to reinforce standards for collecting accurate data. Following the refresher training, the Census Bureau implemented additional performance measures for interviewers based on data quality standards. Interviewers are trained to and assessed on administering the NCVS I and the NCVS II exactly as worded to ensure the uniformity of data collection, completing interviews in an appropriate amount of time (not rushing through them), and keeping item nonresponse and “don’t know” responses to a minimum.

The Census Bureau also uses quality control methods to ensure that accurate data is collected. Interviewers are continually monitored by each Regional Office to assess whether performance and response rate standards are being met and corrective action is taken to assist and discipline interviewers who are not meeting the standards.

For the core NCVS, interviewers are able to obtain interviews with about 88% of household members in 90% of the occupied units in sample in any given month. Only household members who have completed the NCVS-1 will be eligible for the ITS. Among eligible respondents who completed the NCVS-1, the 2008 ITS had an additional 89% response rate. The Census Bureau conducted an evaluation of nonresponse bias in the 2008 ITS and concluded that there was no evidence of significant nonresponse bias in the estimates of identity theft.

We expect that approximately 78,000 persons 16 years of age and older in NCVS sample households will have completed the NCVS-1 and be eligible for the ITS from July through December of 2012. Of these, we anticipate that 89%, or about 69,420 persons, will complete the ITS. Assuming that in 2012, about 3,471 respondents, or about 50 persons per 1,000, experienced an incident of identity theft, we expect a standard error of about 1.1 and a 2.2% coefficient of variation (estimating two degrees of

freedom). At a 95% confidence level, we should be able to detect a difference of less than 10% between the 2012 and 2014 rates.

Upon completion of the 2012 and 2014 ITSs, the Census Bureau will conduct complete analyses of nonresponse, including nonresponse and response rates, respondent and nonrespondent distribution estimates, and nonresponse bias estimates for various subgroups. Should the analyses reveal evidence of nonresponse bias, BJS will work with the Census Bureau to assess the impact to estimates and ways to adjust the weights accordingly.

#### 4. Test of Procedures or Methods

Despite the relatively small number of wording changes to the 2008 ITS questions, the revised ITS questionnaire underwent two rounds of cognitive testing by Census Bureau staff between September and October of 2011. Because this is the first step in the implementation of the ITS, the cognitive interviews began on the first day of the project period – September 1, 2011. Following the completion of the first round of testing with nine respondents, the Census Bureau provided BJS with recommended changes to the survey instrument.

Because the majority of the survey instrument questions have not changed substantially from the 2008 ITS, there were few major changes to the instrument as a result of the cognitive interviews. One of the biggest issues with the revised instrument was in getting respondents to think about an identity theft incident as a series of related transactions rather than thinking about each time a credit card was used, for example. Prior to the first round of cognitive testing the word ‘incident’ and ‘event’ were both used throughout the instrument to mean the same thing. The testing revealed that the use of these synonyms was confusing to respondents and by using only the term ‘incident’ and providing a clearer definition in the instructions, respondents in the second round of testing no longer had a problem. The cognitive testing also revealed several areas in which minor wording adjustments were needed to make the question clearer to

the respondent. The issues that were identified have each been addressed in the revised ITS.

In addition to changes to the ITS instrument, the interviews also brought to light several topics that will be covered in the interviewer training. For example, respondents tended to give vague responses to the question, "How did you first find out someone had misused or attempted to misuse your personal information." Because of this, the interviewer training will include a discussion on the importance of getting clarification from the respondent and ensuring that the response category selected by the interviewer matches what the respondent was intending. The final cognitive interview report will be made available to OMB upon request.

Following OMB approval of the revised ITS, Census will translate the survey instrument into an automated CAPI instrument. Census Bureau staff, including instrument developers and the project management staff, as well as BJS staff will conduct internal testing of the CAPI instrument.

Interviewers will be provided with an ITS self-study which is mandatory to complete prior to initiating any interviews. Interviewer training is usually conducted a month prior to the first month of interview. This allows the interviewers time to familiarize themselves with the survey content and any special instrument functionality that is specific to conducting interviews for the ITS.

#### 5. Consultants on Statistical Aspects and Data Collection

The Victimization Statistics Unit at BJS takes responsibility for the overall design and management of the activities described in this submission, including developing study protocols, sampling procedures, and questionnaires and overseeing the conduct of the studies and analysis of the data by contractors.

The Census Bureau is responsible for the testing of interview materials and the collection of all data. Ms. Meagan Wilson heads the Crime Surveys Branch of the Demographic Surveys Division, which manages and coordinates the NCVS and the ITS supplement. Ms. Theresa DeMaio, Ms.

Rachel Freidus, and Ms. Katherine Drom provided consultation on the instrument development and headed the cognitive interview efforts. Mr. Stephen Ash of the Demographic Statistical Methods Division of the Census Bureau coordinated consultation on the statistical aspects of the supplement. BJS and Census Bureau staff responsible for the ITS include:

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