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OFFICE OF MANAGEMENT AND BUDGET
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ADMINISTRATOR
OFFICE OF
INFORMATION AND
REGULATORY AFFAIR

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MEMORANDUM FOR THE PRESIDENT'S MANAGEMENT COUNCIL

FROM: John D. Graham, Ph.D.
Administrator

SUBJECT: Guidance on Agency Survey and Statistical Information Collections

The Paperwork Reduction Act of 1995 requires that Federal agency information collections employ effective and efficient survey and statistical methodologies appropriate to the purpose for which the information is to be collected. It further directs the Office of Management and Budget (OMB) to develop and oversee the implementation of Government-wide policies, principles, standards, and guidelines concerning statistical collection procedures and methods.

The attached guidance document, entitled "Questions and Answers When Designing Surveys for Information Collections" (Q&A), provides details about the OMB review process, assistance in strengthening supporting statements for information collection requests, and, most importantly, advice for improving information collection designs. The document was circulated for agency comment on December 14, 2004, and has been revised in response to comments from agencies and external peer reviewers.

The content of this document is focused on what agencies need to consider when designing information collections and preparing requests for OMB approval. The guidance addresses issues that frequently arise in OMB reviews, including topics ranging from basic procedural requirements to best practices for tec

QUESTIONS AND ANSWERS

WHEN DESIGNING SURVEYS

FOR INFORMATION COLLECTIONS

Office of Information and Regulatory Affairs
Office of Management and Budget
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PURPOSE OF THIS GUIDANCE

Federal agencies conduct or sponsor a wide variety of information collections to gather data from businesses, individuals, schools, hospitals, and State, local, and tribal governments. Information collections employing surveys are frequently used for general purpose statistics, as well as for program evaluations or research studies that answer more specific research questions. Data collected by Federal agencies are widely used to make informed decisions and to provide necessary information for policy makers and planners. The collection of this information can take many forms and is accomplished in a variety of ways.

The Paperwork Reduction Act of 1995 (PRA) requires agencies to submit requests to collect information from the public to the Office of Management and Budget (OMB) for approval. This guidance is designed to assist agencies and their contractors in preparing Information Collection Requests (ICRs), which may be commonly known as PRA submissions or "OMB clearance packages," for surveys used for general purpose statistics or as part of program evaluations or research studies.

1. What is the purpose of this guidance?

OMB is often asked about the ICR review process and what its expectations are, especially for collections involving surveys. These Q&As are designed to answer many of the frequently asked questions to help agencies better understand OMB's expectations for survey information collection requests. This improved understanding should assist agencies in identifying and documenting information for inclusion in their ICRs, and should facilitate the review process.

This guidance seeks to highlight a wide range of issues that agencies need to consider when designing their surveys. Different sections of this guidance provide a very brief overview of the literature on statistical sampling and different survey methodology topics; each section provides some useful references for more information on these issues. The goal of this guidance is to help agencies to better plan and document their information collections that use surveys.

Conducting a high quality survey is a complex undertaking, and this guidance cannot (and is not intended to) take the place of professional survey methodologists and statisticians that agencies will need to consult in designing, executing, and documenting their surveys. For agencies that do not have these professionals on staff or involved in a particular collection, this guidance points out some key areas where professional consultation will be needed.

2. Does this guidance apply to all ICRs submitted to OMB?

The next two sections of this guidance (on submission of ICRs to OMB and scope of the information collection) cover some general requirements under the PRA that can generally be applied to any information collection request an agency makes. However, the focus of this guidance is on conducting surveys for general purpose statistics or as part of program evaluations or research studies.

Purpose

Surveys represent only a small percentage of all ICRs that OMB reviews. Most ICRs submitted to OMB are mandatory recordkeeping requirements, applications, or audits that are not used for statistical purposes. Because surveys require that careful attention be paid to a variety of methodological and statistical issues, agencies are required to complete Part B of the ICR supporting statement to more fully document how the survey will be conducted and analyzed (see question #10). The focus of this guidance is

SUBMISSION OF ICRs TO OMB

This section covers some basic questions related to the Paperwork Reduction Act (PRA) submissions that agencies prepare and submit to OMB including process issues, what is and is not covered by the PRA, and when agencies need to complete Part B of the Information Collection Request (ICR) supporting statement. Agencies should consult the OMB regulations implementing the PRA (5 C.F.R. § 1320) for more detailed and complete information.

3. When should an agency begin the PRA process?

The PRA requires that the agency publish a 60-day notice in the *Federal Register* to obtain public comment on the proposed collection, prior to submitting the information collection to OMB.[1] At the time this notice is published, agencies must have at least a draft survey instrument available for the public to review. Agencies should state in their ICRs whether any comments were received from the public, and the comments should be addressed in the ICR that is submitted to OMB.

When submitting the ICR to OMB, agencies are required to place a second notice in the *Federal Register,* allowing a 30-day public comment period and notifying the public that OMB approval is being sought and that comments may be submitted to OMB. This notice runs concurrent with the first 30 days of OMB review, and OMB has a total of 60 days after receipt of the ICR to make its decision.[2] <u>Thus, agencies need to allow at least 120 days for consideration of initial public comments, the second public comment period and OMB review, plus additional time for preparation of the ICR, as well as time lags for publication of *Federal Register* notices.</u>

Agencies may also have requirements for internal review or higher level reviews (e.g., departmental) that need to be factored into the schedule for planning a survey. A six month period, from the time the agency completes the ICR to OMB approval, is fairly common for planning purposes but varies considerably across agencies depending on internal review procedures. Thus, starting the process early can be very important to ensure timely data collection. Survey managers should consult with their agency paperwork clearance officers to ascertain what they need to do and the time required to meet agency and OMB requirements. In rare instances, the PRA does provide for expedited processing if an agency can justify an Emergency Collection (see question #9).

4. When should agencies talk to OMB about plans for a study?

The PRA and its implementing regulations provide a formal basis for OMB review of agency information collection requests. However, they do not preclude informal consultation with OMB desk officers prior to the submission of an ICR. Consultation with OMB prior to submission of an ICR is not required as part of the PRA and typically does not occur. However, if an agency is proposing a significant new collection about which it expects OMB may have questions or concerns, the agency is encouraged to consult with its OMB desk officer about the particular

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1 5 C.F.R. § 1320.8(d)(1)
2 5 C.F.R. § 1320.10(a)

collection in advance of submitting the ICR to OMB. When an agency is planning a new, large survey data collection, a major revision to an ongoing survey, or large-scale experiments or tests, agencies and OMB frequently find it helpful for the agency to brief OMB on the nature of the planned collection and the proposed methodology. In this less formal context, OMB and agency staff can discuss potential areas of concern, including the need for further detail and justification. This kind of early consultation can considerably reduce the likelihood that major unexpected concerns about survey methodology or statistical sample design will arise during OMB review, and it allows more time for the agency to consider alternatives if necessary. Agencies can then address any issues identified by OMB in their ICRs. While this informal consultation does not affect the timing of the formal OMB review process under the PRA, it can be of benefit in identifying some issues much earlier and may avoid delays that could otherwise occur.

5. What does it mean for an agency to conduct or sponsor an information collection?

An agency conducts or sponsors an information collection if the agency collects the information using its own staff and resources, or causes another agency or entity to collect the information, or enters into a contract or cooperative agreement with another person or contractor to obtain the information.[3] If the agency requests the collection directly or indirectly through another entity or contractor or exercises control over those collecting the information, the agency is conducting or sponsoring the collection (see also question #6).

6. When are studies involving third party or investigator-initiated grants subject to PRA review?

Collections of information conducted through investigator-initiated grants (e.g., in response to a Request for Applications (RFA)) are generally not subject to OMB review under the PRA. However, information collections by a Federal grant recipient are subject to PRA review if (1) the grant recipient is conducting the collection at the specific request of the agency, or (2) the terms and conditions of the grant require specific approval by the agency for the collection or collection procedures.[4] If either of these conditions is met, the sponsoring agency needs to seek and obtain OMB approval, and the grantee needs to display the OMB control number on the collection instrument.

For example, the National Science Foundation has many program areas that support basic research on a wide variety of topics. Proposals are reviewed by scientific panels and funding may be provided to a university researcher to study some topic, which may include a survey. Although the National Science Foundation funded the research, it did not specifically request the survey, nor does the agency approve the collection or the collection procedures. However, if another agency gives the same researcher a grant to design and conduct a survey that the agency reviews and approves, then this collection wouu 72 36 the agencl over(T1 1 dnded th9.20 0 12 o)Tj0 6n c

7. Are focus groups subject to PRA review?

There is no exemption for focus groups in the PRA. Agencies conducting focus groups must comply with the requirements detailed in 5 C.F.R. § 1320.3(c): "Collection of information means…the obtaining…of information by or for an agency by means of identical questions posed to, or identical reporting, record-keeping, or disclosure requirements imposed on, ten or more persons…." It then goes on to clarify "ten or more persons refers to the persons to whom a collection of information is addressed by the agency within any 12 month period." Thus, focus groups are covered unless the total number of persons participating within a 12-month period is fewer than ten. For example, an agency conducting three focus groups of nine persons would be subject to the PRA because the total number of participants is greater than 10.

Although each focus group may not be asked the exact same questions in the same order, focus groups should be treated as information collections under the PRA if the <u>same</u> <u>information</u> is being sought from the groups. For example, an agency that is developing questions for a survey may convene a few focus groups in different areas of the country (or composed of people with different characteristics) and may have fairly wide ranging discussions on the topic of the survey in order to hear how the participants think about that topic and the vocabulary they use. Because the flow of discussion in the different groups may lead to different areas in more depth or at different points in the discussion, some parts of the protocol may not have been necessarily followed verbatim or may have occurred at a different point in one focus group than another. However, the same information was still being sought by the agency and the collection is subject to the PRA, regardless of whether the exact questions or probes were used or used in the exact same order with each group.

When agencies submit their ICRs for focus groups to OMB, they should include the protocols or scripts for the discussion. Agencies that routinely conduct focus groups as part of their development of questionnaires (e.g., pretesting) may find it useful to obtain a generic clearance for focus groups (see questions #8, #50, #51).

In addition to using focus groups for pretesting, an agency may conduct focus groups as part of its collection of other information and in conjunction with other methods of data collection as part of an overall research study. For example, some program participants may participate in a focus group as part of a program evaluation that also includes other collections, such as surveys of program administrators and staff. In these cases, it is important that the focus groups are included and described in the ICR in the context of the collection the agency is conducting so that OMB can appropriately evaluate the entire scope of the study and the practical utility of the information the agency will obtain. Thus, agencies should include the respondent burden associated with the focus groups in the ICR along with the protocols or script for the focus groups.

8. What are generic clearances and when are these useful for agencies?

A generic clearance is a plan for conducting more than one collection of information using very similar methods. The review of this plan occurs in two stages: (1) a full PRA review of the generic clearance ICR, which includes the general approach and methodology, at least once every three years, and (2) an expedited review of the individual collections that fall within the scope of the generic clearance. A generic clearance is considered only when the agency is able to demonstrate that there is a need for multiple, si process to take effect when the emergency clearance expires. Agencies are strongly encouraged to consult with their OMB desk officers prior to submitting a request for emergency clearance.

10. When do agencies need to complete Part B of the ICR Supporting Statement?

Agencies are instructed to complete Part B if they are using statistical methods, such as sampling, imputation, or other statistical estimation techniques; most research collections or program evaluations should also complete Part B.[5] If an agency is planning to conduct a sample survey as part of its information collection, Part B of the ICR supporting statement must be completed, and an agency should also complete relevant portions of Part B when conducting a census survey (collections that are sent to the entire universe or population under study). For example, an agency doing a census of a small, well-defined population may not need to describe sampling procedures requested in Part B, but it should address what pretesting has taken place, what its data collection procedures are, how it will maximize response rates, and how it will deal with missing unit and item data.

Agencies conducting qualitative research studies or program evaluations, including case studies or focus groups, should also complete the relevant sections of Part B to provide a more complete description of the use of the information and the methods for collecting the information (see question #11).

11. Why do agencies need to complete some of Part B if they are conducting qualitative research studies or program evaluations?

Agencies need to specify how they plan to use the information they are collecting and how they will collect the information in order for OMB to properly evaluate an ICR that uses qualitative methods. There are elements of Part B that are not covered elsewhere in the justification that agencies should answer to appropriately describe the information collection. For example, an agency conducting case studies should specify in Part B:

- how the different sites and/or respondents will be selected,
- whether the agency intends to generalize beyond the specific sites and/or respondents selected,
- what pretesting has been done, and
- what different methods will be used to collect the information, e.g., in-person interviews, focus groups, observations, etc. and the protocols that will be followed to ensure high quality data are obtained.

In addition, as noted in questions #21 and #24, agencies will need to justify why they are not using statistical methods if their research questions are most appropriately addressed by a survey or other quantitative study.

5 See the instructions for supporting statements in Appendix A.

Useful Resources

Office of Management and Budget (August 1995). 5 C.F.R. § 1320 Controlling Paperwork Burdens on the Public; Regulatory Changes Reflecting Recodification of the Paperwork Reduction Act. *Federal Register, 60, No. 167,* 44978-44996.

SCOPE OF THE INFORMATION COLLECTION

This section addresses questions related to the content of the Information Collection Requests

14. What is included in the calculation of burden hours?

Burden hours are a measure of the time it takes respondents to review instructions, search data sources, complete and review their responses, and transmit or disclose information. Estimating burden for household surveys is typically done by timing the completion of interviews done in previous administrations of the survey or in pretests (using 9 or fewer persons) and developing an average time.

Estimating burden for establishment surveys is more complicated because respondents often have to search for information before answering the survey questions. Agencies must first identify all the steps a respondent takes in order to comply with the survey request, and then estimate the time for each step to arrive at a total burden per respondent. The aggregate burden of an ICR is the average burden per respondent multiplied by the number of expected respondents and should be reported in section A.12 of the ICR.

15. For establishment surveys or panel surveys, should burden hours include the original collection of administrative records that may have taken place months or years before?

Generally, surveys of business establishments ask a respondent to aggregate and report data that the establishment already has somewhere in files or databases. Burden hours for these surveys should include only the time it takes to locate the source data and aggregate them. The estimate should not include the time originally taken to collect information in administrative records that were compiled by the establishment for its own purposes, such as accounting records. For example, there are a variety of reporting and recordkeeping requirements in the equal employment opportunity arena. These reports usually ask for summary demographic and job data on employees, and respondents often obtain the data needed from existing personnel files, records, or databases. Agencies SHOULD NOT count the time involved in the original collection of the demographic data from the employees but SHOULD count the time it takes to access the personnel files, aggregate the requested data, and report the data on the agency form.

For panel or longitudinal surveys, agencies SHOULD count the time it takes respondents to begin their participation in a panel in the initial ICR for the recruitment and baseline collection. However, this time SHOULD NOT be counted in subsequent ICRs that concern later collections. Agencies SHOULD count only the hours associated with the collection of information described in the current ICR. For example, the Survey of Income and Program Participation selects respondents to participate in interviews every four months (called waves) for the duration of a panel—usually 3 or 4 years. Each wave has a set of core questions used in all waves and a topical module that differs from one wave to the next. In essence, each wave is treated as a unique survey and the burden associated with answering all the questions in a wave is reported. In this case, the agency SHOULD count the burden of recruitment and the initial collection in the ICR for wave 1; however, the agency SHOULD NOT count the original recruitment of the individual into the survey panel in the ICRs for later waves.

16. Why are agencies required to estimate the burden in terms of both time and costs?

The term "burden" means the "time, effort, or financial resources" the public expends to provide information to or for a Federal agency, or otherwise fulfill statutory or regulatory requirements.[7] Currently, agencies separately estimate the "hour burden" and "cost burden" of each particular information collection in their supporting statements in A.12 and A.13, respectively. This ensures that both types of burden are taken into account.

Thus, for establishment surveys, in addition to the hour burden for reviewing instructions, searching data sources, completing and reviewing responses, and transmitting or disclosing information, there may also be capital, operation, and maintenance costs associated with generating and maintaining the information. Agencies should include costs that respondents incur for developing, acquiring, installing, and utilizing technology and systems for the purposes of collecting, validating, verifying, processing, maintaining, disclosing, and providing information, as well as costs incurred by respondents adjusting to changes from previous instructions, and training personnel to be able to respond to a collection. These costs may be borne directly by the respondent or indirectly by their subordinates, agents, or contractors.

The PRA requires that the agency demonstrate the practical utility of the collection and demonstrate that the burden of the collection both in terms of hours and other costs is justified given the agency's need for the information and the use the agency will make of the information.

Useful Resources

Office of Management and Budget (August 1995). 5 C.F.R. § 1320 Controlling Paperwork Burdens on the Public; Regulatory Changes Reflecting Recodification of the Paperwork Reduction Act. *Federal Register, 60, No. 167,* 44978-44996.

7 44 U.S.C. § 3502(2); 5 C.F.R. 1320.3(b).

requires careful planning and sufficient resources to yield quality data that have practical utility for the agency. Agencies should carefully document and justify the adequacy of their survey methods in their ICRs. Specifically, agencies should provide information about the target population, the sampling frame used and its coverage of the target population, the design of the sample (including any stratification or clustering), the size of the sample and the precision needed for key estimates, the expected response rate (see question #63), the expected item non-response rate for critical questions, the exact wording and sequence of questions and other information provided to respondents, data collection methods and procedures, and the training of interviewers (if applicable). In addition, agencies need to take into account what is known about the different sources of error in

Case studies can also provide important insights when used in conjunction with other research methods such as sample surveys. For example, an agency may conduct a large representative sample survey of program sites to gain knowledge about their characteristics. A number of sites may also be selected for case studies to help provide additional understanding about the way the program functions or is implemented, and thus illuminate the quantitative results from the survey. These case studies may, for example, include direct observational components that are not feasible in a large scale national study.

More specifically, case studies can provide vital insights about how programs are implemented in different local areas. For programs that deliver their services through State and local agencies, the Federal Government often sets general standards regarding administration, evaluation, and funding. Developing a comprehensive picture of how a federally-regulated program is administered, for example, may require site-specific observation and investigation. Data from specific sites can serve several purposes depending on the study design including:

- developing explanatory hypotheses on program characteristics and outcomes, which can be tested in future statistical studies;
- preparing guidance for field offices on how services may be delivered more effectively;
- providing qualitative explanatory information on the range of program characteristics and outcomes, which complement quantitative results obtained through a statistically valid, generalizable study; and
- illustrating findings of the main study through real-world examples.

25. What should agencies consider when designing and conducting a case study?

There are a number of limitations of the case study method that agencies should consider. In some situations, these limitations can make it difficult to conduct the research. In others, they can make it difficult to generalize the results. Limitations include:

- the case study sites are typically not selected in a manner that allows one to generalize to the population under study;
- too few sites are typically visited to get a comprehensive or generalizable picture;
- results observed at a site may be due to other factors besides the program being studied, and there is often no control group or randomized assignment to the program;
- site visits are expensive; they require significant travel and preparation costs; and
- data from site visits are often qualitative and anecdotal in nature.

When designing or evaluating a case study, the following questions should be considered:

- *Who is conducting the case study?* The role of the investigator is very prominent in case study methods and the training, experience, and thoroughness of the investigators visiting a site can have a large impact on the quality of the data that are gathered.
- *How are the sites selected?* How sites are chosen will have direct implications for the kinds of conclusions that can be drawn from the research. Although probability methods are essential for generalizable survey samples (see question #30), the small samples that are typically used in case studies cannot usually be meaningfully generalized to any population. However, the results from case studies are typically not intended to describe

program, it can be difficult to identify similar districts that are an appropriate comparison to gauge the effects of the program on student outcomes. If the comparison schools or districts differed systematically from those that received program funding then it is not clear whether any differences in student outcomes are due to the program or to the preexisting differences such as urbanicity or poverty level. In addition, sometimes, schools or districts that win (or even apply for) competetive grants may be more interested, motivated, or have greater capabilities for improving student outcomes than schools or districts that don't win (or apply) for the program grants, and the student outcomes may reflect the underlying motivation or capabilities rather than anything about the program itself. Thus, the agency needs to consider appropriate methods to select comparison schools or districts that will rule out or minimize alternative explanations for differences in student outcomes in order to maximize the value of the program evaluation.

One of the key characteristics of experimental designs is random assignment of persons or entities to treatment (or experimental) and control (or comparison) conditions. For example, participants in the treatment condition may receive benefits or services from a Federal program, while participants in the control condition do not. This random assignment of persons to conditions acts to equalize preexisting differences between the two groups so that differences observed between the groups can be attributed to the differences in the Federal program. If random assignment is not strictly possible, then quasi-experimental designs can be employed. These designs rely on identifying appropriate comparison grs, schools tie8.855/02 Tc -0experimnt is not striccy r

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Useful Resources

Experimental and Quasi-Experimental Designs

Cook, T. D. & Campbell, D. T. (1979). *Quasi-Experimentation: Design and Analysis Issues for Field Settings.* Boston: Houghton Mifflin.

Hedrick, T. E., Bickman, L. & Rog, D. J. (1993). *Applied Research Design: A Practical Guide.* Newbury Park, CA: Sage.

Program Evaluation Designs

Rossi, P.H. & Freeman, H.E (1993). *Evaluation: A Systematic Approach.* Newbury Park, CA: Sage.

SAMPLING

This section is intended as a broad overview of

28. What is a sampling frame and what is the coverage of the sampling frame?

A sampling frame is a list or set of procedures for identifying all elements of a target population. In theory, the sampling frame should include everyone in the target population as well as other information that will be used in the sampling process or can be used to assess the representativeness of the sample. There are different types of sampling frames, e.g., area and list frames. In an area frame, geographic areas are defined, listed, and then sampled. Often, lists of elements (e.g., housing units) are constructed within the sampled areas and then elements are selected from the lists. In a list frame, a list of all the population elements is used to select the sample directly. Sampling frames also may include information on characteristics of the elements, such as employment levels for a business or enrollment for schools.

Sampling frames should be up to date and accurate. The coverage of the sampling frame refers to how well the frame matches the target population. For example, approximately 97 percent of U.S. households have land-based telephone lines; therefore, a frame of all residential telephone numbers would have a national coverage rate of 97 percent.[9] However, there are systematic differences between households with and without telephones, so that telephone coverage rates for some target populations such as the poor, young adults, and racial or ethnic minorities are often much lower and may not be adequate for some purposes. When those subgroups differ from others on key survey variables, coverage error in the survey estimates can result.

The coverage of a sampling frame can change over time and, therefore, it needs to be kept current and accurate. A list of business establishments that is two or three years old will not include any new businesses formed in the past two to three years but will include establishments that have gone out of business, and also may have incorrect contact information for those that have relocated. The availability and accuracy of contact information for sample units within the frame may affect the agency's choice of mode of data collection. In addition, the availability and accuracy of information for stratification is also an important consideration for choosing a frame.

Agencies need to consider the adequacy of potential sampling frames for their target population and should justify in Part B of their ICRs the frame they have chosen for their collection, its coverage, the mechanism for updating, how recently it has been updated, and what is done to assess or adjust for potential coverage errors.

29. Is a list of Internet subscribers available and acceptable for use as a sampling frame?

There currently are no unduplicated lists of Internet users from which to draw a probability sample (see question #30). In other words, there is no sampling frame available for Internet users or those with Internet access. Furthermore, unlike telephone numbers, there is no set format for e-mail addresses that could be used to generate meaningful addresses to construct a sampling frame for those addresses. Currently, lists of e-mail addresses that are commercially available tend to have unknown coverage for most target populations or consist of persons who

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9 Blumberg, S., Cynamon, M, Lake, J., & Frankel, M. (2006). Recent trends in household telephone coverage in the United States. Paper presented at the Second International Conference on Telephone Survey Methodology, Miami, Florida.

have self-selected or volunteered to participate in studies; thus, these lists represent convenience samples (see question #35).

Recent estimates are that more than 50 percent of households have Internet access at home.[10] Despite the increasing rate of Internet access in the U.S., there remain systematic differences in socio-demographic characteristics between those who have access to the Internet at home and those who do not. Thus, there are significant coverage errors in any sampling frame composed only of those who have access to the Internet, which could lead to biased estimates when generalizing to the national population.[11]

In some cases, an agency may have e-mail addresses from its list frame for the target population that could be used for a census or sample survey. For example, administrative records of program participants may include a variety of means of contacting participants including their e-mail addresses. In this case, the coverage of the sampling frame is based on the characteristics of the frame the agency has and the specific target population; it does not use or require an Internet sampling frame.

The limitations for coverage and sampling of current lists of Internet users means that agencies should consider using any Internet sampling frame only for exploratory purposes, such as part of a pretest (if the main study will have a response option via the Internet), or in other instances where a convenience sample would be appropriate (see question #35). However, these limitations of the Internet for sampling do not imply that the Internet cannot be used as one mode of collecting survey data in a mixed-mode collection (see Modes of Collection), but rather that it is not suitable for drawing a probability sample that can be generalized to a target population. When used simply as a mode of collection, Internet surveys can provide a convenient means for respondents with Internet access to respond to a survey. Using the Internet simply as a mode of data collection, rather than as a sampling frame, is further addressed in question #43.

30. What is an appropriate sample design to ensure the sample drawn represents the population of interest?

When a subset of the population is chosen randomly such that each unit has a known nonzero probability of selection, the sample is called a probability sample. For the purpose of making estimates with measurable sampling error that represent a population, the sample must be selected using probability methods (however, also see question #31 for a discussion of cut-off samples that are able to measure estimation error). These methods require that each case in the population has some known nonzero probability of being included in the sample. For example, an agency can randomly select a sample of 500 customers from a complete list of 10,000 customers by drawing their names out of a hat. This is commonly referred to as a simple random sample (SRS). In a simple random sample, every case in the population (i.e., each of the 10,000

10 National Telecommunications and Information Administration (NTIA) (2004). *A Nation Online: Entering the Broadband Age.* Washington, DC. This and earlier reports available online at www.ntia.doc.gov/reports/anol/index.html.

11 These coverage problems do not necessarily apply to panels or other studies that use some other sampling frame (such as RDD) to recruit panel members and then provide them with Internet access, see question #34.

customers) has the same probability of being selected. Although SRS is rarely used in practice, there are other probability methods that may involve stratifying and/or clustering the sample or involve unequal probabilities of selection (e.g., a design that intentionally oversamples minorities or includes with certainty large businesses that account for a high volume) that are often used in the design of Federal surveys (see question #32). As long as there is a probability mechanism used in selecting the cases (and every unit is given a nonzero chance of selection), samples constructed in this manner can allow the agency to estimate the characteristics of the population from which they were drawn with a known level of sampling error. Non-probability samples do not have this property.

When selecting a sample design, agencies need to consider how the information will be used and what generalizations are intended, and agencies need to explain in their ICRs how they will generalize the results of a survey. Agencies must have a statistical basis for generalizing the results beyond the particular sample selected and need to consult a sampling statistician in designing their sample for their survey. Agencies conducting surveys that are intended to produce valid and reliable results that can be generalized to the universe of study, but are not based on probability methods, must clearly justify the statistical methodology (e.g., see question #31) in Part B of the ICR. Otherwise, OMB cannot approve the collection.[12]

31. Are probability samples always the best for surveys of establishments?

Although a probability sample drawn from the general population is the best way to represent a population of individuals or households, it can be more efficacious to employ other sampling methods, such as cut-off samples, when the target population is businesses or other highly skewed populations. *Cut-off samples* are selected by ordering the universe of potential respondents by some important characteristic and selecting the units with the greatest amount of the characteristic until some specified percentage of the universe is included in the sample. A rule of thumb often used for cut-off samples is that the sample should cover 80 percent of the population total. This method gives an achieved sample that provides the minimum mean square error estimate for the total value of the variable used to specify the coverage. For highly skewed populations, such as those found in some establishment surveys, this method also provides the smallest possible sample. For example, an agency conducting a study of capital expenditures of manufacturers may “cut off” when the survey has received data from establishments with more than 80 percent of the revenues of the universe. Since the cutoff rule is based generally on estimates from a prior time period, the success of the cutoff rule is dependent on the level of stability in the estimates over time. In conjunction with a ratio based on a recent census survey of the population, this method is efficient, reduces respondent burden, and works well for estimating totals. However, it can be misleading if detail is needed on the smaller units, because they are more likely to be excluded from the sample.

Cut-off or other model-based samples are used for some economic surveys conducted by Federal agencies. Designing and using these samples requires that agencies have considerable information about the target population and statistical expertise in order to achieve estimates with smaller errors and biases than would be possible with a probability sample of the same size.

12 5 C.F.R. § 1320.5(d)(2)(v).

When the goal of the collection is to make an estimate for a target population, agencies need to provide a statistical justification in the ICR for using cut-off or other model-based samples that demonstrates that estimates of precision can be calculated and that the error of the estimates and potential biases are acceptably small.

32. What information should agencies provide about their complex sample designs?

Simple random samples (where all units and all equal-numbered combinations of units have the same probabilities of selection) are rare in practice for a number of reasons. Often they are not practical for many information collections because the sheer size of a universe listing and subsequent random sampling may be cost prohibitive. For example, it may be impractical for an agency wishing to survey and administer tests to high school students to select a simple random sample of students because there is not a comprehensive listing of all students in the United States, and even if there were, the costs of administering tests across the many sites where students were sampled could be prohibitive. Thus, other probability-based methods that employ multiple stages of selection, and/or stratification, and/or clustering are used to draw more practical samples that can be generalized with known degrees of sampling error. These samples are referred to as complex sample designs. To properly design and analyze data from these kinds of samples, agencies will need to consult with trained survey statisticians to accurately reflect the statistical effects of the design on the survey estimates.

Agencies need to consider tradeoffs between the cost and efficiency of different sample designs for their purpose, and should demonstrate why the particular design they have chosen is appropriate for their research questions and planned uses of the information. In their ICRs agencies should provide a complete description of the proposed sample design including a description of each stage of selection, a description and definition of the strata, including estimates of the size of the universe and the proposed sample by strata. Any clustering in the sample should also be described.

33. How large should a sample be for a statistical survey?

There are a variety of factors that will affect the size of the probability sample that an agency will need for a particular collection in order to obtain the quality of information that is needed. The size of a sample needed for an information collection is affected by a number of different factors including:

- degree of precision required--the significance level and confidence levels required for the estimates, and the acceptable margin of error;
- variability of the overall population on the key variables being measured;
- approximate values of the statistics that will be estimated, especially for proportions;
- type of estimate;
- sample design, e.g., the stratification and clustering of the sample;
- whether overall national estimates are the primary focus or whether estimates will also be made for subgroups—each subgroup must have adequate sample sizes; and

size of the overall population that estimates will describe.

Agencies will need to consult with trained survey statisticians to ensure that the sample size is adequate for its intended purposes. In Part B, agencies need to provide their precision requirements for the estimates they intend to produce from the survey to justify the sample size and the resulting respondent burden. Although overall national estimates are often the focus of Federal surveys, in many cases what is of greater analytic interest to the agency is either sub-national estimates or estimates for subgroups, e.g., different industries in an establishment survey or different income or education groups for a demographic survey. The precision requirements for estimates of these subgroups often drive the overall sample size that is needed, and therefore should be clearly documented in Part B of the ICR.

For illustrative purposes, Table 1 below provides a very general guide on sample sizes in the special case of a simple random sample and a survey variable that can be expressed as a percentage of the sample. The table provides 95 percent confidence intervals for different estimated percentages from the survey (shown in the first column) with different sample sizes of a simple random sample (shown on the second row across the columns). The size of the 95 percent confidence interval for each combination of survey estimates and sample sizes is shown in the body of the table. For example, if an item on a survey is selected by 50 percent of the respondents and the sample size is 400 respondents, the 95 percent confidence interval for this estimate would be 50 percent plus or minus 5.0 percent, or 45 percent to 55 percent. Values in this table are based on a simple random sample; many complex sample designs (see question #32), especially those using natural clusters, will typically require larger overall sample sizes to achieve the same level of precision.

Table 1. Half-Width 95 percent Confidence Intervals for Estimated Values of Percentages as a Function of Sample Size (for simple random samples)

Survey Estimate	**Sample Size**								
%	**50**	**100**	**200**	**300**	**400**	**500**	**700**	**1000**	**2000**
50	14.1	10.0	7.1	5.8	5.0	4.5	3.8	3.2	2.2
60	13.9	9.8	7.0	5.7	4.9	4.4	3.7	3.1	2.2
70	13.0	9.2	6.5	5.3	4.6	4.1	3.5	2.9	2.0
80	11.3	8.0	5.7	4.6	4.0	3.6	3.0	2.5	1.8
90	8.5	6.0	4.2	3.5	3.0	2.7	2.3	1.9	1.3
92	7.7	5.4	3.8	3.1	2.7	2.4	2.0	1.7	1.2
95	6.2	4.4	3.1	2.5	2.2	1.9	1.6	1.4	1.0

generalized to a target population, convenience samples can be useful for pilot research studies, testing of questionnaires, and some customer satisfaction surveys. Examples of convenience samples include shoppers at a mall, truck drivers visiting a weigh station, attendees at a conference, or visitors at a web site.

Quota samples are samples where units are selected nonrandomly based on a quota. The quota may be defined such that the final numbers of participating units with given characteristics have the same proportion as corresponding units have in the population. While the resulting quota sample may appear to be representative of the population for a set of characteristics, there is still an element of convenience—only those units that were the most ‘available’ become part of the sample. Also, there is no controlling for additional nonrepresentativeness that may exist in the sample for variables not used to define the quotas.

Expert choice samples are purposive samples in which an “expert” specifically chooses sample elements with certain characteristics to mimic ‘typical’ or ‘representative’ members of the population. In addition to the inability to determine the probability of selection associated with the sampled cases, this method can also produce entirely different types of samples depending on the opinions of the experts used.

Snowball samples are traditionally used to sample rare populations or populations that are hard to locate. A frame or sample for the rare population is created or identified by beginning with a set of units belonging to the target population, and asking this initial set to provide information on other members of this population. These units are then contacted for information that they may have on others in the population. This method of sampling is excellent for building a frame or creating a sample based on informal social networks and is often used for research or investigative purposes. For example, testing new questions on race with individuals of a particular background (e.g., Hmong) might be accomplished by finding some initial participants

Cochran, W. G. (1963). *Sampling Techniques.* New York: Wiley. (more technical)

Cohen, J. (1988). *Statistical Power Analysis of the Behavioral Sciences.* Hillsdale, NJ: Lawrence Erlbaum.

Hansen, M.H., Hurwitz, W. N., & Madow, W. G. (1953). *Sample Survey Methods and Theory.* New York: Wiley. (more technical)

Kalton, G. (1976). *Introduction to Survey Sampling.* Sage University Series on Quantitative Applications in the Social Sciences, 07-035. London: Sage.

Lee, E. S., Forthofer, R. N., and Lorimor, R.J. (1989). *Analyzing Complex Survey Data.* Sage University Series on Quantitative Applications in the Social Sciences, 07-071. London: Sage.

Levy, P. S. and Lemeshow, S. (1999). *Sampling of Populations: Methods and Applications.* New York: Wiley.

United States General Accounting Office (1992). *Using Statistical Sampling*, GAO/PEMD-10.1.6. Washington, DC.

MODES OF DATA COLLECTION

The purpose of this section is to provide an overview of the different modes for survey data collection and some of the strengths and limitations of each mode. Because the choice of mode affects and is affected by many other aspects of the survey design, the choice of mode or modes should be carefully considered by agencies, and they should consult with trained survey methodologists in selecting the appropriate data collection mode or modes given the survey's purpose.

36. What are the different modes of survey data collection?

The mode of data collection includes the way in which respondents are contacted and how their responses are obtained. The most commonly used data collection modes are in-person (or face-to-face), telephone, mail, and web (including e-mail). In-person and telephone surveys are typically interviewer-administered, while mail and web surveys are self-administered, though technology is creating new hybrids, such as self-administered telephone surveys using touchtone data entry (TDE) or interactive voice response (IVR). Although mail, telephone, and in-person surveys were traditionally conducted with a paper and pencil questionnaire, many Federal surveys now use some form of computer-assisted interviewing (CAI). Each mode of administration may be computer assisted: Computer-Assisted Telephone Interviewing (CATI), Computer-Assisted Personal Interviewing (CAPI), and Computer-Assisted Self-Interviewing (CASI).

There are a number of advantages of CAI. It allows for more complex questionnaire designs because CAI instruments can use answers from several questions to direct the interview through different series of questions, skip particular questions, and change question wording based on previous responses. Data quality may also be improved by including range and consistency checks into the instrument to help ensure that the correct information is being entered by the respondent or the interviewer. Furthermore, for longitudinal surveys, information provided previously by the respondent may be available to reduce respondent burde

37. What mode of data collection is appropriate for a given survey?

Each mode of data collection has inherent advantages and disadvantages, and there is no one best data collection mode for all situations. Selection of the mode requires consideration of many factors.

Specifically, agencies should consider the following statistical and nonstatistical issues when selecting a mode of collection:

Statistical issues in mode selection

mode for the given purpose of the survey, the use of the data, the characteristics of the respondent population, and available resources. Agencies must justify their choice of mode of data collection in their ICRs and provide details of their data collection methods in Part B of their supporting statements.

38. When should agencies consider a mixed-mode approach?

The two main reasons to consider using more than one mode of collection simultaneously are cost and response rates. The typical mixed mode approach is to use a less costly method for initial contact and a more costly mode for follow-up with nonrespondents, such as using a mail survey with telephone nonresponse follow-up or a telephone survey with an in-person nonresponse follow-up.

Using multiple modes often yields a higher response rate by offering alternative means to respond, so respondents may choose the mode that is most convenient for them; for example, some businesses may prefer to respond via the Internet rather than complete a paper questionnaire. A multimode survey can often be conducted at a lower cost than doing the entire survey using the more expensive mode. However, switching modes for a nonrandom subset of the sample (those who initially did not respond) may also introduce additional variability or bias due to mode effects. Using a mixed mode approach

40. What are the advantages and disadvantages of mail surveys?

Mail surveys have been particularly useful for mandatory household and establishment surveys. They are most appropriate when there is a good address list for a sampling frame. For example, both the Census Bureau and the Bureau of Labor Statistics have list frames of business establishments (the Census Bureau also has the master address file for households). Other Federal agencies may have administrative records of their program participants that serve as their sampling frames. Mail surveys have relatively low cost, and self-administration of the questionnaire improves response to sensitive questions, minimizing social desirability and interviewer biases. There is also evidence that question order effects are reduced in mail survey questionnaires. In addition, visual aids can be used with this mode.

There are a number of disadvantages of mail surveys. Mail surveys frequently can suffer from low response rates, especially for household surveys; therefore, they are often used in mixed mode surveys (see question #38) with follow-ups done via telephone or in-person. Furthermore, there may be more nonresponse bias in mail surveys because the respondent can look over the entire questionnaire before deciding whether to respond or not, increasing the likelihood that the decision to respond is based on his or her values on the key variables of the survey. Mail surveys require accurate mailing addresses, a longer data collection phase than other modes (usually

42. What are the advantages and disadvantages of in-person interviewing?

Area probability sampling and in-person interviewing provide the best coverage for household surveys, and are often considered the gold standard. Given adequate time and numbers of contact attempts, in-person interviews typically have the highest response rates. In-person interviews also allow the use of visual tools such as flash cards and calendars, and permit longer, more complex interviews to take place. In addition, the interviewer can make observations about the neighborhood of the household, or in establishment surveys, facility characteristics can be documented.

The primary disadvantage of in-person interviews is the high cost associated with sending an interviewer to households or business establishments to collect the data. Also, the data collection phase of the survey may take longer (or require a larger interviewing force) compared to other modes of collection. In-person interviewers may also face barriers in completing their assignments because some sampled addresses may be less accessible to interviewers, e.g., high rise buildings and gated communities, or be in high crime areas with greater risk to interviewer safety. Because in-person interviewers typically operate alone with much less supervision and control than is possible in more centralized telephone facilities, there may be greater interviewer variance in in-person surveys, and there are also greater opportunities for interviewer falsification of some survey items or entire interviews. Survey organizations typically conduct available, using the Internet can be a very inexpensive way to contact and remind respondents about completing the survey.

Similar to mail surveys, simple Internet surveys can be low cost, but data collection can be faster since reminders and responses can be sent and received without delay. The Internet offers the potential for presenting visual aids or even multi-media presentations of information to respondents, and self-administration of the questionnaire increases response to sensitive questions, while minimizing social desirability and interviewer biases. Like other modes that use computer administration, data processing time and cost may be reduced compared to paper and pencil surveys because data can be uploaded or captured directly into databases without additional keying. Data quality may also be higher because the instrument can contain built-in edits and prompts. However, more complex instru been entered. Also, visual aids cannot be used to help the respondent understand the question or the response options in a telephone interview. Complex and long sentences should generally be avoided in survey questions, but they are particularly difficult to understand over the telephone.

It is important that agencies test their survey questionnaires in all modes that they plan to use to collect information for the full-scale survey (see section on Questionnaire Design). Usability testing of computer survey instruments should also be included as part of questionnaire pretesting to identify problems either interviewers or respondents may have with the instrument (see question #48).

Useful Resources

Couper, M. P., Baker, R., Bethlehem, J., Clark, C. Z. F., Martin, J., Nicholls II, W. L., and O'Reilly, J. M. (1998). *Computer Assisted Survey Information Collection.* New York: Wiley.

Dillman, D. A. (2000). *Mail and Internet Surveys: The Tailored Design Method (2nd edition).* New York: Wiley.

Groves, R. M. (1989). *.0.0c6ErMTw 9.4).*

Interagency groups are occasionally formed to develop standardized questions on subjects that cut across many agencies. For example, an Interagency Committee on Measures of Educational Attainment has reviewed and recommended a set of standard categories for educational attainment.[17] More recently, an interagency committee on the American Community Survey has coordinated across agencies to share needs for information and to test alternative questions.[18]

On the other hand, asking previously used questions does not mean that the survey requires no pretesting. There is substantial evidence that the context of the question affects its performance; hence, pretesting is always needed.

47. When is it acceptable to duplicate questions used on other surveys?

In designing their information collections, agencies are expected to review existing studies to determine whether the information the agency needs exists elsewhere. Agencies are to describe the existing information in their ICRs and show specifically why the information already available cannot be used or modified for use. If the existing information will not fulfill the agency's needs, the agency should take advantage of the developmental work from existing collections to inform the design of its information collection.

Using questions from well-established national data collections such as the Current Population Survey, the Decennial Census, the Medical Expenditure Panel Survey, the National Crime Victimization Survey, or the National Health Interview Survey helps assure comparability of results. Reasons for using the same questions include benchmarking the responses of one survey to another, or obtaining comparable information from a different population or from the same population at a different time period. In their ICRs, agencies should clearly document the source for questions that were taken from other surveys.

48. What techniques can be used to develop new questions?[19]

Developing effective new questions is often more difficult than most people anticipate, especially if the questionnaire designer is not experienced with survey measurement. Agencies immersed in a topic are often surprised how little respondents know and care about the topic. Agencies may assume knowledge and points of view that respondents may not have. For example, respondents need to know what the intention of the question is so that they can answer it appropriately, and they may have difficulty understanding questions that use technical or unfamiliar terminology. Questions need to be developed so that respondents can answer the question and provide useful data for the agency. The following survey research methods can be used to develop and pretest new survey questions:

Focus Groups
Focus groups are often a useful first step in questionnaire development. Typically, a moderator will guide participants in a focus group discussion on the topics related to the subject area of the survey. Participants are encouraged to talk using their own terms and experiences and react to what others have said. In fact, it is often the interaction among participants that provides the most useful insights. Agencies can learn the language that respondents use when discussing the topic and integrate more common terms and phrases into the design of survey questions.

Focus groups often serve as a way to test the ease of completing a self-administered questionnaire. After completing the questionnaire individually, the group discusses the experience with overall direction from the moderator. This provides information about the appearance and formatting of the questionnaire in addition to content problems.

Finally, focus groups can be very effective in the ultimate design of surveys that ask about sensitive topics. Asking sensitive questions in a survey environment can be especially awkward, and discussions among focus group participants can provide useful information on appropriate wording, terms, and phrases that respondents will not find offensive.

Pre-Survey Design Visits for Establishment Surveys
Visiting a respondent's place of business to review plans for a new survey or major changes in an existing survey can be very useful in improving the final design of a questionnaire. These visits generally involve discussions with a potential respondent on the following topics:

> Does the respondent keep the data that the agency wants?
> How closely does the establishment's record keeping correspond to the required survey data?
> How compatible are these record keeping systems with the agency's collection instruments?
> How difficult will it be to provide the data in the time period needed by the agency?

These visits can help in the preliminary stages of survey development to ensure that the data collectors will design a survey that respondents can complete and that will obtain useful and usable information that corresponds to the agency's data needs.

Cognitive Interviews
The goal of cognitive interviews is to gain insight into how respondents think about and interpret the survey questions. In classical cognitive interviews, this is done by asking respondents to think aloud as they answer questions (concurrent think aloud) and to identify anything that confuses them. Respondents are often asked to paraphrase a question so that researchers learn whether a respondent understands the question and interprets it as intended. If the same paraphrased wording is used by several respondents, it might suggest a better wording of the question. Cognitive interviews can also include in-depth retrospective debriefings during which the interviewer asks a series of probes after the completion of the survey.

A key benefit of using cognitive interview methods is that researchers can quickly diagnose problems, revise question wording to solve problems and conduct additional interviews to see if many, or whether the problem reflects the interviewer's own preference or understanding of the question rather than respondent confusion. In addition, experienced interviewers sometimes change the wording of problem questions as a matter of course to make them work, and may not even realize they have done so.

Split Panel Designs
In a split panel field test, respondents are randomly assigned into different groups to receive different versions of the questions. This is a very useful method for comparing two (or more) different versions of the same question or testing question-order effects because the responses can be compared between the different panels to examine the potential impact of the change on survey estimates.

Behavior Coding
Behavior coding focuses on the overt behavior of interviewers and respondents as they interact during the survey interview. Although behavior coding can be done by an evaluator in real time during the interaction between the interviewer and respondent, frequently the interaction is recorded and then coded by one or more evaluators. There are a variety of coding systems that reflect errors made by the interviewer and difficulties the respondent has with the questions. Because it is a quantitative method, a relatively large number of interviews need to be coded and statistical summaries created to identify problematic questions.

Data Review
A data review of the pilot test results is conducted to identify questions that have higher than expected or desired levels of non-response (either don't knows or refusals). High item nonresponse in a pilot test could indicate poor question wording, generally unavailable data, or non-applicability of the question to a significant subset of respondents. Because data review involves examination of quantitative results from the pilot test, larger numbers of respondents may be needed with more complex instruments to ensure that an adequate number of respondents are asked each question.

50. What do agencies need to do to obtain clearance for pretesting activities?

Pretesting activities, including cognitive interviews and focus groups, must comply with requirements of the PRA, which are detailed in 5 C.F.R. § 1320. Although agencies do not need OMB approval to test draft questionnaires when they are administered to fewer than 10 persons, agencies must obtain approval to conduct iterative testing of the

Agencies that plan to do pretesting activities, including cognitive interviews and focus groups, can obtain OMB approval in one of two ways. First, the pretesting activities can be described and submitted as part of the ICR for the final survey. When this approach is used, OMB approval usually includes a term of clearance that the agency must report to OMB the results of the pretesting and any changes to the survey instrument that were made based on the findings. Alternatively, the agency can submit a separate ICR just for the pretesting activities, and later submit an ICR for the final survey that reflects the results of the pretest. Agencies usually do the latter when the pretest involves a design that is complex, includes large numbers of respondents, or has a relatively high response burden. Agencies also should submit the pretest separately from the full-scale collection when little has been decided about the design of the final survey when the pretesting is planned.

51. What is a generic clearance for pretesting activities?

Agencies that regularly do pretesting and development work for multiple surveys have found it beneficial to obtain a generic clearance specifically for these kinds of studies. Once the overall generic clearance is obtained on the pretesting activities and methods that will be used (e.g., cognitive interviews, focus groups, respondent debriefings, etc.) through the normal clearance process, agencies can submit abbreviated collection requests on the specific questions to be tested and obtain expedited OMB review (often within 10 working days) of the specific study, which can greatly facilitate ongoing and iterativej0 Tc 02(l cleara>T0 1 Tfc0cdo the)Tj-0.001 Tw000 -Pcd(4 pre

Presser, S., Rothgeb, J., Couper, M.P., Lessler, J.T., Martin, E., Martin, J., & Singer, E. (2004). *Methods for Testing and Evaluating Survey Questionnaires*. Hoboken, NJ: Wiley.

Sirken, M. G., Herrmann, D. J., Schechter, S., Schwarz, N., Tanur, J. M., and Tourangeau, R. (1999). *Cognition and Survey Research.* New York: Wiley.

U.S. Bureau of the Census (July 25, 2003). *Census Bureau Standards: Pretesting Questionnaires and Related Materials for Surveys and Censuses.* Washington, DC: U.S Bureau of the Census.

Willis, G. B. (2005). *Cognitive Interviewing: A Tool for Improving Questionnaire Design.* Thousand Oaks, CA: Sage.

STATISTICAL STANDARDS

The purpose of this section is to provide an introduction to the statistical standards that OMB has issued and that agencies must utilize if the standards apply to the information the agency is collecting. In section A.7 of the supporting statement, agencies certify in their ICRs that they are not using a statistical classification not approved by OMB, or they must request a waiver of the applicable OMB standard with a justification for not using the approved classification.

52. What are OMB statistical classifications, definitions, and data sources?

Under the PRA, OMB is charged with developing and overseeing the implementation of government-wide policies, principles, standards, and guidelines concerning statistical collection procedures and methods. Statistical classifications, definitions, and data sources encourage uniformity in data collection, analysis, and dissemination. They are designed and managed to support the full range of research and analytical objectives in a specific subject matter area rather than the needs of a specific program or a specific study. The general criteria OMB has for evaluating the standards have been relevancy, accuracy, currency, efficiency, minimization of burden, and stability ("continuity" and/or "comparability"). There is a clear trade-off between currency and stability; typically, revisions to these standards have been no more frequent than once every five years or longer. However, annual updates of statistical areas are issued based on Census Bureau population estimates.

OMB currently has a number of different statistical classifications for demographic, economic, and geographic data, including data on race and ethnicity, industries, occupations, and statistical areas described 21.u(Ce-eTailtify inionllowcludhan)TJ0.0002 Tc -0.0027 8 593.045 0 t requpatting. addillectith

Classifications that have been updated after 1980 are available at www.whitehouse.gov/omb (Go

and five categories for data on race collected from individuals:

American Indian or Alaska Native,
Asian,
Black or African American,
Native Hawaiian or Other Pacific Islander, and
White.

Note: "other race" is not a response category.

Respondents are to be offered the option of selecting one or more racial designations. Based on research findings, the recommended forms for the instruction are *Mark one or more, Select one or more, or Choose one or more* (not check all that apply).

The mode of administration should be taken into account when designing the exact wording of the question. For example, face-to-face surveys permit the use of flashcards with a listing of the racial categories, whereas a telephone administration must rely on the interviewer reading each of the categories. Examples of questions for different modes are provided in the *Provisional Guidance on the Implementation of the 1997 Standards for Federal Data on Race and Ethnicity*.[26]

OMB. If an agency pledges c

CIPSEA imposes strict requirements on agencies to fulfill the pledge of confidentiality. Agencies planning to use CIPSEA should consult with OMB to obtain guidance on all of the requirements, including the CIPSEA pledge, data security, use of agents, etc.[40]

60. If an agency does not collect data under CIPSEA, how can it protect the confidentiality of the data?

CIPSEA cannot be used to protect data if an agency plans to use the data for nonstatistical purposes, which include the use of information in identifiable form for anything other than a statistical purpose, such as any administrative, regulatory, law enforcement, adjudicative, or other purpose that affects the rights, privileges, or benefits of a particular identifiable respondent.[41] However, the agency may be able to use other legal authority to protect the confidentiality of the data it has gathered. Other general Federal Government statutes that affect the confidentiality of information include the Privacy Act of 1974 and the Freedom of Information Act (FOIA). The Privacy Act can be useful in helping to ensure the confidentiality of information collected about private individuals.

The Freedom of Information Act establishes the public's right of access to Federal records. However, FOIA does have nine exemptions allowing agencies to withhold certain types of information from release. A key FOIA exemption (b)(4)[42] allows an agency to withhold information when public release would cause substantial competitive harm. This exemption is useful when collecting proprietary information from businesses or other organizations that might be harmed if the information were publicly released. Agencies have also relied upon the Privacy Act and FOIA in some circumstances to prevent the release of information that was collected primarily for statistical and research purposes.

Agencies have also used contracts with data collection contractors to protect the confidentiality of their data. Agencies can specify in contracts that only aggregate results from the survey can be given to the sponsoring agency, and that the agency does not own and cannot receive identifiable microdata. This kind of third-party collection may also increase participation from respondents who might be hesitant to provide some kinds of information directly to an agency. For example, prior to CIPSEA, the Energy Information Administration used this kind of arrangement for the household survey on Residential Energy Consumption because the agency had no statutory authority to protect this information from release. This kind of arrangement can limit the kinds of analyses the agency can do, but may be necessary to protect the confidentiality of respondent data.

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40 Please contact the Statistical and Scie

61. What must be done to protect data that are gathered under a pledge of confidentiality?

Agencies need to employ administrative, operational, and technical procedures to protect any data collected under a pledge of confidentiality. Administrative procedures include keeping the data in a secure environment with access limited to approved individuals. Operational procedures may include the administration of a survey in a secluded area, protection of survey forms in the possession of an interviewer, and so forth. Technical procedures are also required to ensure that data or results released do not reveal individually identifiable data.

RESPONSE RATES AND INCENTIVES

The focus in this section is on unit nonresponse or the failure to obtain any information from a selected sample member. Item nonresponse, or the failure of a respondent to respond to a specific survey item, is also discussed briefly. Nonresponse affects all surveys to varying degrees, and agencies need to consider the potential impact of nonresponse on the quality of information obtained from the survey. This section provides guidance on improving response rates and assessing potential nonresponse bias. Agencies should consult with trained survey

Response Rates

that is eligible. This proportion may be estimated as part of the collection process, with the most common estimate of x being (c + e) / (c + e + i). The response rate is defined as

$$\text{Response rate} = c / (c + e + x\,u).$$

In the above formula,

- the denominator includes all original survey units that were identified as being eligible, including units with pending responses with no data received, post office returns because of "undeliverable as addressed," and new eligible units added to the survey. The denominator does not include units deemed out-of-business, out-of-scope, or duplicates.
- the numerator includes all survey units that have submitted all the required items for the report period.

The response rate formula above is unweighted because every case is treated equally. An unweighted response rate is used to measure the proportion of the sample that resulted in useable information for analysis, and it is a useful indicator of field performance. A weighted response rate can be defined as the proportion of the survey population for which useable information is available. In some instances, the two response rates may result in identical values (if a census is taken or if a sample is selected with equal probability (see question #64).

64. When should weighted response rates be reported?

As noted in question #63, unweighted and weighted response rates may result in different values if a sample is selected with different probabilities of selection as the result of oversampling or undersampling specific subpopulations. Oversampling or undersampling of specific subpopulations occurs when the sample size for a specific subpopulation is increased (relative to

The studies noted above reflect a snapshot of response rates at a particular point in time. More recent, but less systematic observations suggest that response rates have been decreasing in many ongoing surveys in the past few years. Some evidence suggests these declines have occurred more rapidly for some data collection modes (such as RDD telephone surveys) and are more pronounced for non-government surveys than Federal Government surveys. Generally, these declines have occurred despite increasing efforts and resources that have been expended to maintain or bolster response rates. It is likely that agencies will need to increase attention to their survey methods and expand innovations to continue to ensure that information gathered through Federal statistical surveys yields high quality, useful information.

The next few questions and answers are intended to help agencies evaluate their response rates, improve survey methods through the sharing of best practices, and assess potential nonresponse bias using a variety of methodologies.

66. What are acceptable response rates for different kinds of survey collections?

The 2001 OMB study of information collections described in question #65 clearly shows that the majority of Federal statistical surveys achieve good response rates. Response rates are an important indicator of the potential for non-response bias (see question #62). Clearly, the lower the response rate, the greater the caution or risk that bias can occur. Therefore, agencies should strive to obtain the highest practical rates of response, commensurate with the importance of survey uses, respondent burden, and data collection costs. Agencies should also plan additional efforts to study non-response bias if projected response rates suggest the potential for bias to occur.

An agency's justification for a survey response rate should reflect, at least in part, the intended use of the data. For example, surveys collecting influential information or information that will otherwise have a substantial impact on an agency's programs or policies should be designed to minimize all sources of survey error (see question #20), including nonresponse bias. As defined in OMB and agency Information Quality Guidelines, "influential" means that "an agency can reasonably determine that dissemination of the information will have or does have a clear and substantial impact on important public policies or important private sector decisions." The Information Quality Guidelines require that agencies hold the information they designate as "influential" to a higher standard of reproducibility and transparency than information that is not defined as influential under the Information Quality Guidelines (see also question #18). Agencies need to document in their ICRs the importance and use of the information and the methods they will use to achieve acceptable response rates for their collections.

In their ICRs, agencies need to report expected response rates for their surveys, which should reflect the overall unit response rate as calculated in questions #63 and #64. For ongoing surveys, the most recent actual achieved response rates should also be reported. As noted in question #62, agencies should use expected response rates as an indicator of potential risk for nonresponse bias. Agencies are encouraged to carefully consider how they can use current and new methodological tools to maximize data quality and minimize nonresponse bias. ICRs for surveys with expected response rates of 80 percent or higher need complete descriptions of the

Has the agency considered ways to promote awareness of the survey? Agencies should utilize their websites and consider obtaining the endorsement of stakeholders, interest groups, and community leaders. The agency may want to conduct outreach sessions with presentations in several cities or provide news releases to trade journals, state associations, and other interested parties. It may also be possible to engage the local media for localized surveys.

What mode of administration is being used? Has the agency carefully considered the use of more than one collection mode, e.g., following up nonrespondents to a mail survey with telephone calls, to improve response rates?

Is the questionnaire well-designed with use

Agencies should plan to evaluate potential nonresponse bias if they expect response rates may fall below the levels noted in question #66; these plans should be described in their ICRs. When agencies are gathering influential information (under OMB information quality guidelines) or other information with a substantial impact on programs and policies that requires high precision, agencies should consider examining potential nonresponse bias even when normally acceptable response rates are achieved.

Because nonresponse bias is particular to each survey estimate, it is possible that some survey estimates are unbiased while others have a great deal of bias. Therefore, it is important that agencies attempt to assess nonresponse bias on key survey estimates. For example, a survey on willingness to pay for some environmental improvements should assess bias on the key estimate of willingness to pay (or something highly related to it); it is not sufficient for an agency to simply look at the demographic composition of the sample compared to, for example, the latest official Census figures and, if similar, conclude there is no nonresponse bias. Similarly, agencies cannot simply assume that because the demographic composition of their achieved sample was close to the composition of the decennial census before adjustment, that there is no bias on the other substantive survey variables or that making the weighting adjustments to the demographic composition of the sample will eliminate nonresponse bias in the other variables.

Agencies should consult with professional statisticians and survey methodologists to ensure that potential nonresponse bias is addressed in the design of the study as options are far more limited sample co2TEMCT*(-0.Tc bm-0lishh)6(e k745 0 T BT/[s 1 Tf12 0 0 12 60.7 0 12 72 460.56 Tm( )TjETEMC /P

When there are no good sources of information about respondents and nonrespondents on the substantive variables of interest, agencies can also use additional follow-up procedures with an abbreviated questionnaire to estimate the characteristics of nonrespondents on some key variables of interest. Sometimes these follow-up studies are done by selecting a probability sample of nonrespondents for extensive and more expensive efforts on a smaller sample that are then used to estimate the characteristics of all nonrespondents and compare to respondents.

Agencies can also assess potential nonresponse bias by analyzing differences between respondents and initial refusals (who were later “converted”) or conduct analyses of key estimates by levels of effort to obtain the response (e.g., the number of reminders sent for a mail survey or the number of calls made in a telephone survey).

Finally, agencies can also evaluate and compare different methods of nonresponse weighting adjustments using additional variables and information noted above to see what impact these have on the key survey estimates.

All of the above methods have va

Because of the multiple stages of initiation of a prospective panel member and the resulting opportunities for nonresponse, different biases due to nonresponse may enter into the panel at different stages. For example, those who ag

Complex study design: Some studies require ongoing participation of various respondents, each of whom is important to the achievement of study goals. For example,

ANALYSIS AND REPORTING

The focus of this section is on the documentation that agencies need to provide in their ICRs on their plans for analyzing and reporting the information they will collect in their survey.

77. What information should agencies include in their analysis plans?

In their ICRs agencies need to provide information on their plans for analyzing and publishing the information they are collecting. The analysis plans should include a description of the statistical methods as well as any other relevant model or analytic plan that will be used to address the research questions or purposes for which the information was collected.

With respect to statistical methods, agencies should specify the estimation methods they will use, including any use of weighting. Agencies should clearly describe how weights will be derived and any adjustments that will be made to the weights to minimize potential nonresponse or coverage errors. When analyzing data from a complex survey design, agencies must ensure that appropriate statistical methods and software are used so that accurate estimates and associated variances or standard errors of those estimates are reported. For complex sample designs, specialized software is necessary that takes into account the sample design in estimating the variances. The statistical methods and software should be clearly identified in the ICR.

Often, research questions involve comparisons between groups or subgroups. Agencies should specify what statistical tests will be used to assess potential differences between the groups. The information collection should be designed with an appropriate sample size so that planned comparisons between groups or subgroups have adequate statistical power to statistically detect the differences between the groups or subgroups that are likely to exist (see question #33). Agencies should provide a power analysis in their ICRs to justify the sample size when key analyses involve comparisons among groups or subgroups (this may be included in Part B of the ICR in the justification for sample size).

When possible, agencies should include table shells or actual results from prior collections to show how the information will be presented. If detailed estimates by subgroups are planned, agencies should also describe criteria that are used to determine the amount of detail that is published in a table or figure. For example, agencies should consider criteria such as a minimum sample size, precision of the estimate, or potential disclosure risk (see question #61) in publishing estimates in tables.

Sometimes, agencies use the data gathered from a survey as inputs to models (e.g., economic forecasting models, biomechanical models) to conduct analyses. For recurring collections, agencies should submit information on the relevant models with sufficient details to allow OMB to assess the practical utility of the data being collected. For one-time collections, agencies should submit as much information as possible on the tentative models and analytic plans.

78. What predissemination review do agencies need to do for reports based on surveys or statistical collections?

Agencies are responsible for the quality of the information that they disseminate and must institute appropriate review procedures to comply with OMB and agency Information Quality Guidelines. Agencies proposing information products that involve reporting results from surveys or other statistical collections should include as part of their review process a statistical and methodological review to ensure that appropriate statistical methods are used and reported. The reviewer should have appropriate expertise in the methodology that is used, and should be provided with sufficient technical documentation to evaluate the information in the report (See OMB Peer Review Bulletin).[47]

The statistical and methodological review should include an evaluation of the suitability of the statistical methods used, the accuracy of the assumptions and limitations of the data, and the appropriateness of the conclusions and technical recommendations (from a statistical perspective). The statistical and methodological review should also include examination of presentations of data in tables or figures as well as examination of any public use datasets that are released. Agencies must en te revF.00lte 8s1 T6.965Dy o1 Tc 0 6#61(pers#61(pers 5)TjETE s#676.48m)8(i

STUDIES USING STATED PREFERENCE METHODS

The focus of this section is on surveys that use stated preference methods, which are frequently used in regulatory analyses by Federal agencies. Generally, the same requirements described throughout this guidance for surveys collecting influential information apply to these surveys; however, some of these considerations are highlighted in this section with particular illustrations for this type of survey.

79. What are stated preference methods?

Stated Preference Methods (SPM) have been developed and used in the peer-reviewed literature to estimate both “use” and “non-use’ values of goods and services. They have also been widely used in regulatory analyses by Federal agencies, in part because these methods can be creatively employed to address a wide variety of goods and services that are not easy to study through revealed preference methods.

The distinguishing feature of these methods is that questions about the use or non-use value of a good are posed to survey respondents in order to obtain willingness-to-pay estimates relevant to benefit or cost estimation. Some examples of SPM include contingent valuation, conjoint analysis, and risk-tradeoff analysis. The surveys used to obtain the health-utility values used in cost effectiveness analysis are similar to stated preference surveys but do not entail monetary measurement of value. Nevertheless, the principles governing quality stated preference research, with some obvious exceptions involving monetization, are also relevant in designing quality health-utility research.

80. What should agencies consider when designing questions for stated preference studies?

Stated Preference Methods have been developed and used to estimate both “use” and “non-use” values of goods and services. Because these methods pose hypothetical questions about use or non-use values to survey respondents in order to obtain willingness-to-pay estimates relevant to benefit or cost estimation, the following principles should be considered when designing these questions:

> the good or service being evaluated should be explained to the respondent in a clear, complete and objective fashion, and the survey instrument should be pre-tested;
> willingness-to-pay questions should be designed to focus the respondent on the reality of budgetary limitations and on the availability of substitute goods and alternative expenditure options; and
> the survey instrument should be designed to probe beyond general attitudes (e.g., a "warm glow" effect for a particular use or non-use value) and focus on the magnitude of the respondent's economic valuation.

In addition, the results from the questions should be consistent with economic theory using both "internal" (within respondent) and "external" (between respondent) scope tests such as the willingness to pay is larger (smaller) when more (less) of a good is provided.

The challenge in designing quality stated preference studies is arguably greater for non-use values and unfamiliar use values than for familiar goods or services that are traded (directly or the statistical and econometric methods used to analyze the collected data should be transparent, well suited for the analysis, and applied with rigor and care.

More detailed guidance on regulatory analysis is provided in OMB Circular No. A-4.[48]

48 See www.whitehouse.gov/omb/circulars/a004/a-4.pdf.

Glossary of Abbreviations

ACASI	audio computer assisted self interview
AAPOR	American Association for Public Opinion Research
CAI	computer assisted interview
CAPI	computer assisted personal interview
CASI	computer assisted self interview
CATI	computer assisted telephone interview
CDAC	Confidentiality and Data Access Committee
CFR	Code of Federal Regulations
CIPSEA	Confidential Information Protection and Statistical Efficiency Act
CPS	Current Population Survey
FCSM	Federal Committee on Statistical Methodology
FOIA	Freedom of Information Act
GPEA	Government Paperwork Elimination Act
ICR	Information Collection Request
IQG	Information Quality Guidelines
IVR	interactive voice response
MSA	Metropolitan Statistical Area
NAICS	North American Industry Classification System
PRA	Paperwork Reduction Act
OMB	Office of Management and Budget
RDD	random digit dialing
RIA	regulatory impact analysis
SDL	statistical disclosure limitation
SIC	Standard Industrial Classification
SIPP	Survey of Income and Program Participation

Glossary of Terms

-A-

Administrative records are information kept by business establishments, institutions, and governments primarily for their own purposes in running their business or program. Respondents may need to refer to these records in order to answer questions on Federal surveys.

-B-

Behavior coding is a technique used for pretesting that involves monitoring the interaction between interviewers and respondents (often through reviewing tape recordings) and coding certain behaviors, such as the interviewer misreading the question or a respondent asking for clarification, in order to identify problem questions.

Bias is the deviation of the average survey value from the true population value. Bias refers to systematic errors that affect any sample taken under a specific design with the same constant error.

-C-

A **case study** is a method for learning about a complex instance, based on a comprehensive understanding of that instance obtained by extensive description and analysis of that instance taken as a whole and in its context.

A **census** survey is a survey of the entire universe or target population that is of interest.

Clustering refers to a sample design in which geographic groups are formed (clusters) for purposes of sampling in order to reduce the costs of interviewer travel.

Coding involves converting information into numbers or other symbols that can be more easily counted and tabulated.

Cognitive interviews are used to test and refine questionnaires. In a cognitive interview, respondents are required to report aloud everything they are thinking as they attempt to answer a survey question.

A **complex sample design** is one that involves multiple stages, stratification, unequal probabilities of selection or clustering.

Confidentiality involves the protection of individually identifiable data from unauthorized disclosures.

A **convenience sample** is a nonprobability sample that is drawn from units of the population of interest that are close at hand or willing to participate.

Coverage refers to the extent to which all elements on a frame list are members of the population, and to which every element in a population appears on the frame list once and only once.

Coverage error refers to the discrepancy between statistics calculated on the frame population and the same statistics calculated on the target population. <u>Undercoverage</u> errors occur when target population units are missed during frame construction, and <u>overcoverage</u> errors occur when units are duplicated or enumerated in error.

A **cut-off sample** is a nonprobability sample that consists of the units in the population that have the largest values of a key variable (frequently the variable of interest from a previous time period). For example, a 90 percent cut-off sample consists of the largest units accounting for at least 90 percent of the population total of the key variable. Sample selection is usually done by sorting the population in decreasing order by size, and including units in the sample until the percent coverage exceeds the established cut-off.

-D-

Data protection involves techniques that are used to insure that confidential individually identifiable data are not disclosed.

The **design effect (DEFF)** is the ratio of the true variance of a statistic (taking the complex sample design into account) to the variance of the statistic for a simple random sample with the same number of cases. Design effects differ for different subgroups and different statistics; no single design effect is universally applicable to any given survey or analysis.

Disclosure means the public release of individually identifiable data that were obtained under a pledge of confidentiality.

-E-

Editing is a procedure that uses available information and some assumptions to derive substitute values for inconsistent values in a data file.

An **eligible sample unit** is a unit selected for a sample that is confirmed to be a member of the target population.

An e**stablishment survey** is a survey of a business establishment.

Estimates result from the process of providing a numerical value for a population parameter on the basis of information collected from a survey and/or other sources.

Estimation is the process of using data from a survey and/or other sources to provide a value for an unknown population parameter (such as a mean, proportion, correlation, or effect size), or to provide a range of values in the form of a confidence interval.

Estimation error is the difference between a survey estimate and the true value of the target population.

An **experimental design** is a type of research design in which the researcher controls and manipulates conditions in order to assess the effect on some outcome of interest. Experiments are conducted when researchers want to be able to infer causality.

An **expert choice sample** is a nonprobability sample in which an “expert” specifically chooses sample elements with certain characteristics to mimic ‘typical’ or ‘representative’ members of the population.

-F-

In a **field test,** all or some of the survey procedures are tested on a small scale that mirrors the planned full-scale implementation.

A **focus group** involves a semi-structured group discussion of a topic.

Forecasting involves the specific projection that an investigator believes is most likely to provide an accurate prediction of a future value of some process.

A **frame** is a mapping of the universe elements (i.e., sampling units) onto a finite list (e.g., the population of schools on the day of the survey).
The **frame population** is the set of elements that can be enumerated prior to the selection of a survey sample.

-G-
A **gatekeeper** is a person who is between the interviewer and the respondent and may prevent the interviewer from gaining access to the respondent. In an establishment survey, secretaries or administrative assistants may control what mail and telephone calls reach a respondent and, thus, act as gatekeepers.

-H-
Honoraria are payments given to professional individuals or institutions for services for which fees are not legally or traditionally required in order to secure their participation. Thus, this term is more appropriately used for payments to physicians, CPAs, schools, administrators, teachers, and so forth. An honorarium is usually paid on the condition of a respondent's participation as a token of appreciation.
Hypothesis testing draws a conclusion about the tenability of a stated value for a parameter. For example, sample data may be used to test whether an estimated value of a parameter (such as the difference between two population means) is sufficiently different from zero that the null hypothesis, designated H_0 (no difference in the population means), can be rejected in favor of the alternative hypothesis, H_1 (a difference between the two population means).

-I-
Imputation is a procedure that uses available information and some assumptions to derive substitute values for missing values in a data file.
An **incentive** is a positive motivational influence; something that induces action or motivates

Interviewer bias refers to effects that interviewers may have that bias the survey results. One bias that may occur is that respondents will report fewer socially undesirable attitudes or behaviors to an interviewer.
Interviewer debriefing is a method used in pretesting in which interviewers are asked to report any problems that they perceived that respondents had with the questions in the survey instrument.
Item nonresponse occurs when a respondent fails to respond to one or more relevant item(s) on a survey.

-K-

Key variables include survey-specific items for which aggregate estimates are commonly published from a study. They include, but are not restricted to, variables most commonly used in census tract or block group within the county. The sample elements are then listed and finally selected for inclusion into the sample.

-N-

Nonprobabilistic methods are methods for selecting a sample that do not select sample elements such that each one has some known nonzero probability of being selected into the sample.

A **nonprobability sample** is a sample in which sample elements are not chosen so that each one has some known nonzero probability of being selected into the sample. Common examples of nonprobability samples are convenience sample, quota samples, and expert choice samples.

Nonresponse bias occurs when the observed value deviates from the population parameter due to differences between respondents and nonrespondents. Nonresponse bias is likely to occur as a result of not obtaining 100 percent response from the selected cases.

Nonresponse error is the overall error observed in estimates caused by differences between respondents and nonrespondents. It consists of a variance

testing, that is a laboratory or a very small-scale test of a questionnaire or procedure, or a **field test** in which all or some of the survey procedures are tested on a small scale that mirrors the planned full-scale implementation.

Probabilistic methods for survey sampling are any of a variety of methods for sampling that give a known, non-zero, probability of selection to each member of the target population. The advantage of probabilistic sampling methods is that sampling error can be calculated. Such methods include: random sampling, systematic sampling, and stratified sampling. They do not include: convenience sampling, judgment sampling, quota sampling, and snowball sampling.

A **probability sample** is a sample that is selected so that each sample member has some known nonzero probability of being selected into the sample.

Probability of selection in a survey is the probability that a given sampling unit will be selected, based on the probabilistic methods used in sampling.

Proxy responses are responses provided by anyone other than the respondent who is reporting for the respondent or providing information about the respondent. For example, parents often report for young children in surveys.

A **public-use data file or public-use microdata file** includes a subset of data that have been coded, aggregated, or otherwise altered to mask individually identifiable information, and thus is available to all external users. Unique identifiers, geographic detail, and other variables that cannot be suitably altered are not included in public-use data files.

-Q-

A **qualitative study** is one done with the goal of obtaining rich information and insight to describe or explore a phenomena through a variety of methods such as focus groups, case studies, in-depth interviews, and observations.

A **quasi-experimental design** is one in which the researcher is unable to assign persons randomly to conditions but is still able to have some control over the conditions.

A **quota sample** samples are samples where units are selected nonrandomly based on a quota. The quota may be defined such that the final numbers of participating units with given characteristics have the same proportion as corresponding units have in the population.

-R-

A **RDD survey** refers to Random Digit Dialing, which is a means of generating telephone numbers to select a random sample.

Refusal conversion refers to the practice of having interviewers call back (either on the telephone or in-person) a respondent who has refused and attempt to gain his or her cooperation in the survey. Often the most effective interviewers in an organization are selected to do refusal conversions.

Reinterview refers to asking usually only a small subset of respondents to take the survey again or answer a subset of the survey questions again. Reinterviews may be conducted to assess interviewers or statistical properties of questions in the survey.

Required response items include the minimum set of items required for a case to be considered a respondent.

Respondent burden is the estimated total time and financial resources expended by the survey respondent to generate, maintain, retain, and provide survey information.

represent the relative portion of the population that the unit represents. Weights may be adjusted for nonresponse.

A **weighted response rate** is the response rate calculated using the counts of the number of completed interviews, noncontacts, refusals, etc. taking into account the probabilities of selection for each case to measure the proportion of the sampling frame that is represented by the responding units.

Appendices

1. Agency/Subagency originating request

2. OMB control number

a. __ __ __ __ - __ __ __ __

b. __ __ __ __

3. Type of information collection *(check one)*

a.

b.

c.

d. , of a previously approved collection for which approval has expired

e. , of a previously approved collection for which approval has expired

f.

For b-f, note Item A2 of Supporting Statement instructions

4. Type of review requested *(check one)*

a.

b.

c.

5. Small entities

Will this information collection have a significant economic impact on a substantial number of small entities?

Yes

6. Requested expiration date

a.

7. Title

8. Agency form number(s) *(if applicable)*

9. Keywords

10. Abstract

11. Affected public *(Mark primary with "P" and all others with "X")*

a. __ Individuals or households

d. __ Farms

12. Obligation to respond *(Mark primary with "P" and all others that apply with "X")*

On behalf of this Federal agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9.

The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

(a) It is necessary for the proper performance of agency functions;

(b) It avoids unnecessary duplication;

(c) It reduces burden on small entities;

(d) It uses plain, coherent, and unambiguous language that is understandable to respondents;

(e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;

(f) It indicates the retention periods for recordkeeping requirements;

(g) It informs respondents of the information called for under 5 CFR 1320.8 (b)(3) about:

- (i) Why the information is being collected;
- (ii) Use of information;
- (iii) Burden estimate;
- (iv) Nature of response (voluntary, required for a benefit, or mandatory);
- (v) Nature and extent of confidentiality; and
- (vi) Need to display currently valid OMB control number;

(h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of the instructions);

(i) It uses effective and efficient statistical survey methodology (if applicable); and

(j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of these provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee	Date

Please answer all questions and have the Senior Official or designee sign the form. These instructions should be used in conjunction with 5 CFR 1320, which provides information on coverage, definitions, and other matters of procedure and interpretation under the Paperwork Reduction Act of 1995.

Provide the name of the agency or subagency originating the request. For most cabinet-level agencies, a subagency designation is also necessary. For non-cabinet agencies, the subagency designation is generally unnecessary.

a. If the information collection in this request has previously received or now has an OMB control or comment number, enter the number.

b. Check "None" if the information collection in this request has not previously received an OMB control number. Enter the four digit agency code for your agency.

a. Check "New collection" when the collection has not previously been used or sponsored by the agency.

b. Check "Revision" when the collection is currently approved by OMB, and the agency request includes a material change to the collection instrument, instructions, its frequency of collection, or the use to which the information is to be put.

c. Check "Extension" when the collection is currently approved by OMB, and the agency wishes only to extend the approval past the current expiration date without making any material change in the collection instrument, instructions, frequency of collection, or the use to which the information is to be put.

d. Check "Reinstatement without change" when the collection previously had OMB approval, but the approval has expired or was withdrawn before this submission was made, and there is no change to the collection.

e. Check "Reinstatement with change" when the collection previously had OMB approval, but the approval has expired or was withdrawn before this submission was made, and there is change to the collection.

f. Check "Existing collection in use without OMB control number" when the collection is currently in use but does not have a currently valid OMB control number.

a. Check "Regular" when the collection is submitted under 5 CFR 1320.10, 1320.11, or 1320.12 with a standard 60 day review schedule.

b. Check "Emergency" when the agency is submitting the request under 5 CFR 1320.13 for emergency processing and provides the required supporting material. Provide the date by which the agency requests approval.

c. Check "Delegated" when the agency is submitting the collection under the conditions OMB has granted the agency delegated authority.

Indicate whether this information collection will have a significant impact on a substantial number of small entities. A small entity may be (1) a small business which is deemed to be one that is independently owned and operated and that is not dominant in its field of operation; (2) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field; or (3) a small government jurisdiction which is a government of a city, county, town, township, school district, or special district with a population of less than 50,000.

a. Check "Three years" if the agency requests a three year approval for the collection.

b. Check "Other" if the agency requests approval for less than three years. Specify the month and year of the requested expiration date.

Provide the official title of the information collection. If an official title does not exist, provide a description which will distinguish this collection from others.

Provide any form number the agency has assigned to this collection of information. Separate each form number with a comma.

Select and list at least two keywords (descriptors) from the "Federal Register Thesaurus of Indexing Terms" that describe the subject area(s) of the information collection. Other terms may be used but should be listed after those selected from the thesaurus. Separate keywords with commas. Keywords should not exceed two lines of text.

Provide a statement, limited to five lines of text, covering the agency's need for the information, uses to which it will be put, and a brief description of the respondents.

Mark all categories that apply, denoting the primary public with a "P" and all others that apply with "X."

Mark all categories that apply, denoting the primary obligation with a "P" and all others that apply with "X."

a. Mark "Voluntary" when the response is entirely discretionary and has no direct effect on any benefit or privilege for the respondent.

b. Mark "Required to obtain or retain benefits" when the response is elective, but is required to obtain or retain a benefit.

c. Mark "Mandatory" when the respondent must reply or face civil or criminal sanctions.

a. Enter the number of respondents and/or recordkeepers. If a respondent is also a recordkeeper, report the respondent only once.

b. Enter the number of responses provided annually. For recordkeeping as compared to reporting activity, the number of responses equals the number of recordkeepers.

b1. Enter the estimated percentage of responses that will be submitted/collected electronically using magnetic media (i.e., diskette), electronic mail, or electronic data interchange. Facsimile is considered an electronic submission.

c. Enter the total annual recordkeeping and reporting hour burden.

d. Enter the burden hours currently approved by OMB for this collection of information. Enter zero (0) for any new submission or for any collection whose OMB approval has expired.

e. Enter the difference by subtracting line d from line c. Record a negative number (d larger than c) within parentheses.

f. Explain the difference. The difference in line e must be accounted for in lines f.1. and f.2.

f.1. "Program change" is the result of deliberate Federal government action. All new collections and any subsequent revision of existing collections (e.g., the addition or deletion of questions) are recorded as program changes.

f.2. "Adjustment" is a change that is not the result of a deliberate Federal government action. Changes resulting from new estimates or action not controllable by the Federal government are recorded as adjustments.

The costs identified in this item must exclude the cost of hour burden identified in Item 13.

a. Enter the total dollar amount of annualized cost for all respondents of any associated capital or start-up costs.

b. Enter recurring annual dollar amount of cost for all respondents associated with operating or maintaining systems or purchasing services.

c. Enter total (14.a. + 14.b.) annual reporting and recordkeeping cost burden.

d. Enter any cost burden currently approved by OMB for this collection of information. Enter zero (0) if this is the first submission after October 1, 1995.

e. Enter the difference by subtracting line d from line c. Record a negative number (d larger than c) within parenthesis.

f. Explain the difference. The difference in line e must be accounted for in lines f.1. and f.2.

f.1. "Program change" is the result of deliberate Federal government action. All new collections and any subsequent revisions or changes resulting in cost changes are recorded as program changes.

f.2. "Adjustment" is a change that is not the result of a deliberate Federal government action. Changes resulting from new estimations or actions not controllable by the Federal government are recorded as adjustments.

Mark all categories that apply, denoting the primary purpose with a "P" and all others that apply with "X."

a. Mark "Application for benefits" when the purpose is to participate in, receive, or qualify for a grant, financial assistance, etc., from a Federal agency or program.

b. Mark "Program evaluation" when the purpose is a formal assessment, through objective measures and systematic analysis, of the manner and extent to which Federal programs achieve their objectives or produce other significant effects.

c. Mark "General purpose statistics" when the data is collected chiefly for use by the public or for general government use without primary reference to the policy or program operations of the agency collecting the data.

d. Mark "Audit" when the purpose is to verify the accuracy of accounts and records.

e. Mark "Program planning or management" when the purpose relates to progress reporting, financial reporting and grants management, procurement and quality control, or other administrative information that does not fit into any other category.

f. Mark "Research" when the purpose is to further the course of research, rather than for a specific program purpose.

g. Mark "Regulatory or compliance" when the purpose is to measure compliance with laws or regulations.

Check "Recordkeeping" if the collection of information explicitly includes a recordkeeping requirement.

Check "Third party disclosure" if a collection of information includes third-party disclosure requirements as defined by 1320.3(c).

Check "Reporting" for information collections that involve reporting and check the frequency of reporting that is requested or required of a respondent. If the reporting is on "an event" basis, check "On occasion."

Check "Yes" if the information collection uses statistical methods such as sampling or imputation. Generally, check "No" for applications and audits (unless a random auditing scheme is used). Check "Yes" for statistical collections, most research collections, and program evaluations using scientific methods. For other types of data collection, the use of sampling, imputation, or other statistical estimation techniques should dictate the response for this item. Ensure that supporting documentation is provided in accordance with Section B of the Supporting Statement.

Provide the name and telephone number of the agency person best able to answer questions regarding the content of this submission.

The Senior Official or designee signing this statement certifies that the collection of information encompassed by the request complies with 5 CFR 1320.9. Provisions of this certification that the agency cannot comply with should be identified here and fully explained in item 18 of the attached Supporting Statement. NOTE: The Office that "develops" and "uses" the information to be collected is the office that "conducts or sponsors" the collection of information. (See 5 CFR 1320.3(d)).

A Supporting Statement, including the text of the notice to
the public required by 5 CFR 1320.5(a)(i)(iv) and its actual

existing economic or regulatory impact analysis
associated with the rulemaking containing the