**Summary of and Response to Comments on Office of Management and Budget**

**Standards and Guidelines for Statistical Surveys**

The Office of Management and Budget (OMB) issued proposed standards and guidelines for statistical surveys for public comment in July 2005 (70 FR 40746-40747). The proposed standards were based on recommendations from the Federal Committee on Statistical Methodology's (FCSM) Subcommittee on Standards for Statistical Surveys; OMB charged the FCSM subcommittee to update and revise OMB Statistical Policy Directive No. 1, Standards for Statistical Surveys, and OMB Statistical Policy Directive No. 2, Publication of Statistics. Six public comments were received in response to OMB's request. OMB reviewed the public comments on the standards and guidelines and made some modifications in response to the comments. This document provides a summary of the public comments, OMB's responses to those comments, and the resulting changes that were made to the standards and guidelines. The final standards and guidelines, the public comments, and this document are all available on the OMB website at http://www.whitehouse.gov/omb/inforeg/statpolicy.html.

GENERAL COMMENTS

One commenter suggested that OMB consider providing a checklist as an attachment or as a separate document that has only the standards to make it easier for users to see the 20 standards. Although OMB believes that the guidelines associated with each standard are key to assisting agencies in fulfilling and interpreting that standard, we have included a list of the standards alone at the beginning of the document for reference purposes.

One commenter suggested that the standards reference a multiagency initiative that is currently underway to define the Data Reference Model of the Federal Enterprise Architecture. The commenter acknowledged that this effort is still in draft phase and outside the scope of the proposed standards and guidelines, and for these reasons, OMB has not referenced this initiative in these standards.

One commenter noted that the standards and guidelines were heavily oriented toward the design, collection, and processing of survey data, but provided a more cursory treatment of estimates, analysis, review, and reports. OMB acknowledges that there is variability in the number of standards and associated guidelines in different sections; however, we disagree that the document provides a cursory treatment of estimates, analysis, review, and reports. Given the role of the standards and their applicability to a host of Federal agencies that conduct a wide range of statistical activities, OMB has tried to provide adequate guidance across all of the areas. In some areas, we believed it was important and necessary to provide more detailed guidelines, while in other areas the more detailed guidelines would, of necessity, need to be far more technical and specific than these standards and guidelines are intended to be. In the introduction to the standards and guidelines we note that:

> The standards and guidelines are not intended to substitute for the extensive existing literature on statistical and survey theory, methods, and operations. When undertaking a survey, an agency should engage knowledgeable and experienced survey practitioners to effectively achieve the goals of the standards. Persons involved should have knowledge

and experience in survey sampling theory, survey design and methodology, field operations, data analysis, and dissemination as well as technological aspects of surveys.

One commenter noted that it was unclear how these guidelines were to be interpreted in relation to the dissemination of estimates and reports prepared by U.S. statistical agencies based on statistical surveys conducted in other countries. It was not clear from this comment whether the commenter was referring to information designed and collected by U.S. statistical agencies or was referring only to the U.S. agencies disseminating information collected by foreign entities. These standards and guidelines apply to U.S. agencies designing and conducting statistical surveys. Agencies should be transparent as to the source of the information and what they know about the quality of the information they disseminate and should seek to follow the standards for any of the component activities that they perform with data collected by other entities.

INTRODUCTION

One commenter noted that the introduction referred to "key words" instead of "key terms" for each standard, and that a couple of the key terms were missing from the glossary. We made the editorial change and included the missing terms that were inadvertently not included in the glossary.

One commenter raised questions about what expectations OMB had with respect to agencies' following the proposed standards and guidelines and whether the standards were goals or whether agencies must adhere to them. The commenter went on to quote from the introduction that these standards are expected to be adhered to, but are subject to agency judgment, and, therefore, the commenter believed that the burden placed upon agencies in complying with these standards would seem to be minimal. A second commenter also noted that documenting the reasons a standard could not be met provides the agency with flexibility that is needed under tight budget and staffing conditions. All of the standards are requirements, and OMB expects that agencies will follow the standards for their statistical surveys. The guidelines are intended as best practices and guidance in ways to interpret and fulfill the standards, but they are not specific requirements. However, OMB recognizes that there are circumstances where an agency may not be able to meet a standard for a particular survey. We made some changes to the introduction to be clearer that agencies need to provide sufficient information in their information collection requests to OMB to demonstrate that they meet the standards or justify why a standard is not being met.

SECTION 1 DEVELOPMENT OF CONCEPTS, METHODS, AND DESIGN

Section 1.1 Survey Planning

One of the comments suggested that Standard 1.1 on survey planning did not clearly address the importance of duplication and overlap across surveys and that the standard should require that the written plan show that each survey must be assessed to ensure that it does not contain unnecessary duplication. OMB agreed with the comment and made the suggested change so that the standard now states: "Agencies initiating a new survey or major revision of an existing survey must develop a written plan that sets forth a justification, including: … steps taken to prevent unnecessary duplication with other sources of information…."

One comment suggested that guideline 1.1.2 should emphasize the reduction of unnecessary duplication. This suggestion was accepted, and the second item of the guideline now reads: "A review of related studies, surveys, and reports of Federal and non-Federal sources to ensure that part or all of the survey would not unnecessarily duplicate available data from an existing source, or could not be more appropriately obtained by adding questions to existing Federal statistical surveys…."

Several comments requested minor additions to Guideline 1.1.2, which provides a list of key planning and project management activities. One commenter suggested that we mention priorities within the goals and objectives, which are often critical in balancing opposing goals, such as accuracy of estimates vs. increased user requirements for more detailed estimates. The commenter stated that when the goals and objectives are both defined and prioritized at the planning stage, the balance of goals and resolution of conflicts can be prevented or resolved more readily and accounted for throughout the survey design and survey process. OMB agreed and included a parenthetical phrase in item 1 of this guideline so that it now reads: "A justification for the survey, including the rationale for the survey, relationship to prior surveys, survey goals and objectives (including priorities within these goals and objectives), hypotheses to be tested, and definitions of key variables…." to address the comment.

An additional item was also added to guideline 1.1.2 based on a comment that OMB include the preservation of data, documentation, and data products over time. The new item includes as a key planning and project management activity: "A data management plan for the preservation of survey data, documentation, and information products as well as the authorized disposition of survey records."

Finally, in response to another request, a cross-reference to section 5.1 on Analysis and Report Planning was added to item 8, which covers analysis plans, to parallel the citations for the other activities.

Section 1.2 Survey Design

One commenter suggested that OMB add several Key Terms to Section 1.2; however, none of the requested terms were actually used in this section, so no changes were made. The intent of the key terms was to identify technical terms that were used in the standards and guidelines. Definitions are also provided for these key terms in the appendix to the document.

Another commenter asked OMB to consider adding to guideline 1.2.2 a number of additional areas such as (1) use of panels and the effect of panels, (2) sample replacement/rotation/resampling plan, (3) justification for the variable used for measure of size for Probability Proportional to Size (PPS), (4) nonresponse adjustment and/or imputation methodology, (5) post-stratification plan if appropriate, and (6) sample implementation plan. While OMB agrees that these are all relevant topics for survey design, we considered them too specific and technical to include as guidelines. OMB believes that the amount of information included in the standards needs to be managed and balanced against the size and usability of the document. To cover all topics to this degree of technical detail would multiply the size of this document several fold. As noted in the introduction to the standards, this document is not intended to take the place of textbooks and the body of knowledge in statistics and survey methodology.

One commenter suggested that guideline 1.2.4 focus on the perspective of respondents and requested that the last sentence be revised to read: "A clear, logical and easy-to-follow flow of questions from a respondent's point-of-view is a key element of a successful survey." We incorporated this suggestion.

Section 1.3 Survey Response Rates

Two commenters suggested changes to Standard 1.3 on response rates. One suggested that the standard should say only that nonresponse bias analyses "should" be conducted, not that they "must" be conducted. OMB disagrees with this comment because the language used in all of the standards is "must," and it appears the commenter is implying that conducting nonresponse bias analyses "when unit or item response rates suggest the potential for bias to occur" should not be a requirement. We believe that it is essential that agencies acknowledge and address the potential for nonresponse bias and conduct appropriate analyses to ensure the quality of the information they are collecting and reporting.

Another commenter believed that for economic surveys conducting nonresponse bias analyses should be based on quantity response rates or total quantity response rates, and therefore, the standard should state that "Response rate definitions appropriate for the type of data being collected should be used to make this determination." OMB certainly agrees that the appropriate definitions should be used for response rates, and these are discussed in detail in the guidelines. We do not believe that this statement is necessary or adds any clarification to the standards, and, therefore, we did not change the standard.

One commenter suggested that the word "unit" be dropped from Guideline 1.3.1 that states: "Calculate sample survey unit response rates without substitutions." OMB did not make this change because we believe that dropping "unit" would make the guideline less clear. Another commenter asked for an explanation of the term "substitution," but this term was already defined in the glossary.

Three commenters raised similar issues about Guidelines 1.3.2, 1.3.4, and 1.3.5 that referred to target response rates for surveys collecting data to construct sampling frames (1.3.2), thresholds for planning nonresponse bias studies at the unit (1.3.4) and item (1.3.5) levels. One commenter suggested that Guideline 1.3.2 state that data collections used for sample frames should have a target unit response of at least 95 percent for demographic surveys, but for economic data, the target quantity or total quantity rate should be at least 80 percent. Similarly, the commenter suggested that Guidelines 1.3.4 and 1.3.5 be combined keeping the proposed unit and item response rate thresholds for demographic surveys but for economic data collections, plan for a nonresponse bias analysis if the quantity or total quantity response rate is below 65 percent. However, the commenter provided no justification or explanation for this differential between demographic and economic surveys.

Another commenter believed that the "nonsampling error thresholds" (sic) seemed unrealistically high and not productive and recommended changing the response rate threshold for surveys that develop frames for other surveys from 95 percent to 80 or 85 percent and lowering the other thresholds to "more reasonable numbers."

A third commenter acknowledged that the lower the response rate the greater the chance that nonresponse bias may exist, but noted that there has been no determination of how large a response rate is needed to avoid nonresponse bias, or the relative size of this error compared to other sources of survey error. This commenter also stated that the current thresholds should be justified or eliminated, and stated that agencies should focus on whether nonrespondents differ with respect to respondents.

OMB did not make the suggested changes to these guidelines. Guideline 1.3.2 was intended to apply to a very small number of Federal surveys conducted explicitly as universe collections or censuses that are intended to be used as the sampling frame for a variety of other surveys. Because these surveys are essentially creating sampling frames and will affect the coverage for other collections, they should be designed to *target* a 95 percent response rate. In this guideline, we added a reference to Guideline 2.1.3 which states that "Coverage rates in excess of 95 percent overall and for each major stratum are desirable. If coverage rates fall below 85 percent, conduct an evaluation of the potential bias."

OMB does not believe that there is any reason that economic surveys have any less or greater risk for nonresponse bias than demographic surveys, and the commenters did not provide any rationale or evidence for differences between these types of surveys. There may be some confusion related to the calculation of response rates for economic surveys that also affects these guidelines; we discuss the comments about the calculation of response rates in section 3.2. We do not believe that the response rate guidelines are unrealistically high as many Federal demographic and economic surveys achieve or exceed these response rates. However, the response rate guidelines merely indicate a minimal threshold where agencies need to assess potential nonresponse bias. Agencies are certainly encouraged to set higher thresholds for their surveys, and should consider higher thresholds for their influential collections (as defined in OMB and agency information quality guidelines). Simply lowering these thresholds would not reduce the risk of nonresponse bias in economic or demographic surveys.

As one of the commenters noted, there is not a body of research that clearly demonstrates a minimum threshold for response rates to avoid nonresponse bias. In fact, there is likely some nonresponse bias in all surveys with less than 100 percent response; however, because the nonresponse bias in a survey estimate is a function of the differences between respondents and nonrespondents as well as the response rate, the impact of these differences on survey estimates is smaller with higher response rates. OMB agrees that it is important for agencies to examine differences between respondents and nonrespondents and that nonresponse bias is only one source of error in survey estimates. It is a judgment as to when agencies need to be concerned about potential nonresponse bias, and OMB has set these minimal guidelines for agencies to plan to examine potential nonresponse bias, weighing the risks of bias along with the potential impact on estimates as well as the effect on agency resources. We also believe the guidelines would be less useful and clear without thresholds, and, therefore, we have retained them as originally proposed.

One of these commenters also suggested that OMB include the appropriate cross references to the Guidelines in section 3.2 which state that a nonresponse analysis *be conducted* when *actual* overall unit response rates are less than 80 percent and item response rates are less than 70 percent. The commenter requested mention of subpopulations or other crosscuts for

examination of risk of nonresponse bias. OMB incorporated the suggestions and provided the cross references to the guidelines in section 3.2.

Section 1.4 Pretesting Survey Systems

One commenter suggested a revision to Standard 1.4 to include direct testing or prior successful fielding or experience as a part of the standard for pretesting. This change was made so that the standard now reads: "Agencies must ensure that all components of a survey function as intended when implemented in the full-scale survey and that measurement error is controlled by conducting a pretest of the survey components or by having successfully fielded the survey components on a previous occasion."

One commenter suggested that OMB include a number of Key Terms for this standard such as usability testing, respondent debriefings, record-keeping studies, exploratory or feasibility studies, and anthropological or ethnographic studies. We agree that these are relevant terms for pretesting, but only usability testing is actually mentioned in the standard or guidelines. The list of key terms is not intended to be a comprehensive list of related terms for a given topic, but rather is intended to capture technical terms that are used in the standard and guidelines for a given section. These terms are then defined in the appendix. Usability testing was added to the list of key terms and included in the appendix because it was included in Guideline 1.4.1; however, the other terms were not used in this section.

Another commenter noted that the list of Key Terms for this section included some terms that did not seem appropriate. The list did, in fact, inadvertently include some other terms that were not used in the standard or guidelines, and these were removed from the list.

One commenter stated that Guideline 1.4.1 should not name specific pretesting methodologies but rather should refer more generally to the selection and use of appropriate pretesting methodologies and make clear that the listed examples are not exhaustive. The commenter also cautioned us that this terminology is not standardized across the field. OMB agrees that agencies should choose the appropriate method for their intended purpose and that it is important to include examples of widely used pretesting methodologies in the standard to convey accurately what pretesting includes. We also acknowledge that there is variability in the use of these terms, and have included these in the appendix to clarify our intended meaning. Guideline 1.4.1 was revised to read: "Test new components of a survey using methods such as cognitive testing, focus groups, and usability testing prior to a field test of the survey system, and incorporate the results from these tests into the final design."

One commenter was concerned that the description of "field test" in Guideline 1.4.2 implied the need for a full "dress rehearsal" to test all systems together, and emphasized that these are not necessarily needed for all for surveys. The commenter also noted that simulations using past data could sometimes be used effectively. OMB did not make any changes based on this comment because the guideline already stated that field tests are to be used "when *some* or all components of a survey system cannot be successfully demonstrated through *previous work (italics added).* The guideline does not require a full dress rehearsal (though it does state that it *may be desirable* for highly influential surveys) nor does it require field tests in lieu of simulations or other forms of testing.

## SECTION 2 COLLECTION OF DATA

### Section 2.1 Developing Sampling Frames

Three suggestions were offered to supplement Guideline 2.1.1 in describing the target populations and survey or sampling frames. One suggestion was that we mention descriptions of frame maintenance in Guideline 2.1.1, item 1, and another suggestion was to expand the guidelines to address deterioration/turn-over of the frame from time of construction until use. OMB accepted the first suggestion and believes that the second suggestion is also incorporated in frame maintenance. This item was changed to read: "The manner in which the frame was constructed and the maintenance procedures." The other suggestion was to include as a limitation in item 5 the accuracy of the frame. This suggestion was accepted and the item now reads "Other limitations of the frame including the timeliness and accuracy of the frame (e.g., misclassification, eligibility, etc.)."

One commenter noted that Guideline 2.1.3 seemed only to address undercoverage with its mention of coverage rates. OMB agrees that both overcoverage and undercoverage need to be addressed, and changed item 3 in Guideline 2.1.1 to reflect this, so that this item now reads:

> "Coverage issues such as alternative frames that were considered, coverage rates (an estimation of the missing units on the frame (undercoverage), and duplicates on the frame (overcoverage)), multiple coverage rates if some addresses target multiple populations (such as schools and children or households and individuals), what was done to improve the coverage of the frame, and how data quality and item nonresponse on the frame may have affected the coverage of the frame."

One commenter noted generally that it is often the case that there exists no alternative source to use to evaluate coverage, particularly with the limited data sharing available among many statistical agencies. OMB agrees that matching sampling frame microdata is the best means of comparing two frames; however, some aggregate level statistics by strata are also informative for comparing different frames. For example, if a commercially available business frame has much lower counts of businesses in an industry and size class than the Economic Census, this provides valuable insight into the coverage of the commercial frame. No specific change was requested or made based on this comment.

One commenter requested a justification for the specific cutoff of 85 percent for an analysis of coverage bias and noted that the cutoff appears to be arbitrary. As noted in section 1.3, there is not a body of research that clearly demonstrates a minimum threshold for response rates or coverage rates to avoid bias. In fact, there is likely some bias whenever there is less than 100 percent coverage; however, because coverage error in a survey estimate is a function of the differences between those on the frame and those not on the frame as well as the coverage rate, the impact of these differences on survey estimates is smaller with higher coverage rates. It is a judgment as to when agencies need to be concerned about potential coverage bias, and OMB has provided guidelines for agencies to use when examining potential coverage bias and weighing the risks of bias against the availability of agency resources. Agencies are certainly encouraged to set higher thresholds for their surveys, and are specifically encouraged to set high thresholds for their influential collections (as defined in OMB and agency information quality guidelines).

Section 2.2 Required Notifications to Potential Survey Respondents
One commenter was confused by the reference to 5 CFR 1320.8(b)(3)), which is a citation to the *Code of Federal Regulations*, specifically, the section implementing the Paperwork Reduction Act. We added a phrase to help identify this for those unfamiliar with these legal citations, so this now reads: "(see further requirements in the regulations implementing the Paperwork Reduction Act, 5 C.F.R. § 1320.8(b)(3))."

One commenter suggested that we revise item 3 of Guideline 2.3.2 on questionnaire pretesting to include previous success in administration of the items. This suggestion was accepted and the item now reads: "The questionnaire includes only items that have been shown to be successful in previous administrations or the questionnaire is pretested to identify problems with interpretability and ease in navigation."

One commenter noted that Guidelines 2.3.3 or 2.3.4 should include a statement indicating that if an agency is using telephone interviewing, the agency's name should appear on Caller ID to identify the caller as an agency of the Federal Government instead of a telemarketer. OMB believes that while this may be a useful practice, it is too specific for the guidelines and has limited applicability as some Federal statistical data are collected by external contractors. Thus, no changes were made based on this comment.

One commenter assumed that item 3 of Guideline 2.3.5 that refers to selecting a "random subsample of nonrespondents" for further follow-up reflects a probabilistic subsample, not a simple random sample (SRS). OMB concurs that this guideline refers to a probabilistic sample and changed the wording to "probabilistic" instead of "random" to avoid potential confusion.

SECTION 3 PROCESSING AND EDITING OF DATA

Section 3.1 Data Editing
One commenter recommended that Guideline 3.1.1, which focuses on checking and editing data to mitigate errors, be modified to mention also the use of exploratory data analysis and graphical approaches in assisting to determine potential outliers. OMB agrees that these techniques as well as others can be helpful, but mentioning specific analytic techniques goes into a greater level of specificity of methods and detail than intended in these guidelines. We do provide references to the Federal Committee on Statistical Methodology's Statistical Policy Working Papers 18 and 25, which cover data editing, and agencies can find more specific information in those publications.

The commenter also recommended that whenever possible, edit rules and edit parameters should be based on analysis of data with subject matter specialist input in order to produce more effective editing. OMB agreed with the comment, and added one sentence to Guideline 3.1.1 that reads: "Include results from analysis of data and input from subject matter specialists in the development of edit rules and edit parameters."

One commenter recommended that Guideline 3.1.3, which addresses coding the data set to indicate any actions taken during editing and the retention of unedited and edited data, also mention the importance of this coding for evaluating and improving the performance of the edits and the edit process. OMB agrees this is one important use, but it was not the intent of the guidelines to provide detailed reasons for the guidelines, so no modifications were made.

Section 3.2 Nonresponse Analysis and Response Rate Calculation
One commenter suggested avoiding the use of the term 'standard formulas' in Standard 3.2 because the formulas may not be appropriate for determining the potential nonresponse bias for economic data. OMB did not agree with this comment and believes that it is essential that agencies report their response rates using appropriate standard formulas. We address issues related to the specific formulas in the guidelines below.

Two commenters expressed confusion with the phrasing and sentence structure used in Guideline 3.2.1, which states that response rates should be calculated weighted and unweighted. In addition, one of the commenters noted that the standard formulas from the American Association for Public Opinion Research (AAPOR) recognize and recommend the calculation and reporting of a range of response rates. OMB made several changes to incorporate the suggestions and clarify this guideline. It now reads:

> Calculate all response rates unweighted and weighted. Calculate weighted response rates based on the probability of selection or, in the case of establishment surveys, on the proportion of key characteristics that is represented by the responding units. Agencies may report other response rates in addition to those given below (e.g., to show the range of response rates given different assumptions about eligibility) as long as the rates below are reported and any additional rates are clearly defined.

One commenter provided several comments about Guideline 3.2.2, which provides a formula for calculating unweighted unit response rates. The commenter noted that the formula, which is based on AAPOR's Response Rate 3 formula, uses the terminology "interview" that is associated with personal or phone interviews and recommended that a more generic term be used that would include other collection methods such as mail surveys and internet data collections. OMB agreed and now uses the term "cases" instead of "interviews." The commenter also noted that the guideline did not specifically address partially completed cases. OMB agreed and accepted the suggestion that the definition of completed cases also includes sufficient partials.

The commenter also noted that the formula in Guideline 3.2.2 includes an estimate of the proportion of units of unknown eligibility that are eligible (e) and notes that the literature contains multiple approaches of estimating 'e.' The commenter suggested that the guidelines should recommend that e(U) be calculated using multiple approaches to provide a range of response rates with clear explanation of each. OMB acknowledges that there are different ways of estimating 'e,' but does not believe that it is necessary to state explicitly in the guidelines that agencies can use different methods for this calculation as this goes to a deeper level of specificity and detail than intended in these guidelines. Furthermore, this is implied by the changes made to Guideline 3.2.1, which allow agencies to report a range of response rates along with the assumptions behind them.

One commenter requested that formulae and discussion be added concerning the calculation of weighted response rates and suggested these be based on the Federal Committee on Statistical Methodology's Statistical Policy Working Paper 31. This commenter provided another formula for unweighted unit response rates for economic surveys, while another commenter provided three alternative formulas for Guideline 3.2.2 that specifically applied to economic surveys; one of these formulas was unweighted and two were weighted. These suggested formulas are listed below:

(1) Unit response rate = Number of eligible sampled units responding/ number of eligible sampled units

Where eligible units do not include establishments that are out-of-scope, out-of-business, or duplicates.

(2) Unweighted Response Rate -- The rate of responding units to the sum of eligible units and units of unknown eligibility: [R/(E+U)] * 100

Where:

E is the number of units eligible for data collection (including sufficient partials);

U is the number of units for which eligibility for data collection could not be determined.

R is the number of eligible units for which an attempt was made to collect data, the unit belongs to the target population, and the unit provided sufficient data to be classified as a response.

(3) Quantity Response Rate -- The rate of total weighted quantity for responding units to the total estimated quantity for all units eligible for tabulation:

$$\left[\sum_{i=1}^{R} w_i t_i / T\right] * 100$$

where

R is the number of eligible units for which an attempt was made to collect data, the unit belongs to the target population, and the unit provided sufficient data to be classified as a response.

$w_i$ is the sampling weight for the ith unit.

$t_i$ is the quantity of a key variable for the ith unit.

T is the estimated (weighted) total of the variable t over the entire population represented by the frame. T is based on actual data (and administrative data for some surveys) and on imputed data or nonresponse adjustment.

(4) Total Quantity Response Rate -- The rate of total weighted quantity of data from responding units and from sources determined to be of equivalent quality as data provided by respondents to the total estimated quantity for all units eligible for tabulation.

$$\left[\sum_{i=1}^{R+A} w_i t_i / T\right] * 100$$

where

R is the number of eligible units for which an attempt was made to collect data, the unit belongs to the target population, and the unit provided sufficient data to be classified as a response.

A is the number of units belonging to the target population for which it was decided not to collect survey data, but instead to obtain administrative data.

$w_i$ is the sampling weight for the ith unit.

$t_i$ is the quantity of a key variable for the ith unit.

T is the estimated (weighted) total of the variable t over the entire population represented by the frame. T is based on actual data (and administrative data for some surveys) and on imputed data or nonresponse adjustment.

OMB agreed that another guideline was needed specifically on the calculation of weighted response rates and that it should specifically address the calculation of weighted response rates for economic surveys. We did not make any changes or additions to the unweighted unit response rate formula in Guideline 3.2.2 because this formula is more specific in outcome codes and more useful. The unweighted formulas above (1 and 2) were not incorporated because there

is no estimate of the eligibility rate for cases with unknown eligibility in formula 2, and formula 1 assumes that there are no cases with unknown eligibility. Therefore, formula 2 represents a lower bound for the response rate, which may be useful if presented along with other response rates that represent an upper bound as well as a rate that includes an estimate of eligibility for cases with unknown eligibility.

For the weighted unit response rate formulas, OMB decided to use formulas from the Federal Committee on Statistical Methodology's Statistical Policy Working Paper 31, *Measuring and Reporting Sources of Error in Surveys*, as suggested by one of the commenters, rather than the formulas suggested by the other commenter. As noted in Guideline 3.2.1 above, those rates may also be reported, and, in some cases, may be equivalent to the formulas in the guideline. However, the weighted unit response rate formulas in the guideline are intended to provide an indication of the risk of potential nonresponse bias, which is not necessarily the focus of the quantity response rates above. This new guideline reads:

> Calculate weighted unit response rates (RRW) to take into account the different probabilities of selection of sample units, or for economic surveys, the different proportions of key characteristics that are represented by the responding units. For each observation *i:*
> $C_i = 1$ if the *ith* case is completed (or is a sufficient partial), and $C_i = 0$ if the *ith* case is not completed;
> $R_i = 1$ if the *ith* case is a refusal and $R_i = 0$ if the *ith* case is not a refusal;
> $NC_i = 1$ if the *ith* case is a noncontacted sample unit known to be eligible and $NC_i = 0$ if the *ith* case is not a noncontacted sample unit known to be eligible;
> $O_i = 1$ if the *ith* case is an eligible sample unit not responding for reasons other than refusal and $O_i = 0$ if the *ith* case is not an eligible sample unit not responding for reasons other than refusal;
> $U_i = 1$ if the *ith* case is a sample unit of unknown eligibility and $U_i = 0$ if the *ith* case is not a sample unit of unknown eligibility;
> e = estimated proportion of sample units of unknown eligibility that are eligible; and
> $w_i$ = the inverse probability of selection for the *ith* sample unit.
>
> The weighted unit response rate can be given by summing over all sample units selected to be in the sample, as shown below:
>
> $$RRW = \frac{\sum w_i C_i}{\sum w_i (C_i + R_i + NC_i + O_i + e(U_i))}$$
>
> Many economic surveys use weighted response rates that reflect the proportion of a key characteristic, *y*, such as "total assets," "total revenues," or "total amount of coal produced." Though it may be referred to as a coverage rate, it is, in fact, a weighted item response rate where the item of interest is a quantity of primary interest for the survey. If we let $y_i$ be the value of the characteristic *y* for the *ith* sample unit and sum over the entire sample, then the weighted response rate can be given by:
>
> $$RRW = \frac{\sum w_i y_i C_i}{\sum w_i y_i (C_i + R_i + NC_i + O_i + e(U_i))}$$
>
> Alternatively, the denominator can be based on the population total from a previous period or from administrative records.

One commenter suggested providing more information to explain and define the terms in the formula and the following paragraph for Guideline 3.2.3, which addresses calculating response rates for cross sectional sample surveys. OMB agreed and made the suggested edits so that it now reads:

> Where:
> $RRU_i$ = the unit level response rate for the *ith* stage;
> C denotes cross-sectional; and
> K = the number of stages.
>
> When a sample is drawn with probability proportionate to size (PPS), then the interpretation of $RRO^C$ can be improved by using size weighted response rates for the K stages. This is especially helpful if nonresponse is related to the size of the sample units.

One commenter noted that the term cross-sectional was being used in Guideline 3.2.3 to refer to analysis rather than as a cross-sectional sample survey as described in the glossary. OMB agreed and changed the guideline to refer to cross-sectional sample surveys rather than cross-sectional analysis.

One commenter noted that the unit response rate formula in Guideline 3.2.4 for longitudinal surveys is only for wave 1, and suggested a change in notation to make it more general. OMB did not make this change because wave 1, with all of the originally selected eligible cases, is the appropriate denominator. Agencies may also find it useful to examine wave specific response rates, but it is the cumulative response rate from the original sample that is most informative about potential nonreponse bias.

One commenter noted that Guideline 3.2.7, which discusses response rates for supplemented samples, referred only to 'matched pairs' even though some area sample surveys select more than one supplemental unit in an area to be used as substitutes for nonresponding units. OMB agrees with the comment and changed the reference to 'matched pairs' as an example, so the sentence now reads: "However, when calculating response rates where the sample was supplemented during the initial sample selection (e.g., using matched pairs), calculate unit response rates without the substituted cases included (i.e., only the original cases are used)."

There were several comments on Guideline 3.2.8, which recommended conducting a nonresponse bias analysis when unit nonresponse rates are less than 80 percent. One commenter requested that the guideline include studying variation within the respondent set as an acceptable nonresponse bias study technique, using techniques such as comparing response rates on subgroups, using prior wave data, and analyzing estimates by level of effort. OMB agrees that these can be useful techniques, but believes that the other techniques mentioned in the guideline provide more direct estimates of nonresponse bias. Because there is a wide variety of methods that may be used to provide insight into nonresponse bias, we changed this guideline to clarify that the methods described are only examples. The modified sentence now reads: "A variety of methods can be used to examine nonresponse bias, for example, make comparisons between respondents and nonrespondents across subgroups using available sample frame variables."

Another commenter noted that the guidelines did not address measuring nonresponse bias or provide a formula for measuring the possible bias resulting from nonresponse and suggested that we include the formula in section 4.2.6 of the Federal Committee on Statistical Methodology's

*Statistical Policy Working Paper 31, Measuring and Reporting Sources of Error in Surveys*. OMB agreed with the comment and included a reference to the Statistical Policy Working Paper as well as the suggested formula. We added the following text to this guideline:

> As noted above, the degree of nonresponse bias is a function of not only the response rate but also how much the respondents and nonrespondents differ on the survey variables of interest. For a sample mean, an estimate of the bias of the sample respondent mean is given by:
>
> $$B(\bar{y}r) = \bar{y}_r - \bar{y}_t = \left(\frac{n_{nr}}{n}\right)(\bar{y}_r - \bar{y}_{nr})$$
>
> Where:
>
> $\bar{y}_t$ = the mean based on all sample cases;
>
> $\bar{y}_r$ = the mean based only on respondent cases;
>
> $\bar{y}_{nr}$ = the mean based only on the nonrespondent cases;
>
> n = the number of cases in the sample; and
>
> $n_{nr}$ = the number of nonrespondent cases.

One of the commenters suggested that Guidelines 3.2.8 and 3.2.9, which provide unit and item response rate thresholds for conducting nonresponse bias analyses, could be combined and altered to apply only to demographic data collections. A similar comment was offered for section 1.3. As noted earlier, economic surveys do not have any less or greater risk for nonresponse bias than demographic surveys, and the commenters did not provide any rationale or evidence for such a difference. Therefore, we did not make this suggested change to the guidelines.

One commenter suggested a wording change to Guideline 3.2.11 on adjusting weights for nonresponse, and OMB agreed. The sentence now reads: "For data collections involving sampling, adjust weights for unit nonresponse, unless unit imputation is done."

Section 3.4 Data protection

One commenter suggested a clarification to Guideline 3.4.3 on controlled access to data sets. OMB agreed and modified the sentence to read: "Ensure controlled access to data sets so that only specific, named individuals working on a particular data set can have read only, or write only, or both read and write access to that data set."

Section 3.5 Evaluation

One commenter suggested that "bias" be included in the key terms; however, the key terms were intended only to highlight technical terms that were actually used in the standards or guidelines. These terms are defined in the appendix. Because "bias" was not used in this standard or its guidelines, it was not listed as a key term here. The term is included in the appendix because it is a key term for other standards.

One commenter suggested that item 2 on data processing errors in Guideline 3.5.1 be included in item 1 that listed other potential sources of error (coverage, nonresponse, and measurement). OMB agreed and made this change.

## SECTION 4 PRODUCTION OF ESTIMATES AND PROJECTIONS

### Section 4.1 Developing Estimates and Projections

One commenter suggested that “calibration” be included in the key terms; however, the key terms were intended only to highlight technical terms that were actually used in the standards or guidelines. These terms are defined in the appendix. Because calibration was not used in these standards or guidelines, we do not include it as a key term or in the appendix.

One commenter suggested an edit to the first line of Guideline 4.1.1 item 1 that was accepted. The line now reads: “Employ weights appropriate for the sample design to calculate population estimates.” The commenter also requested a clarification of the term “weights;” however, this term was already included in the appendix.

## SECTION 5 DATA ANALYSIS

### Section 5.1 Analysis and Report Planning

One commenter recommended that type II errors also be mentioned because of their importance in many data uses/interpretations. While OMB agrees that this is a relevant issue for analysis, we considered it too specific and technical to include in the guidelines and did not make the change.

Another commenter suggested that Guideline 5.1.2 that covers standard elements of project management in the analysis plan include risk planning. OMB agreed and the guideline now reads: “Include standard elements of project management in the plan, including target completion dates, the resources needed to complete each activity, and risk planning.” This commenter also suggested that the targets be achievement-based; however, we considered this too specific to include in the guideline and did not make this suggested change.

## SECTION 6 REVIEW PROCEDURES

### Section 6.1 Review of Information Products

One commenter provided a reference to Section 508 of the U.S. Rehabilitation Act that was inadvertently omitted in Guideline 6.1.3, and this was inserted.

## SECTION 7 DATA DISSEMINATION

One commenter noted that the Section 7 heading was changed to "Data Dissemination" from the original Information Quality Guidelines category, "Dissemination of data by published reports, electronic files, and other media requested by users," and expressed concern that the standards did not seem to deal explicitly with the publication of statistics. The commenter also asked where the equivalent section in the new standards was to the section in Directive No. 1 with the heading, "Preparation and Publication of Final Report." OMB believes that Section 7 does address publication of statistics and changed the title of this section to “Dissemination of Information Products” to more clearly convey that it does cover reports and publication of statistics. The section in Directive 1 on Preparation and Publication of Final Report discusses labeling of graphs and charts, size of print, and appropriate titles for figures, which, while important, were deemed too specific to be covered in the updated guidelines.

One commenter questioned whether this section should include guidelines about not releasing data because of low response and other errors. OMB believes that this is addressed in Guideline 7.1.7 and did not make further changes.

Section 7.2 Data Protection and Disclosure Avoidance for Dissemination
One commenter recommended that Guideline 7.2.2 on disclosure limitation rules include a citation for a forthcoming OMB Statistical Policy Directive on the release and dissemination of statistical products produced by Federal statistical agencies**.** OMB plans to issue this draft directive for public comment. It is not a final directive or standard, and therefore, is not cited.

Section 7.3 Survey Documentation
One commenter recommended that the information reported on OMB Form 83-I and all of its attachments, certifications, supporting statements, and comments (including responses to the *Federal Register* notice already submitted to OMB for information collection approval) be included in the survey documentation. The commenter more specifically recommended that an electronic version of the Form I-83 package for each information survey or study be posted on the agency's web site with linkages to both the agency's information quality guidelines and the survey or program area. OMB agrees that it would be appropriate for agencies to provide their information collection requests and supporting materials, which are public documents, as part of the survey documentation and have added this to Guideline 7.3.1. OMB also notes that while a number of agencies do provide all of their information collection requests on their websites, many do not. While OMB agrees this is a good practice, the comment would seem to have broader implications beyond just statistical surveys to most if not all other information collections that an agency conducts or sponsors that may be disseminated. Therefore, this document is not the most appropriate vehicle should OMB seek to encourage or require agencies to provide this information. We believe that it is sufficient that this information is included in the survey documentation, and that agencies can determine how to make this and other information accessible to users. However, we do note that OMB's new electronic system for submitting information collection requests has now made all currently active collections available electronically on the web at http://www.reginfo.gov/public/do/PRAMain.

One commenter suggested that reference to how sampling errors were calculated in item 12 of Guideline 7.3.1 was redundant with item 9, and OMB agreed. This item now reads: "Description of the magnitude of sampling error associated with the survey."

One commenter suggested that the items in Guideline 7.3.1 that refer to reporting response rates apply to demographic surveys and that economic surveys should include unweighted response rates, quantity response rates, and total quantity response rates in line with the comments made in section 3.2. OMB does not believe that this change is necessary as agencies are to report the response rates listed in the guidelines for section 3.2. As noted previously, additional rates that are clearly defined may also be reported.

One commenter suggested that the guidelines for survey documentation include additional information on the reporting of item nonresponse rates and the impact of imputations on the published data. Specifically, the commenter recommended that item 16 of Guideline 7.3.1 be changed to delete "below 70 percent" to include all item response rates, and that a new item 17 be added that states "Impact of imputations on each variable." OMB agreed with the suggestions and deleted "below 70 percent" from item 16; however, we implemented the

other suggestion by adding evaluations of the imputation methods to item 10 and adding nonresponse bias analyses to items 16 and 17. These items now read as follows:

10. Description of all editing and imputation methods applied to the data (including evaluations of the methods) and how to remove imputed values from the data;
16. Overall unit response rates (weighted and unweighted) and nonresponse bias analyses (if applicable); and
17. Item response rates and nonresponse bias analyses, (if applicable).

One commenter recommended that a new item be added to Guideline 7.3.1 requiring a separate section on "data limitations" to ensure that evaluation information described in Guideline 3.5.1 and Guideline 6.1.2 is made available in the survey documentation. OMB generally agreed with the suggestion, but believes that a separate item is not necessary. OMB added evaluation to item 13 of Guideline 7.3.1 so it now reads: "Description of the sources of nonsampling error associated with the survey (e.g., coverage, measurement) and evaluations of these errors." OMB believes that this change, together with the changes noted above for reporting evaluations of imputation methods and the results of nonresponse bias analyses as well as item 11 on data anomalies, adequately addresses the concerns that the commenter raised.

One commenter recommended that the guidelines in section 7 require agencies to report comparisons with independent sources and to include the results in the survey documentation to appropriately implement Standard 3.5, which requires evaluation of the quality of the data. OMB agreed with the suggestion and created an additional item that reads: "Comparisons with independent sources, if available."

One commenter noted that Guideline 7.3.3 refers to estimating bounds on nonsampling error, which seemed more appropriate to section 4 on production of estimates, and that it could be revised or combined with Guideline 7.3.4 on evaluation reports. OMB agrees that this guideline was out of place and moved it to section 3.5 on evaluation of data quality (rather than section 4 on estimates).

Two commenters noted that Guidelines 7.3.5 and 7.4.6 refer to agency archival policy but that there is a single archival policy for all Federal agencies in the Federal Records Act. The commenter recommended that these guidelines be changed to reflect this. One also recommended that Guideline 7.4.6 be changed to include: "Agencies should also arrange to archive data with the National Archives and Records Administration and other data archives, as appropriate, so that data are available for historical research in future years." OMB agreed with the comments. These guidelines now read:

> Guideline 7.3.4: Retain all survey documentation according to appropriate Federal records disposition and archival policy.
> Guideline 7.4.6: Retain all microdata products and documentation according to appropriate Federal records disposition and archival policy. Archive data with the National Archives and Records Administration and other data archives, as appropriate, so that data are available for historical research in future years.

GLOSSARY

Several of the commenters provided suggestions on terms they thought should be in the glossary and definitions for terms included in the glossary. One commenter noted that the definitions used for some terms differ from those that a demographic glossary would use for the same terms, such as coverage, coverage error, or estimates. OMB intended the glossary definitions simply to clarify how the term was being used in the standards and guidelines rather than to provide textbook definitions. We note that there may have been some confusion about the glossary and the key terms, so we added some additional information in the introduction about the key terms, and we have decided to create an appendix that contains the definitions of the key terms rather than have a glossary.

One commenter noted that although the Survey of Income and Program Participation is usually identified as a longitudinal survey, it does not seem to fit the definition put forward in the glossary. OMB modified the definition of longitudinal survey to make it broader. The definition now reads: "A longitudinal sample survey follows the experiences and outcomes over time of a representative sample of respondents (i.e., a cohort)."

One commenter noted that some of the definitions use other terms that are not elsewhere defined, but are not common use terms, such as convenience sampling, judgment sampling, quota sampling, and snowball sampling. OMB did not define these terms in the appendix because they are only referenced as examples in the definition of probabilistic methods.

One commenter suggested OMB make changes to the definitions for the terms bias and domain for clarification. The revised definitions are as follows:

> Bias is the systematic deviation of the survey estimated value from the true population value. Bias refers to systematic errors that can occur with any sample under a specific design.
>
> Domain refers to a defined universe or a subset of the universe with specific attributes, e.g., knowledge, skills, abilities, attitudes, interests, lines of business, size of operations, etc.

One commenter suggested that the definition for "collection of information" should use the definition in OMB's regulations for the Paperwork Reduction Act, and also suggested that the definition of "dissemination" should come from OMB's Information Quality Guidelines. OMB accepted both of these suggestions. This commenter also suggested the following definitions for terms drawing upon definitions used by the United Nations Economic Commission for Europe or the Organization for Economic Cooperation and Development:

> "Editing is the activity aimed at detecting and correcting errors."
>
> "Imputation is the procedure for entering a value for a specific data item where the response is missing or unusable."
>
> "Substitution is the process of maintaining and adding to the sample in an unbiased manner in order to ensure it continues to be representative of the population".

OMB generally agreed with and accepted these suggestions, but made a modification to "substitution" so that it reads: "Substitution is the process of supplementing the sample in an unbiased manner in order to ensure it continues to be representative of the population," and also modified editing to read: "Editing is the data-processing activity aimed at detecting and correcting errors."

One commenter noted that the word “record” is listed in the report ten times, but is not defined in the glossary. OMB did not consider this a key term because it is used in a general sense and used differently in different parts of the standards and guidelines. Another commenter requested that OMB include definitions for expected yield per stratum and estimated efficiency of sample design. OMB dropped these terms from the guidelines, and therefore, did not include them in the appendix.