Appendix C. Historical Comparisons and Changes

HISTORICAL COMPARISONS

- In 1991, the American Housing Survey's weighting has been changed to reflect the results of the 1990 Census of Housing. The estimates in chapters 1 through 6 of this book are not comparable to similar data published in earlier AHS books. The effects of the weighting change in 1991 are, however, proportionately distributed among all types of housing units. Therefore, the comparison of percents and medians in this book with similar previously published data is valid. For most metropolitan areas, the count of housing units from the 1990 Census of Housing suggest that the numbers shown in the 1987 metropolitan reports are too high. A 1987 count of housing units for each metropolitan area that is consistent with the 1990 Census of Housing is shown below.

Metropolitan area	1987 total housing units consistent with 1990 census	Published 1987 total housing units
Atlanta, GA MSA	1,078,000	1,117,700
Baltimore, MD MSA	898,400	904,400
Chicago, IL area PMSA's	2,755,600	2,936,000
Columbus, OH MSA	530,800	547,000
Hartford, CT CMSA	417,700	420,700
Houston, TX area PMSA's	1,420,500	1,553,000
New York-Nassau-Suffolk, NY PMSA's	4,434,800	4,741,100
Northern NJ area PMSA's	2,179,200	2,254,400
St. Louis, MO-IL CMSA	977,200	991,000
San Diego, CA MSA	884,400	921,500
Seattle-Tacoma, WA CMSA	983,500	998,700

- This appendix provides a description of historical changes that have occurred in the American Housing Survey since its beginning in 1973.

HISTORICAL CHANGES

Comparison with the 1987 American Housing Survey Metropolitan Sample. The concepts, definitions, data collection, and processing procedures are essentially the same for both the 1987 and 1991 American Housing Survey Metropolitan Samples.

In 1991, a programming error was discovered and corrected involving the computation of the median for the item "Current interest rate." Caution should be used when making comparisons with the 1987 survey data. The medians presented in the 1987 reports are calculated incorrectly. However, the data distributions are correct and can be used to compute corrected medians.

For the items "Amount of savings and investments" and "Food stamps," data are restricted to families and primary individuals with incomes of $25,000 or less per year. In 1987, data were restricted to families and primary individuals with incomes of $20,000 or less per year.

A new item was introduced in the 1991 AHS— "Time sharing." This item is restricted to vacant housing units, including units with usual residence elsewhere (URE's). For a detailed definition of "Time sharing," see appendix A.

In 1991, the monthly housing costs questionnaire items for renters were revised to improve the reporting of actual rental costs. In 1987, the questionnaire reflected the total amount reportedly paid for monthly rental costs. These amounts may have included the partially subsidized amount provided by the public housing authority, the Federal government, or State and local governments. The current questionnaire identifies those rental units that are subsidized and allows households to report only the costs they actually paid. The new procedures in 1991 produce lower and more accurate estimates.

In 1991, two new procedures were introduced that attempt to correct the overreporting of electricity and gas costs in the AHS. Previously, respondents were only asked to provide an estimate of average monthly costs. The new procedures produce lower and more accurate estimates. For a detailed definition of "Monthly costs of electricity and gas," see appendix A.

Changes in two items relating to income. Two items have replaced similar items that were published in 1987. They are "Monthly housing costs as percent of current income" and "Ratio of value to current income." For income, these new items use "Current income"; in 1987, the items "Value-income ratio" and "Monthly housing costs as percent of income" used the "Income of families and primary individuals in the last 12 months." See appendix A for a complete definition of "Current income," and "Ratio of value to current income." We recommend caution when comparing prior years' data with 1991 because of differences in the definitions. For further discussion of "Monthly housing costs as a percent of current income" see the introduction of the *American Housing Survey of the United States in 1989*, series H150/89 report.

Severe and moderate problems. The data concerning units with severe and moderate problems in 1991 are not entirely comparable with similar data published in 1987. See the paragraphs on "Plumbing facilities" under the section "Comparison with the 1974 through 1983 Annual Housing Surveys" in this introduction.

Heating equipment. In 1991, the heating equipment questions were revised to improve the reporting of electric heat pumps as a heating source. Previously, the questionnaire item dealing with the type of heating equipment underreported electric heat pumps. The respondents often answered yes to the first option of "a central warm-air furnace with air vents or ducts to the individual rooms" and did not proceed to the option of "electric heat pump." The questionnaire item was revised to determine if the central air system is actually a heat pump or another type of warm-air furnace.

Comparison with the 1974 through 1983 Annual Housing Survey. Most of the subjects in the 1991 and 1987 American Housing Survey Metropolitan Samples (AHS-MS) are the same as those in pre-redesign (1974 through 1983) Annual Housing Survey metropolitan samples. Beginning with 1984, the AHS-MS was redesigned including the introduction of a new questionnaire. Most of the changes made in redesign were made to improve the quality of the data. As a result of these changes, however, several items in the redesigned AHS-MS are not comparable to similar data in 1974 through 1983. All comparisons made between 1991 (or 1987) and 1974 through 1983 should be made with caution. Listed below are major differences noted as a result of redesign. The list may not be all inclusive. Differences noted as of the time of this publication include:

Inventory changes as a result of AHS redesign. In the redesigned AHS-MS, vacant mobile homes are included in the inventory. Prior to redesign, such units were not counted. These units should not be considered when estimating inventory change between redesigned AHS-MS surveys and 1974 through 1983 AHS-MS surveys.

Units in structure. In the 1974 through 1983 AHS-MS, data on units in structure were based on the respondent's answer to one question, "How many living quarters, both occupied and vacant, are there in this house (building)?" In the redesigned AHS-MS, data on units in structure were based on the respondent's answers to a series of questions (see items 20 through 23 on page 3 of the questionnaire in appendix A). The method of collecting units-in-structure data in the redesigned AHS-MS was revised as previous AHS experience has shown the concept to be difficult for the respondents. Respondents particularly had difficulty distinguishing between single-family attached and multi-unit structures. As a result of this change, the estimated number of one-unit attached structures declined in some MSA's between 1987 and interview dates prior to 1984. It is estimated that the pre-redesign (1974 through 1983) AHS-MS, on average, overestimated the numbers of one-unit attached structures by approximately 25 percent. The level of overestimation may vary significantly between metropolitan areas. Units incorrectly classified as one-unit attached in previous survey years are, in redesign, correctly classified as being in multi-unit structures.

Rooms in units. In the 1974 through 1983 AHS-MS, respondents answered a single question asking for a total count of rooms in a unit. The potential to miss specific rooms is high in a question of this type. In the redesigned AHS, respondents were asked for a count of each specific type of room. The answers to these questions are then added together in the tabulations to provide a total count of rooms. Far fewer rooms should be missed in this series of questions. Based on research done for the 1985 American Housing Survey National Sample (AHS-N), it is assumed that the 1974 through 1983 AHS-MS estimates of one- and two-room units are too high, resulting in low estimates for median number of rooms in many metropolitan areas.

Plumbing facilities. The data on plumbing facilities, which were suppressed in 1987, are shown in this report. The changes in the redesigned questionnaire that resulted in serious deficiencies in these data have been modified in 1991. In the 1974 through 1983 AHS-MS, respondents were asked a question on complete plumbing facilities that specified to the respondents the components necessary for complete plumbing (i.e., hot and cold piped water, a flush toilet, and a bathtub or shower). The question further ensured that these facilities were only for the use of occupants of the unit in which they were located (exclusive use). In those units with complete plumbing, an additional question was asked as to how many bathrooms there were.

In the 1987 AHS, respondents were first asked how many bathrooms they had. If they answer one or more bathrooms, questions on plumbing facilities were not asked; the unit was assumed to have complete plumbing facilities for exclusive use. Although the redesigned definition of a bathroom required hot and cold piped water, a sink, a flush toilet, and a bathtub or shower, this definition was not read to the respondent as it was before redesign. Also, nothing in the question requires the bathroom to be only for the use of the occupants of the sample unit (exclusive use). We believe that the 1987 AHS was counting a significant number of units as having complete plumbing for exclusive use because respondents for these units reported having a bathroom when, in fact, either the bathroom did not contain all plumbing facilities or the facilities were shared by persons living in another unit. Based on AHS data from previous years, we believe that "completeness" was more of a problem than "exclusive use."

In the 1991 AHS, the questionnaire items on bathrooms and plumbing were modified to provide more accurate estimates. Respondents were asked, "How many full bathrooms with a sink, with hot and cold piped water, a

flush toilet, **and** a bathtub or shower does this house/apartment have?" Also, an additional question was asked, "Are the bathrooms for this household's use only?" If the respondent reported no bathrooms, detail questions on each required plumbing facility were asked separately. Units lacking complete plumbing facilities are included in the count of units with severe physical problems. The number of units with severe physical problems may also have been underestimated in 1986. It also appears the units with moderate problems may also have been overestimated.

Kitchens. In 1974 through 1983 AHS-MS, vacant units lacking kitchen facilities were counted as having them if it was intended for future occupants to have kitchen facilities. It was felt that this instruction caused underestimates of units lacking kitchen facilities in some areas of the country where kitchen facilities are made available to prospective tenants. The instruction was dropped in the redesigned AHS. In the redesigned AHS, vacant units are counted as lacking complete kitchen facilities if one or more of the facilities are absent regardless of what will be present when new occupants move in. It is now felt that the new procedures produced overestimates of units lacking facilities in areas of the country where the facilities are normally provided by the incoming tenants. It may well be that a simple, ideal way of measuring kitchen facilities for vacant units does not exist.

Also, in the redesigned AHS, existence of each component of a kitchen is asked separately. In the 1974 through 1983 AHS-MS, the existence of complete kitchen facilities was obtained through the answer to one question. It is felt that the 1974 through 1983 AHS underestimated the number of units lacking complete kitchen facilities as some of the respondents who reported having complete kitchen facilities lacked one or more of them. This is less likely to happen when the existence of each facility is asked separately as in the redesigned AHS.

Housing Unit Definition. In addition to the inclusion of vacant mobile homes as housing units, there are two additional minor changes to the housing unit definition.

One minor difference in the definition is the 1974 through 1983 requirement that a housing unit must have either direct access from the outside or through a common hallway or complete kitchen facilities for the exclusive use of the occupants. In the redesigned American Housing Survey, the complete kitchen facilities alternative was dropped with direct access required of all units. A second minor difference is in the definition of group quarters. In the 1974 through 1983 Annual Housing Survey, a household containing five or more persons unrelated to the householder was considered to be group quarters. In the redesigned AHS, the cutoff was changed to nine or more persons unrelated to the householder.

Other Changes. In the redesigned AHS series H170 reports, all financial characteristics, except those in table 19, are shown for all renters and/or all owners. Prior to the redesigned AHS, the Annual Housing Survey reported characteristics such as value and rent for specified owners and specified renters only. Table 19 in the H170 series continues to show financial characteristics for specified owners and specified renters. Specified owners are single-family, owner-occupied units on less than 10 acres with no business or medical office. Specified renters exclude single-family units on 10 acres or more.

Beginning in 1980, the concept head of household was dropped and replaced by householder. The head of household was the person regarded as the head by the respondent. However, if a married woman living with her husband was reported as the head, her husband was considered the head for the purpose of simplifying the tabulations. The householder is the first household member who is 18 years old or over and is the owner or renter of the sample unit.

There are also some minor differences in the definition or presentation of several subjects. The 1974 through 1983 AHS reports presented data on gross rent for renter-occupied units, contract rent for vacant-for-rent units, and selected monthly housing costs for owner-occupied housing units. The same basic data are presented for all three groups in the redesigned AHS except that the subject is titled "monthly housing costs" for all three universes on all tables to ease presentation of the data on tables where more than one of the universes occur. For a detailed definition of "monthly housing costs," See appendix A.

The characteristics of new construction units are based on units constructed during the last 4 years in the AHS redesign. Prior to the AHS-MS redesign, characteristics of new construction were based on units built since the last survey, which varied from being a 3- to 4-year period.

In the AHS redesign, some of the data for recent movers are based on the householder's characteristics and some are based on characteristics of the respondent who may or may not be the householder. Before AHS redesign, all recent-mover data were based on the householder's characteristics.

A number of new items were introduced in the AHS-redesign including lot size, square footage, units with severe or moderate problems, elderly householder, and detailed information on mortgages, etc. For detailed definitions and qualifications of these and other items, see appendix A.