

## Household Food Security

Food security—access by all people at all times to enough food for an active, healthy life—is one of several conditions necessary for a population to be healthy and well nourished. This section provides information on food security and food insecurity in U.S. households based on the December 2008 food security survey—the 14th annual survey in the Nation’s food security monitoring system.

### Methods

The statistics presented in this report are based on data collected in a supplement to the Current Population Survey (CPS) conducted in December 2008. The CPS currently includes about 53,000 households and is representative, at State and national levels, of the civilian, noninstitutionalized population of the United States. About 44,000 households completed the food security supplement in December 2008; the remainder were unable or unwilling to do so. Weighting factors were calculated by the U.S. Census Bureau so that, when properly weighted, responses to the food security questions are representative at State and national levels.<sup>2</sup> All statistics in this report were calculated by applying the food security supplement weights to responses of the surveyed households to obtain nationally representative prevalence estimates.

The household food security statistics presented in this report are based on a measure of food security calculated from responses to a series of questions about conditions and behaviors known to characterize households having difficulty meeting basic food needs.<sup>3</sup> Each question asks whether the condition or behavior occurred at any time during the previous 12 months and specifies a lack of money or other resources to obtain food as the reason. Voluntary fasting or dieting to lose weight are thereby excluded from the measure. The series includes 10 questions about food conditions of the household as a whole and of adults in the household and, if there are children present in the household, an additional 8 questions about their food conditions (see box, “Questions Used To Assess the Food Security of Households in the CPS Food Security Survey,” p. 3). Responses to the 18 food security questions are reported in appendix A.

The food security status of each interviewed household is determined by the number of food-insecure conditions and behaviors the household reports. Households are classified as *food secure* if they report no food-insecure conditions or if they report only one or two food-insecure conditions. (Food-insecure conditions are indicated by responses of “often” or “sometimes” to questions 1-3 and 11-13; “almost every month” or “some months but not every month” to questions 5, 10, and 17; and “yes” to the other questions.) They are classified as *food insecure* if they report three or more food-insecure conditions.<sup>4</sup>

<sup>2</sup>Reweightings of the Supplement takes into consideration income and other information about households that completed the labor-force portion of the survey but not the Food Security Supplement. This corrects, to some extent, biases that could result from nonresponse to the Supplement by households that completed only the labor-force part of the survey.

<sup>3</sup>The methods used to measure the extent and severity of food insecurity have been described in several places (Hamilton et al., 1997a, 1997b; Andrews et al., 1998; Bickel et al., 1998; Carlson et al., 1999; Bickel et al., 2000; Nord and Bickel, 2002). See also the recent assessment of the measurement methods by a panel of the Committee on National Statistics (National Research Council, 2006). Further details on the development of the measure are provided in appendix B.

<sup>4</sup>To reduce the burden on higher income respondents, households with incomes above 185 percent of the Federal poverty line who give no indication of food-access problems on either of two preliminary screening questions are deemed to be food secure and are not asked the questions in the food security assessment series. The preliminary screening questions are as follows:

- People do different things when they are running out of money for food in order to make their food or their food money go further. In the last 12 months, since December of last year, did you ever run short of money and try to make your food or your food money go further?
- Which of these statements best describes the food eaten in your household—enough of the kinds of food we want to eat, enough but not always the kinds of food we want to eat, sometimes not enough to eat, or often not enough to eat?

## Questions Used To Assess the Food Security of Households in the CPS Food Security Survey

1. “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
2. “The food that we bought just didn’t last and we didn’t have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?
3. “We couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? (Yes/No)
5. (If yes to question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn’t eat, because there wasn’t enough money for food? (Yes/No)
8. In the last 12 months, did you lose weight because there wasn’t enough money for food? (Yes/No)
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)
10. (If yes to question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

### *(Questions 11-18 were asked only if the household included children age 0-18)*

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn’t feed our children a balanced meal, because we couldn’t afford that.” Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because we just couldn’t afford enough food.” Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food? (Yes/No)
15. In the last 12 months, were the children ever hungry but you just couldn’t afford more food? (Yes/No)
16. In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food? (Yes/No)
17. (If yes to question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
18. In the last 12 months did any of the children ever not eat for a whole day because there wasn’t enough money for food? (Yes/No)

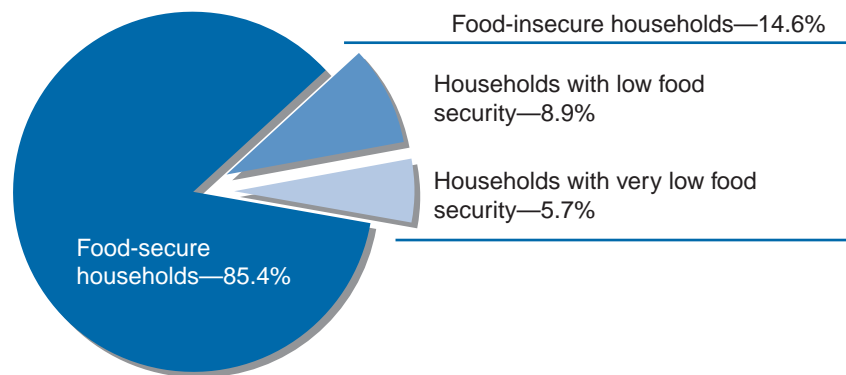
Food-insecure households are further classified as having either *low food security* or *very low food security*.<sup>5</sup> The very low food security category identifies households in which food intake of one or more members was reduced and eating patterns disrupted because of insufficient money and other resources for food. Households without children are classified as having *very low food security* if they report six or more food-insecure conditions. Households with children are classified as having *very low food security* if they report eight or more food-insecure conditions, including conditions among both adults and children. Households with children are further classified as having *very low food security among children* if they report five or more food-insecure conditions among the children (that is, if they respond affirmatively to five or more of questions 11-18).

Households classified as having *low food security* have reported multiple indications of food access problems, but typically have reported few, if any, indications of reduced food intake. Households classified as having *very low food security* have reported multiple indications of reduced food intake and disrupted eating patterns due to inadequate resources for food. In most, but not all households with *very low food security*, the survey respondent reported that he or she was hungry at some time during the year but did not eat because there was not enough money for food.

## Prevalence of Food Insecurity— National Conditions and Trends

About 85 percent of U.S. households were food secure throughout the entire year 2008 (fig. 1, table 1A). In concept, “food secure” means that all household members had access at all times to enough food for an active, healthy life.<sup>6</sup> The remaining 17 million U.S. households (14.6 percent of all households) were food insecure at some time during the year. That is, they were, at times, uncertain of having, or unable to acquire, enough food for all household members because they had insufficient money and other resources for food. About two-thirds of food-insecure households avoided substantial reductions or disruptions in food intake, in many cases by relying on a few basic foods and reducing variety in their diets. But 6.7 million households

Figure 1  
**U.S. households by food security status, 2008**



Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

<sup>5</sup>Prior to 2006, households with low food security were described as “food insecure without hunger” and households with very low food security were described as “food insecure with hunger.” Changes in these descriptions were made in 2006 at the recommendation of the Committee on National Statistics (National Research Council, 2006), in order to distinguish the physiological state of hunger from indicators of food availability. The criteria by which households were classified remained unchanged. See box “What Is ‘Very Low Food Security’?,” p. 5, for further information on these changes.

<sup>6</sup>Food security and insecurity, as measured for this report, are based on respondent perceptions of whether the household was able to obtain enough food to meet their needs. The measure does not specifically address whether the household’s food intake was sufficient for active, healthy lives. Nonetheless, research based on other surveys has found food security, measured as in this report, to be associated with health, nutrition, and children’s development in a manner that generally supports the conceptualized link with sufficiency for active, healthy lives (see, for example, Nord and Kantor, 2006; Nord and Hopwood, 2007; Nord, 2009).

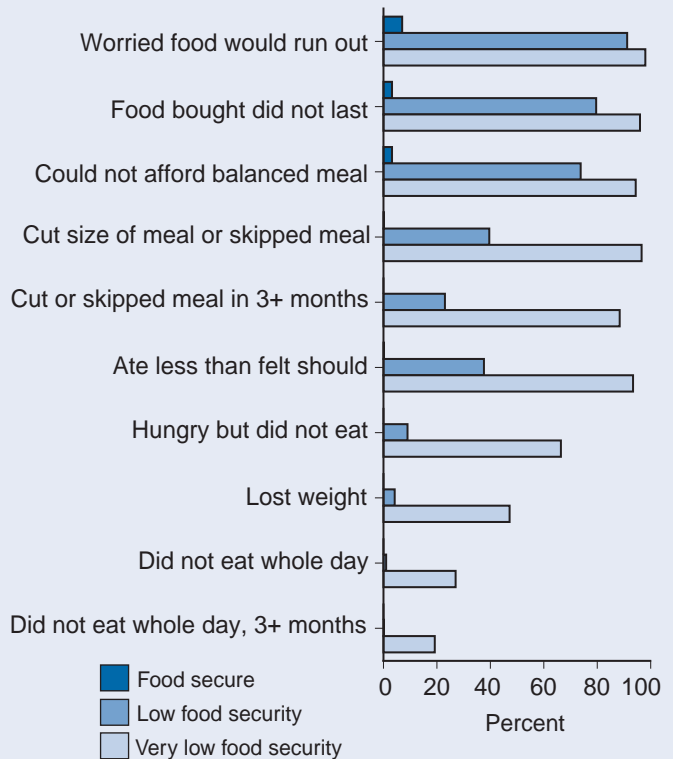
## What Is “Very Low Food Security”?

The defining characteristic of “very low food security” (described in *Household Food Security* reports prior to 2006 as “food insecurity with hunger”) is that, at times during the year, the food intake of household members was reduced and their normal eating patterns were disrupted because the household lacked money and other resources for food. Very low food security can be characterized in terms of the conditions that households in this category reported in the food security survey. In the 2008 survey, **households classified as having very low food security** (representing an estimated 6.7 million households nationwide) reported the following specific conditions:

- 98 percent reported having worried that their food would run out before they got money to buy more.
- 96 percent reported that the food they bought just did not last and they did not have money to get more.
- 94 percent reported that they could not afford to eat balanced meals.
- 97 percent reported that an adult had cut the size of meals or skipped meals because there was not enough money for food.
- 88 percent reported that this had occurred in 3 or more months.
- In 93 percent, respondents reported that they had eaten less than they felt they should because there was not enough money for food.
- In 66 percent, respondents reported that they had been hungry but did not eat because they could not afford enough food.
- In 47 percent, respondents reported having lost weight because they did not have enough money for food.
- 27 percent reported that an adult did not eat for a whole day because there was not enough money for food.

- 19 percent reported that this had occurred in 3 or more months.
- All of those without children reported at least 6 of these conditions, and 67 percent reported 7 or more. (Conditions in households with children were similar, but the reported food-insecure conditions of both adults and children were taken into account.)

**Households reporting each indicator of food insecurity, by food security status, 2008**



Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

(5.7 percent of all U.S. households) had *very low food security*—that is, they were food insecure to the extent that eating patterns of one or more household members were disrupted and their food intake reduced, at least some time during the year, because they couldn’t afford enough food.

Children in most food-insecure households—even in most households with very low food security—were protected from reductions in food intake. However in about 506,000 households (1.3 percent of households with children), one or more children were also subject to reduced food intake and disrupted eating patterns at some time during the year (table 1B). In some households with very low food security among children, only older children

Table 1A

**Households and individuals by food security status of household, 1998-2008**

Unit	Total <sup>1</sup>	Food insecure								
		Food secure			All		With low food security		With very low food security	
		1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
<b>Households:</b>										
2008	117,565	100,416	85.4	17,149	14.6	10,426	8.9	6,723	5.7	
2007	117,100	104,089	88.9	13,011	11.1	8,262	7.0	4,749	4.1	
2006	115,609	102,961	89.1	12,648	10.9	8,031	6.9	4,617	4.0	
2005	114,437	101,851	89.0	12,586	11.0	8,158	7.1	4,428	3.9	
2004	112,967	99,473	88.1	13,494	11.9	9,045	8.0	4,449	3.9	
2003	112,214	99,631	88.8	12,583	11.2	8,663	7.7	3,920	3.5	
2002	108,601	96,543	88.9	12,058	11.1	8,259	7.6	3,799	3.5	
2001	107,824	96,303	89.3	11,521	10.7	8,010	7.4	3,511	3.3	
2000	106,043	94,942	89.5	11,101	10.5	7,786	7.3	3,315	3.1	
1999	104,684	94,154	89.9	10,529	10.1	7,420	7.1	3,109	3.0	
1998	103,309	91,121	88.2	12,188	11.8	8,353	8.1	3,835	3.7	
<b>All individuals (by food security status of household):<sup>2</sup></b>										
2008	299,567	250,459	83.6	49,108	16.4	31,824	10.6	17,284	5.8	
2007	297,042	260,813	87.8	36,229	12.2	24,287	8.2	11,942	4.0	
2006	294,010	258,495	87.9	35,515	12.1	24,395	8.3	11,120	3.8	
2005	291,501	256,373	87.9	35,128	12.1	24,349	8.4	10,779	3.7	
2004	288,603	250,407	86.8	38,196	13.2	27,535	9.5	10,661	3.7	
2003	286,410	250,155	87.3	36,255	12.7	26,622	9.3	9,633	3.4	
2002	279,035	244,133	87.5	34,902	12.5	25,517	9.1	9,385	3.4	
2001	276,661	243,019	87.8	33,642	12.2	24,628	8.9	9,014	3.3	
2000	273,685	240,454	87.9	33,231	12.1	24,708	9.0	8,523	3.1	
1999	270,318	239,304	88.5	31,015	11.5	23,237	8.6	7,779	2.9	
1998	268,366	232,219	86.5	36,147	13.5	26,290	9.8	9,857	3.7	
<b>Adults (by food security status of household):<sup>2</sup></b>										
2008	225,461	193,026	85.6	32,435	14.4	20,320	9.0	12,115	5.4	
2007	223,467	199,672	89.4	23,795	10.6	15,602	7.0	8,193	3.7	
2006	220,423	197,536	89.6	22,887	10.4	15,193	6.9	7,694	3.5	
2005	217,897	195,172	89.6	22,725	10.4	15,146	7.0	7,579	3.5	
2004	215,564	191,236	88.7	24,328	11.3	16,946	7.9	7,382	3.4	
2003	213,441	190,451	89.2	22,990	10.8	16,358	7.7	6,632	3.1	
2002	206,493	184,718	89.5	21,775	10.5	15,486	7.5	6,289	3.0	
2001	204,340	183,398	89.8	20,942	10.2	14,879	7.3	6,063	3.0	
2000	201,922	181,586	89.9	20,336	10.1	14,763	7.3	5,573	2.8	
1999	198,900	179,960	90.5	18,941	9.5	13,869	7.0	5,072	2.5	
1998	197,084	174,964	88.8	22,120	11.2	15,632	7.9	6,488	3.3	

<sup>1</sup>Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 366,000 households (0.3 percent of all households.)

<sup>2</sup>The food security survey measures food security status at the household level. Not all individuals residing in food-insecure households were directly affected by the households' food insecurity. Similarly, not all individuals in households classified as having very low food security were subject to the reductions in food intake and disruptions in eating patterns that characterize this condition. Young children, in particular, are often protected from effects of the households' food insecurity.

Sources: Calculated by ERS using data from the August 1998, April 1999, September 2000, December 2001, December 2002, December 2003, December 2004, December 2005, December 2006, December 2007, and December 2008 Current Population Survey Food Security Supplements.

may have been subjected to the more severe effects of food insecurity, while younger children were protected from those effects.

When interpreting food security statistics in this report (except for appendix D), it is important to keep in mind that households were classified as having low or very low food security if they experienced the condition at any time during the previous 12 months. The prevalence of these conditions on any given day is far below the corresponding annual prevalence. For example, the prevalence of very low food security on an average day during the 30-day period prior to the December 2008 survey is estimated to have been between 0.9 and 1.2 percent of households (1.1 to 1.4 million households; see box “When Food Insecurity Occurs in U.S. Households, It Is Usually Recurrent But Not Chronic,” p. 9). Children, as well as adults, experienced very low food security in an estimated 86,000 to 111,000 households (0.22 to 0.28 percent of all U.S. households with children) during the same period.

Table 1B

**Households with children, and children, by food security status of household, 1998-2008**

	Total <sup>1</sup>	Food secure		With low or very low food security among adults or children		With very low food security among children	
		1,000	Percent	1,000	Percent	1,000	Percent
<b>Households with children:</b>							
2008	39,699	31,364	79.0	8,335	21.0	506	1.3
2007	39,390	33,160	84.2	6,230	15.8	323	0.8
2006	39,436	33,279	84.4	6,157	15.6	221	.6
2005	39,601	33,404	84.4	6,197	15.6	270	.7
2004	39,990	32,967	82.4	7,023	17.6	274	.7
2003	40,286	33,575	83.3	6,711	16.7	207	.5
2002	38,647	32,267	83.5	6,380	16.5	265	.7
2001	38,330	32,141	83.9	6,189	16.1	211	.6
2000	38,113	31,942	83.8	6,171	16.2	255	.7
1999	37,884	32,290	85.2	5,594	14.8	219	.6
1998	38,036	31,335	82.4	6,701	17.6	331	.9
<b>Children (by food security status of household):<sup>2</sup></b>							
2008	74,106	57,433	77.5	16,673	22.5	1,077	1.5
2007	73,575	61,140	83.1	12,435	16.9	691	.9
2006	73,587	60,959	82.8	12,628	17.2	430	.6
2005	73,604	61,201	83.1	12,403	16.9	606	.8
2004	73,039	59,171	81.0	13,868	19.0	545	.7
2003	72,969	59,704	81.8	13,265	18.2	420	.6
2002	72,542	59,415	81.9	13,127	18.1	567	.8
2001	72,321	59,620	82.4	12,701	17.6	467	.6
2000	71,763	58,867	82.0	12,896	18.0	562	.8
1999	71,418	59,344	83.1	12,074	16.9	511	.7
1998	71,282	57,255	80.3	14,027	19.7	716	1.0

<sup>1</sup>Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 120,000 households (0.3 percent of all households with children.)

<sup>2</sup>The food security survey measures food security status at the household level. Not all children residing in food-insecure households were directly affected by the households' food insecurity. Similarly, not all children in households classified as having very low food security among children were subject to the reductions in food intake and disruptions in eating patterns that characterize this condition. Young children, in particular, are often protected from effects of the households' food insecurity.

Sources: Calculated by ERS using data from the August 1998, April 1999, September 2000, December 2001, December 2002, December 2003, December 2004, December 2005, December 2006, December 2007, and December 2008 Current Population Survey Food Security Supplements.

The prevalence of food insecurity at all reported levels of severity increased from 2007 to 2008. The prevalence of food insecurity increased from 11.1 percent of households in 2007 to 14.6 percent in 2008. The prevalence of very low food security increased from 4.1 percent of households in 2007 to 5.7 percent in 2008. The prevalence of very low food security among children was up from 0.8 percent of households with children in 2007 to 1.3 percent in 2008.

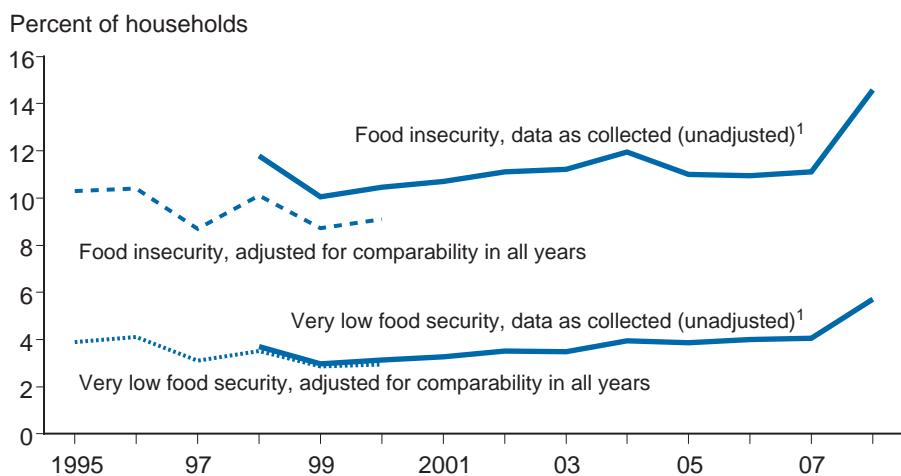
The prevalences of both food insecurity overall and the more severe condition, very low food security, were higher in 2008 than in any year since the first nationally representative food security survey in 1995 (fig. 2). Over the previous decade, food insecurity had increased from about 10 percent in 1999 to near 12 percent in 2004, then declined to 11 percent in 2005-07.<sup>7</sup> The prevalence of very low food security had increased from around 3 percent in 1999 to 4 percent in 2004, then remained essentially unchanged through 2007.

## Prevalence of Food Insecurity—Conditions and Trends by Selected Household Characteristics

The prevalence of food insecurity varied considerably among households with different demographic and economic characteristics (table 2). Rates of food insecurity were well below the national average of 14.6 percent for households with more than one adult and no children (9.1 percent) and for households with elderly persons (8.1 percent).<sup>8</sup> Rates of food insecurity substantially higher than the national average were registered by the following groups:

- households with incomes below the official poverty line (42.2 percent)<sup>9</sup>
- households with children, headed by single women (37.2 percent) or single men (27.6 percent)
- Black households (25.7 percent)
- Hispanic households (26.9 percent).

Figure 2  
**Trends in the prevalence of food insecurity in U.S. households, 1995-2008**



<sup>1</sup>Data as collected in 1995-97 are not directly comparable with data collected in 1998-2008.  
Source: Calculated by ERS based on Current Population Survey Food Security Supplement data.

<sup>7</sup>Because of changes in screening procedures used to reduce respondent burden, food security statistics from 1995-97 are not directly comparable with those from 1998-2008. Figure 2 presents statistics for the years 1995-2000, adjusted to be comparable across all years, as well as statistics for 1998-2008 based on data as collected. See Andrews et al. (2000) and Ohls et al. (2001) for detailed information about questionnaire screening and adjustments for comparability. From 1995-2000, the prevalence rates reflected an overall decline in food insecurity but also a 2-year cyclical component that was associated with data collection schedules (Cohen et al., 2002a). The CPS food security surveys over that period alternated between April in odd-numbered years and August or September in even-numbered years. The measured prevalence of food insecurity was higher in the August/September collections, suggesting a seasonal response effect. Since 2001, the survey has been conducted in early December, which avoids further problems of seasonality effects in interpreting annual changes. A smaller food security survey was also conducted in April 2001 to provide a baseline for assessing seasonal effects of data collection in December. Comparison of food security statistics from the April 2001 survey with those from April 1999 and December 2001 suggests that seasonal effects in early December were similar to those in April (Nord et al., 2002a).

<sup>8</sup>“Elderly” in this report refers to persons ages 65 and older. .

<sup>9</sup>The Federal poverty line was \$21,834 for a family of four in 2008.

## When Food Insecurity Occurs in U.S. Households, It Is Usually Recurrent But Not Chronic

When households experience very low food security in the United States, the resulting instances of reduced food intake and disrupted eating patterns are usually occasional or episodic but are not usually chronic. The food security measurement methods used in this report are designed to register these occasional or episodic occurrences. The questions used to assess households' food security status ask whether a condition, experience, or behavior occurred at any time in the past 12 months, and households can be classified as having very low food security based on a single, severe episode during the year. It is important to keep this aspect of the scale in mind when interpreting food insecurity statistics. Analysis of additional information collected in the food security survey on how frequently various food-insecure conditions occurred during the year, whether they occurred during the 30 days prior to the survey, and, if so, in how many days, provide insight into the frequency and duration of food insecurity in U.S. households. These analyses reveal that in 2008:

- About one-fourth of the households with very low food security at any time during the year experienced the associated conditions rarely or occasionally—in only 1 or 2 months of the year. For three-fourths of households, the conditions were recurring, experienced in 3 or more months of the year.
- For about one-fourth of food-insecure households and one-third of those with very low food security, occurrence of the associated conditions was frequent or chronic. That is, the conditions occurred often, or in almost every month.
- On average, households that were food insecure at some time during the year were food insecure in 7 months during the year (see appendix D). During the 30-day period ending in mid-December 2008, 10.4 million households (8.8 percent of all households) were food insecure—about 60 percent of the number that were food insecure at any time during the year.
- On average, households with very low food security at some time during the year experienced the associated conditions in 7 or 8 months during the year (see appendix D). During the 30-day period ending in mid-December 2008, 4.2 million households (3.6 percent of all households) had very low food security—about 63 percent of the number with very low food security at some during the year.
- Most households that had very low food security at some time during a month experienced the associated

conditions in 1 to 7 days of the month. The average daily prevalence of very low food security during the 30-day period ending in mid-December 2008 was probably between 1.1 and 1.4 million households (0.9 to 1.2 percent of all households)—about 18 to 23 percent of the annual prevalence.

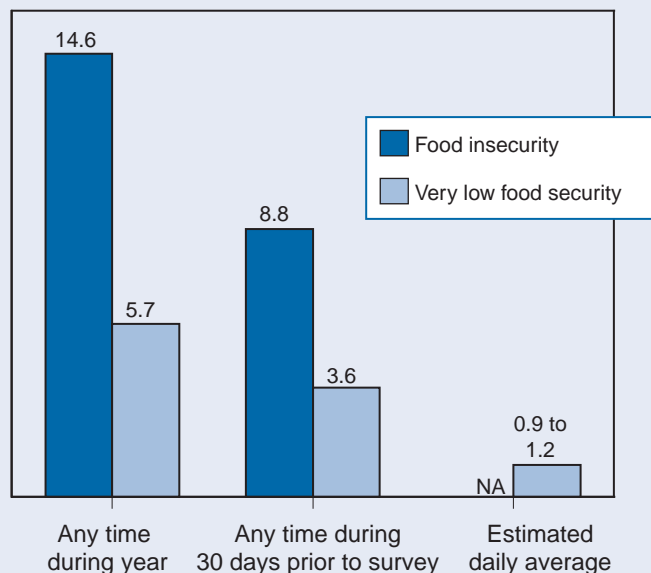
- The daily prevalence of very low food security among children during the 30-day period ending in early December 2008 was probably between 86,000 and 111,000 households (0.22 to 0.28 percent of households with children)—about 17 to 22 percent of the annual prevalence.

The omission of homeless families and individuals from these daily statistics biases the statistics downward, and the bias may be substantial relative to the estimates, especially for the most severe conditions.

(Appendix A provides information on how often conditions indicating food insecurity occurred, as reported by respondents to the December 2008 food security survey. See Nord et al., 2000, for more information about the frequency of food insecurity.)

### Prevalence of food insecurity and very low food security, by reference period

Percent of households



NA = Estimate of average daily occurrence of food insecurity not available.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.



Table 2

**Households by food security status and selected household characteristics, 2008**

Category	Total <sup>1</sup>	Food insecure							
		Food secure		All		With low food security		With very low food security	
		1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All households	117,565	100,416	85.4	17,149	14.6	10,426	8.9	6,723	5.7
Household composition:									
With children < 18 yrs	39,699	31,364	79.0	8,335	21.0	5,718	14.4	2,617	6.6
With children < 6 yrs	17,503	13,595	77.7	3,908	22.3	2,818	16.1	1,090	6.2
Married-couple families	26,705	22,887	85.7	3,818	14.3	2,735	10.2	1,083	4.1
Female head, no spouse	9,639	6,057	62.8	3,582	37.2	2,296	23.8	1,286	13.3
Male head, no spouse	2,782	2,013	72.4	769	27.6	569	20.5	200	7.2
Other household with child <sup>2</sup>	572	405	70.8	167	29.2	118	20.6	49	8.6
With no children < 18 yrs	77,866	69,052	88.7	8,814	11.3	4,708	6.0	4,106	5.3
More than one adult	45,772	41,610	90.9	4,162	9.1	2,409	5.3	1,753	3.8
Women living alone	17,934	15,266	85.1	2,668	14.9	1,284	7.2	1,384	7.7
Men living alone	14,160	12,177	86.0	1,983	14.0	1,015	7.2	968	6.8
With elderly	28,211	25,927	91.9	2,284	8.1	1,402	5.0	882	3.1
Elderly living alone	11,148	10,168	91.2	980	8.8	552	5.0	428	3.8
Race/ethnicity of households:									
White non-Hispanic	82,935	74,041	89.3	8,894	10.7	5,154	6.2	3,740	4.5
Black non-Hispanic	14,441	10,732	74.3	3,709	25.7	2,251	15.6	1,458	10.1
Hispanic <sup>3</sup>	13,504	9,873	73.1	3,631	26.9	2,439	18.1	1,192	8.8
Other	6,686	5,772	86.3	914	13.7	582	8.7	332	5.0
Household income-to-poverty ratio:									
Under 1.00	13,117	7,576	57.8	5,541	42.2	3,014	23.0	2,527	19.3
Under 1.30	20,383	12,427	61.0	7,956	39.0	4,403	21.6	3,553	17.4
Under 1.85	29,680	19,622	66.1	10,058	33.9	5,731	19.3	4,327	14.6
1.85 and over	70,433	65,038	92.3	5,395	7.7	3,595	5.1	1,800	2.6
Income unknown	17,452	15,755	90.3	1,697	9.7	1,101	6.3	596	3.4
Area of residence: <sup>4</sup>									
Inside metropolitan area	98,189	83,790	85.3	14,399	14.7	8,757	8.9	5,642	5.7
In principal cities <sup>5</sup>	32,808	27,006	82.3	5,802	17.7	3,634	11.1	2,168	6.6
Not in principal cities	48,239	42,125	87.3	6,114	12.7	3,650	7.6	2,464	5.1
Outside metropolitan area	19,375	16,625	85.8	2,750	14.2	1,669	8.6	1,081	5.6
Census geographic region:									
Northeast	21,341	18,616	87.2	2,725	12.8	1,610	7.5	1,115	5.2
Midwest	26,370	22,671	86.0	3,699	14.0	2,254	8.5	1,445	5.5
South	43,542	36,621	84.1	6,921	15.9	4,216	9.7	2,705	6.2
West	26,311	22,507	85.5	3,804	14.5	2,346	8.9	1,458	5.5

<sup>1</sup>Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 366,000 households (0.3 percent of all households.)

<sup>2</sup>Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

<sup>3</sup>Hispanics may be of any race.

<sup>4</sup>Metropolitan area residence is based on the 2003 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2004 and later years but are not precisely comparable with those of earlier years.

<sup>5</sup>Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

Food insecurity was more prevalent among households with children (21.0 percent) than among those with no children (11.3 percent).<sup>10</sup> Among households with children, those headed by a married couple showed the lowest rate of food insecurity (14.3 percent).

Across the metropolitan area classifications, the prevalence of food insecurity was highest for households located in principal cities of metropolitan areas (17.7 percent), intermediate for those in nonmetropolitan areas (14.2 percent), and lowest in suburbs and other metropolitan areas outside principal cities (12.7 percent).<sup>11</sup> Regionally, the prevalence of food insecurity was highest in the South (15.9 percent), intermediate in the West (14.5 percent) and Midwest (14.0 percent), and lowest in the Northeast (12.8 percent).

The prevalence rates of very low food security in various types of households followed a pattern similar to that observed for food insecurity. Rates were lowest for married couples with children (4.1 percent), multiple-adult households with no children (3.8 percent), and households with elderly persons (3.1 percent). Very low food security was more prevalent than the national average (5.7 percent) for households with children headed by single women (13.3 percent), women living alone (7.7 percent), men living alone (6.8 percent), Black and Hispanic households (10.1 and 8.8 percent, respectively), households with incomes below the poverty line (19.3 percent), and households located in principal cities of metropolitan areas (6.6 percent).

Very low food security among children was least prevalent in married-couple households, White non-Hispanic households, and households with incomes above 185 percent of the poverty line (table 3). Children in households headed by single women were more likely to experience very low food security, as were children in households headed by a Black or Hispanic person and those in households with incomes below 185 percent of the poverty line.

The prevalence of food insecurity increased from 2007 to 2008 for all categories of households analyzed (fig. 3). Increases were largest for single parents with children (both men and women) and for Hispanic households. The prevalence of very low food security also increased from 2007 to 2008 for all categories of households except for single-male-headed households with children (fig. 4). Among the households surveyed, this category, too, registered an increase, but the change was within a range that could have resulted from sampling variation. Increases in the prevalence of very low food security were largest for single-female-headed families with children and for households with incomes below, or not far above, the poverty line.

## Food Insecurity in Low-Income Households

Food insecurity is by definition a condition that results from insufficient household resources. In 2008, food insecurity was more than four times as prevalent in households with annual incomes below 185 percent of the poverty line as it was in households with incomes above that range (table 2). However, many factors that might affect a household's food security (such as job loss, divorce, or other unexpected events) are not captured by an annual income measure. Some households experienced episodes of food insecurity, or even very low food security, even though their annual incomes were well above the poverty line (Nord and Brent, 2002; Gundersen and Gruber, 2001).

<sup>10</sup>About one-third of the difference in food insecurity between households with and without children results from a difference in the measures applied to the two types of households. Responses to questions about children as well as adults are considered in assessing the food security status of households with children, but for both types of households, a total of three indications of food insecurity is required for classification as food insecure. Even with the child-referenced questions omitted from the scale, however, 17.9 percent of households with children would be classified as food insecure (that is, as having food insecurity among adults), compared with 11.3 percent for households without children. Comparisons of very low food security are not biased by this measurement issue because a higher threshold is applied to households with children consistent with the larger number of questions taken into consideration.

<sup>11</sup>Revised metropolitan statistical areas (MSAs) and principal cities within them were delineated by the Office of Management and Budget in 2003, based on revised standards developed by the U.S. Census Bureau in collaboration with other Federal agencies. Food security prevalence statistics by area of residence are comparable with those for 2004 and later years, but are not precisely comparable with those for earlier years. Principal cities include the incorporated areas of the largest city in each MSA and other cities in the MSA that meet specified criteria based on population size and commuting patterns.

Table 3

**Prevalence of food security and food insecurity in households with children by selected household characteristics, 2008**

Category	Total <sup>1</sup>	Food-secure households		Food-insecure households <sup>2</sup>		Households with very low food security among children	
		1,000	Percent	1,000	Percent	1,000	Percent
All households with children	39,699	31,364	79.0	8,335	21.0	506	1.3
Household composition:							
With children < 6 yrs	17,503	13,595	77.7	3,908	22.3	166	.9
Married-couple families	26,705	22,886	85.7	3,819	14.3	196	.7
Female head, no spouse	9,639	6,057	62.8	3,582	37.2	266	2.8
Male head, no spouse	2,782	2,014	72.4	768	27.6	31	1.1
Other household with child <sup>3</sup>	572	405	70.8	167	29.2	13	2.3
Race/ethnicity of households:							
White non-Hispanic	24,237	20,480	84.5	3,757	15.5	152	.6
Black non-Hispanic	5,613	3,825	68.1	1,788	31.9	146	2.6
Hispanic <sup>4</sup>	7,294	4,950	67.9	2,344	32.1	177	2.4
Other	2,554	2,108	82.5	446	17.5	31	1.2
Household income-to-poverty ratio:							
Under 1.00	5,975	2,968	49.7	3,007	50.3	244	4.1
Under 1.30	9,229	4,960	53.7	4,269	46.3	329	3.6
Under 1.85	12,586	7,271	57.8	5,315	42.2	385	3.1
1.85 and over	22,245	20,006	89.9	2,239	10.1	80	.4
Income unknown	4,867	4,085	83.9	782	16.1	41	.8
Area of residence: <sup>5</sup>							
Inside metropolitan area	33,592	26,597	79.2	6,995	20.8	447	1.3
In principal cities <sup>6</sup>	10,614	7,834	73.8	2,780	26.2	166	1.6
Not in principal cities	17,288	14,246	82.4	3,042	17.6	211	1.2
Outside metropolitan area	6,107	4,766	78.0	1,341	22.0	59	1.0
Census geographic region:							
Northeast	7,132	5,787	81.1	1,345	18.9	89	1.2
Midwest	8,773	7,045	80.3	1,728	19.7	81	.9
South	14,393	11,064	76.9	3,329	23.1	175	1.2
West	9,400	7,466	79.4	1,934	20.6	161	1.7
Individuals in households with children:							
All individuals in households with children	160,524	126,394	78.7	34,130	21.3	2,263	1.4
Adults in households with children	86,418	68,961	79.8	17,457	20.2	1,186	1.4
Children	74,106	57,433	77.5	16,673	22.5	1,077	1.5

<sup>1</sup>Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 120,000 households with children (0.3 percent of all households with children.)

<sup>2</sup>Food-insecure households are those with low or very low food security among adults or children.

<sup>3</sup>Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

<sup>4</sup>Hispanics may be of any race.

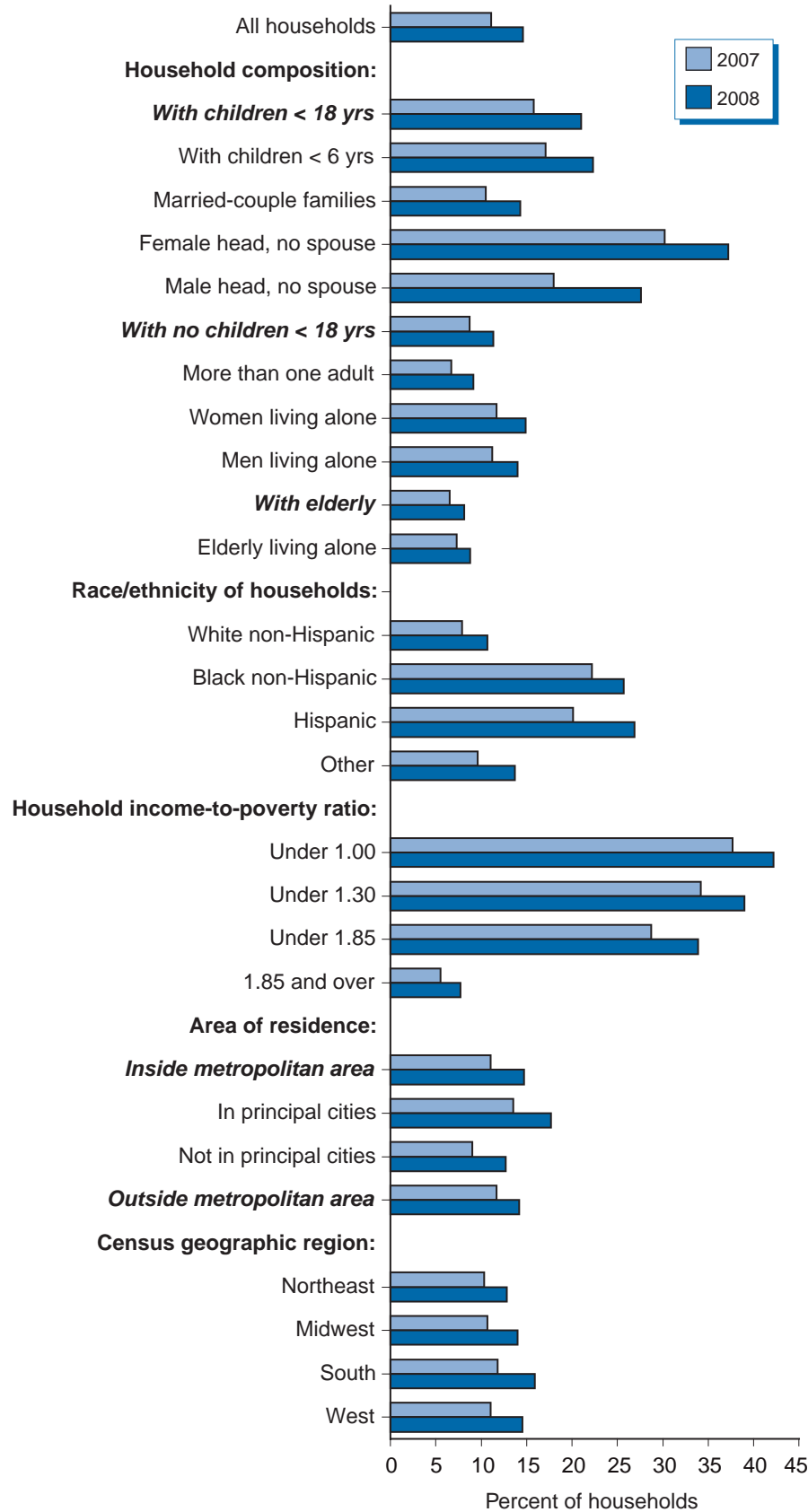
<sup>5</sup>Metropolitan area residence is based on the 2003 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2004 and later years but are not precisely comparable with those of earlier years.

<sup>6</sup>Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

Figure 3

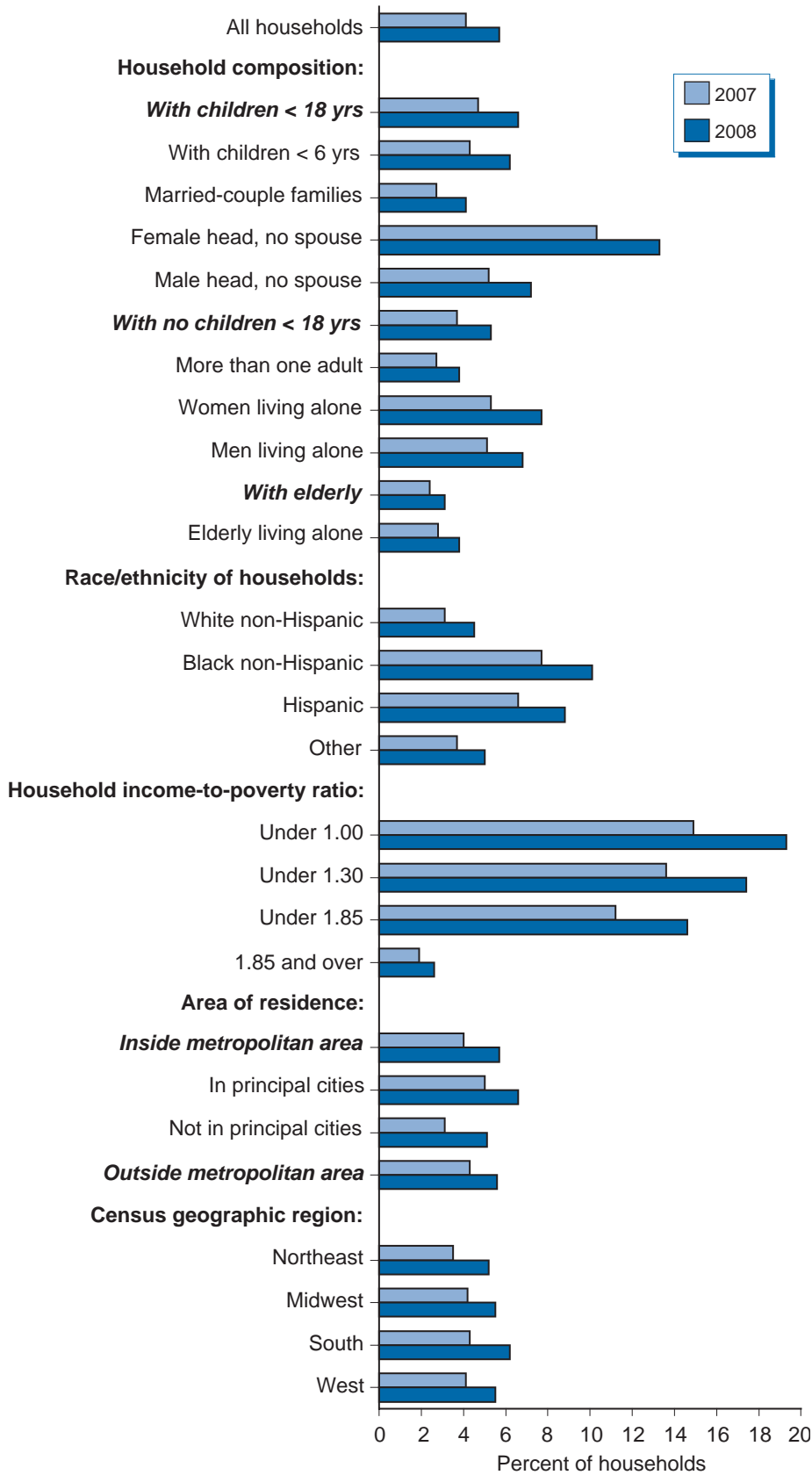
**Prevalence of food insecurity, 2007 and 2008**



Source: Calculated by ERS based on Current Population Survey Food Security Supplement data, December 2007 and December 2008.

Figure 4

**Prevalence of very low food security, 2007 and 2008**



Source: Calculated by ERS based on Current Population Survey Food Security Supplement data, December 2007 and December 2008.

On the other hand, many low-income households (including 58 percent of those with incomes below the official poverty line) were food secure.

Table 4 presents food security statistics for households with annual incomes below 130 percent of the poverty line.<sup>12</sup> Thirty-nine percent of these low-income households were food insecure, including 17.4 percent that had very low food security at times during the year. Low-income households with children were more likely to be food insecure than low-income households without children (46.3 percent vs. 33.1 percent), but were no more likely to have very low food security (16.6 percent vs. 18.1 percent). Low-income single-parent households with children were especially vulnerable to food insecurity (50.3 percent for those headed by single women and 48.6 percent for those headed by single men).

### **Number of Persons, by Household Food Security Status and Selected Household Characteristics**

The food security survey is designed to measure food security status at the household level. While it is informative to examine the number of persons residing in food-insecure households, these statistics should be interpreted carefully. In a single food-insecure household, different household members may have been affected differently by the households' food insecurity. Some members—particularly young children—may have experienced only mild effects or none at all, while adults were more severely affected. It is more precise, therefore, to describe these statistics as representing “persons living in food-insecure households” rather than as representing “food-insecure persons.” Similarly, “persons living in households with very low food security” is a more precise description than “persons with very low food security.”

In 2008, 49.1 million people lived in food-insecure households (table 1A). They constituted 16.4 percent of the U.S. civilian noninstitutionalized population and included 32.4 million adults and 16.7 million children. Of these individuals, 12.1 million adults and 5.2 million children lived in households with very low food security, and 1.1 million children (1.5 percent of U.S. children) lived in households with very low food security among children (table 1B). Tables 5 and 6 present estimates of the number of people and the number of children in the households in each food security status and household type.

### **Prevalence of Food Insecurity by State**

The prevalence of food insecurity varied considerably from State to State. Data for 3 years, 2006-08, were combined to provide more reliable statistics at the State level (table 7). Estimated prevalence rates of food insecurity during this 3-year period ranged from 6.9 percent in North Dakota to 17.4 percent in Mississippi; estimated prevalence rates of very low food security ranged from 2.6 percent in North Dakota to 7.4 percent in Mississippi.

The margin of error for the State prevalence rates should be taken into consideration when interpreting these statistics and especially when comparing prevalence rates across States. The margin of error reflects

<sup>12</sup>Households with income below 130 percent of the poverty line are eligible to receive SNAP benefits, provided they meet other eligibility criteria. Children in these households are eligible for free meals in the National School Lunch and School Breakfast Programs.

Table 4

**Households with income below 130 percent of the poverty line by food security status and selected household characteristics, 2008**

Category	Total <sup>1</sup>	Food secure		Food insecure					
		1,000	Percent	All	With low food security		With very low food security		
	1,000	1,000	Percent	1,000	Percent	1,000	Percent	1,000	Percent
All low-income households	20,383	12,427	61.0	7,956	39.0	4,403	21.6	3,553	17.4
Household composition:									
With children < 18 yrs	9,229	4,960	53.7	4,269	46.3	2,738	29.7	1,531	16.6
With children < 6 yrs	4,900	2,689	54.9	2,211	45.1	1,513	30.9	698	14.2
Married-couple families	3,766	2,223	59.0	1,543	41.0	1,057	28.1	486	12.9
Female head, no spouse	4,425	2,200	49.7	2,225	50.3	1,347	30.4	878	19.8
Male head, no spouse	840	432	51.4	408	48.6	278	33.1	130	15.5
Other household with child <sup>2</sup>	197	104	52.8	93	47.2	56	28.4	37	18.8
With no children < 18 yrs	11,154	7,467	66.9	3,687	33.1	1,665	14.9	2,022	18.1
More than one adult	4,208	2,813	66.8	1,395	33.2	687	16.3	708	16.8
Women living alone	4,206	2,823	67.1	1,383	32.9	573	13.6	810	19.3
Men living alone	2,740	1,830	66.8	910	33.2	406	14.8	504	18.4
With elderly	4,315	3,361	77.9	954	22.1	531	12.3	423	9.8
Elderly living alone	2,465	1,972	80.0	493	20.0	243	9.9	250	10.1
Race/ethnicity of households:									
White non-Hispanic	10,182	6,707	65.9	3,475	34.1	1,710	16.8	1,765	17.3
Black non-Hispanic	4,455	2,396	53.8	2,059	46.2	1,167	26.2	892	20.0
Hispanic <sup>3</sup>	4,596	2,604	56.7	1,992	43.3	1,294	28.2	698	15.2
Other	1,149	719	62.6	430	37.4	233	20.3	197	17.1
Area of residence: <sup>4</sup>									
Inside metropolitan area	16,199	9,705	59.9	6,494	40.1	3,617	22.3	2,877	17.8
In principal cities <sup>5</sup>	7,030	4,019	57.2	3,011	42.8	1,762	25.1	1,249	17.8
Not in principal cities	6,055	3,789	62.6	2,266	37.4	1,192	19.7	1,074	17.7
Outside metropolitan area	4,184	2,721	65.0	1,463	35.0	787	18.8	676	16.2
Census geographic region:									
Northeast	3,241	2,059	63.5	1,182	36.5	615	19.0	567	17.5
Midwest	4,303	2,581	60.0	1,722	40.0	952	22.1	770	17.9
South	8,510	5,105	60.0	3,405	40.0	1,921	22.6	1,484	17.4
West	4,329	2,681	61.9	1,648	38.1	916	21.2	732	16.9
Individuals in low-income households (by food security status of household):									
All individuals in low-income households	56,265	32,341	57.5	23,924	42.5	14,447	25.7	9,477	16.8
Adults in low-income households	36,196	21,750	60.1	14,446	39.9	8,241	22.8	6,205	17.1
Children in low-income households	20,069	10,592	52.8	9,477	47.2	6,206	30.9	3,271	16.3

<sup>1</sup>Totals exclude households whose income was not reported (about 15 percent of households), and those whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale (0.7 percent of low-income households).

<sup>2</sup>Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

<sup>3</sup>Hispanics may be of any race.

<sup>4</sup>Metropolitan area residence is based on the 2003 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2004 and later years but are not precisely comparable with those of earlier years.

<sup>5</sup>Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 19 percent of low-income households in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

Table 5

**Number of individuals by food security status of households and selected household characteristics, 2008**

Category	Total <sup>1</sup>	In food-insecure households							
		In food-secure households		All		In households with low food security		In households with very low food security	
		1,000	1,000 Percent	1,000	Percent	1,000	Percent	1,000	Percent
All individuals in households	299,567	250,459	83.6	49,108	16.4	31,824	10.6	17,284	5.8
Household composition:									
With children < 18 yrs	160,524	126,394	78.7	34,130	21.3	23,549	14.7	10,581	6.6
With children < 6 yrs	75,300	57,646	76.6	17,654	23.4	12,795	17.0	4,859	6.5
Married-couple families	115,058	97,333	84.6	17,725	15.4	12,831	11.2	4,894	4.3
Female head, no spouse	33,681	20,726	61.5	12,955	38.5	8,212	24.4	4,743	14.1
Male head, no spouse	9,629	6,860	71.2	2,769	28.8	2,015	20.9	754	7.8
Other household with child <sup>2</sup>	2,155	1,474	68.4	681	31.6	491	22.8	190	8.8
With no children < 18 yrs	139,043	124,064	89.2	14,979	10.8	8,276	6.0	6,703	4.8
More than one adult	106,948	96,620	90.3	10,328	9.7	5,977	5.6	4,351	4.1
Women living alone	17,934	15,266	85.1	2,668	14.9	1,284	7.2	1,384	7.7
Men living alone	14,160	12,177	86.0	1,983	14.0	1,015	7.2	968	6.8
With elderly	54,468	49,301	90.5	5,167	9.5	3,396	6.2	1,771	3.3
Elderly living alone	11,148	10,168	91.2	980	8.8	552	5.0	428	3.8
Race/ethnicity of households:									
White non-Hispanic	199,282	176,212	88.4	23,070	11.6	14,239	7.1	8,831	4.4
Black non-Hispanic	36,722	26,723	72.8	9,999	27.2	6,403	17.4	3,596	9.8
Hispanic <sup>3</sup>	44,820	31,653	70.6	13,167	29.4	9,212	20.6	3,955	8.8
Other	18,742	15,870	84.7	2,872	15.3	1,970	10.5	902	4.8
Household income-to-poverty ratio:									
Under 1.00	36,647	19,752	53.9	16,895	46.1	10,050	27.4	6,845	18.7
Under 1.30	56,265	32,341	57.5	23,924	42.5	14,447	25.7	9,477	16.8
Under 1.85	80,823	50,509	62.5	30,314	37.5	18,728	23.2	11,586	14.3
1.85 and over	175,935	161,887	92.0	14,048	8.0	9,810	5.6	4,238	2.4
Income unknown	42,809	38,061	88.9	4,748	11.1	3,287	7.7	1,461	3.4
Area of residence: <sup>4</sup>									
Inside metropolitan area	251,869	210,500	83.6	41,369	16.4	26,822	10.6	14,547	5.8
In principal cities <sup>5</sup>	81,111	64,627	79.7	16,484	20.3	11,039	13.6	5,445	6.7
Not in principal cities	128,278	110,238	85.9	18,040	14.1	11,487	9.0	6,553	5.1
Outside metropolitan area	47,698	39,959	83.8	7,739	16.2	5,002	10.5	2,737	5.7
Census geographic region:									
Northeast	53,859	46,354	86.1	7,505	13.9	4,700	8.7	2,805	5.2
Midwest	65,640	55,599	84.7	10,041	15.3	6,551	10.0	3,490	5.3
South	110,029	90,382	82.1	19,647	17.9	12,879	11.7	6,768	6.2
West	70,039	58,122	83.0	11,917	17.0	7,695	11.0	4,222	6.0

<sup>1</sup>Totals exclude individuals in households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 893,000 individuals (0.3 percent of all individuals.)

<sup>2</sup>Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

<sup>3</sup>Hispanics may be of any race.

<sup>4</sup>Metropolitan area residence is based on the 2003 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2004 and later years but are not precisely comparable with those of earlier years.

<sup>5</sup>Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of individuals living in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.



Table 6

**Number of children by food security status of households and selected household characteristics, 2008**

Category	Total <sup>1</sup>	In food-secure households		In food-insecure households <sup>2</sup>		In households with very low food security among children	
			Percent		Percent		Percent
All children	74,106	57,433	77.5	16,673	22.5	1,077	1.5
Household composition:							
With children < 6 yrs	37,467	28,303	75.5	9,164	24.5	456	1.2
Married-couple families	51,457	43,346	84.2	8,111	15.8	421	0.8
Female head, no spouse	17,508	10,516	60.1	6,992	39.9	554	3.2
Male head, no spouse	4,305	3,012	70.0	1,293	30.0	84	2.0
Other household with child <sup>3</sup>	836	559	66.9	277	33.1	19	2.3
Race/ethnicity of households:							
White non-Hispanic	43,900	36,874	84.0	7,026	16.0	271	0.6
Black non-Hispanic	10,998	7,260	66.0	3,738	34.0	351	3.2
Hispanic <sup>4</sup>	14,679	9,705	66.1	4,974	33.9	400	2.7
Other	4,530	3,597	79.4	933	20.6	54	1.2
Household income-to-poverty ratio:							
Under 1.00	13,331	6,465	48.5	6,866	51.5	570	4.3
Under 1.30	20,069	10,592	52.8	9,477	47.2	760	3.8
Under 1.85	26,926	15,386	57.1	11,540	42.9	872	3.2
1.85 and over	38,193	34,438	90.2	3,755	9.8	120	0.3
Income unknown	8,987	7,609	84.7	1,378	15.3	85	0.9
Area of residence: <sup>5</sup>							
Inside metropolitan area	62,532	48,583	77.7	13,949	22.3	922	1.5
In principal cities <sup>6</sup>	20,294	14,529	71.6	5,765	28.4	344	1.7
Not in principal cities	31,826	25,910	81.4	5,916	18.6	445	1.4
Outside metropolitan area	11,574	8,851	76.5	2,723	23.5	155	1.3
Census geographic region:							
Northeast	12,319	9,893	80.3	2,426	19.7	166	1.3
Midwest	16,192	12,779	78.9	3,413	21.1	175	1.1
South	27,686	20,964	75.7	6,722	24.3	364	1.3
West	17,909	13,797	77.0	4,112	23.0	372	2.1

<sup>1</sup>Totals exclude children in households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. In 2008, these represented 221,000 children (0.3 percent.)

<sup>2</sup>Food-insecure households are those with low or very low food security among adults or children.

<sup>3</sup>Households with children in complex living arrangements, e.g., children of other relatives or unrelated roommate or boarder.

<sup>4</sup>Hispanics may be of any race.

<sup>5</sup>Metropolitan area residence is based on the 2003 Office of Management and Budget delineation. Prevalence rates by area of residence are comparable with those for 2004 and later years, but are not precisely comparable with those of earlier years.

<sup>6</sup>Households within incorporated areas of the largest cities in each metropolitan area. Residence inside or outside of principal cities is not identified for about 17 percent of children living in metropolitan statistical areas.

Source: Calculated by ERS using data from the December 2008 Current Population Survey Food Security Supplement.

sampling variation—the uncertainty associated with estimates that are based on information from a limited number of households in each State. The margins of error presented in table 7 indicate the range (above or below the estimated prevalence rate) within which the true prevalence rate is 90 percent likely to fall. For example, considering the margins of error, it is not certain that the prevalence of very low food security was higher in Mississippi than in the States with the next five highest prevalence rates.

Taking into account margins of error of the State and U.S. estimates, the prevalence of food insecurity was higher (i.e., statistically significantly higher) than the national average in 10 States and lower than the national average in 14 States. In the remaining 26 States and the District of Columbia, differences from the national average were not statistically significant. The prevalence of very low food security was higher than the national average in 8 States, lower than the national average in 9 States, and not significantly different from the national average in 33 States and the District of Columbia.

State-level prevalence rates of food insecurity and very low food security for the period 2006-08 are compared with 3-year average rates for 2003-05 and 1996-98 in table 8. The prevalence rates for 2006-08 are repeated from table 7. The prevalence rates for the two earlier periods were reported previously in *Household Food Security in the United States, 2005* (Nord et al., 2006). The 1996-98 statistics presented here and in *Household Food Security in the United States, 2005* were revised from those reported in *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999) to adjust for differences in data collection procedures in the two periods.<sup>13</sup> They are presented as a baseline to assess longer term changes in State-level food security conditions.<sup>14</sup>

In four States—Idaho, South Carolina, Utah, and Wyoming—prevalence rates of food insecurity declined from 2003-05 to 2006-08 by statistically significant percentages. The largest declines were in Idaho and Utah. Prevalence rates increased by statistically significant percentages in 13 States, with the largest increases observed in Nevada and West Virginia. During the same period, the prevalence of very low food security declined by a statistically significant percentage only in Wyoming, while increasing in 23 States. The largest increases were in Mississippi and Oregon. Changes not marked as statistically significant in table 8 were within ranges that could have resulted from sampling variation (that is, by the interviewed households not precisely representing all households in the State).

<sup>13</sup>To reduce the burden on survey respondents, households—especially those with higher incomes—that report no indication of any food access problems on two or three “screener” questions are not asked the questions in the food security module. They are classified as food secure. Screening procedures in the CPS food security surveys were modified from year to year prior to 1998 to achieve an acceptable balance between accuracy and respondent burden. Since 1998, screening procedures have remained unchanged. The older, more restrictive screening procedures depressed prevalence estimates—especially for food insecurity—compared with those in use since 1998 because a small proportion of food-insecure households were screened out along with those that were food secure. To provide an appropriate baseline for assessing changes in State prevalence rates of food insecurity, statistics from the 1996-98 report were adjusted upward to offset the estimated effects of the earlier screening procedures on each States’ prevalence rates. The method used to calculate these adjustments was described in detail in *Household Food Security in the United States, 2001* (Nord et al., 2002), appendix D.

<sup>14</sup>Seasonal effects on food security measurement (see fig. 2) probably bias prevalence rates for 1996-98 upward somewhat compared with 2003-05 and 2006-08. At the national level, this effect may have raised the measured prevalence rate of food insecurity in 1996-98 by about 0.8 percentage point and the prevalence rate of very low food security by about 0.4 percentage point. However, seasonal effects may have differed from State to State.

Table 7

**Prevalence of household-level food insecurity and very low food security by State, average 2006-08<sup>1</sup>**

State	Number of households		Food insecurity (low or very low food security)		Very low food security	
	Average 2006-08 <sup>2</sup>	Interviewed	Prevalence	Margin of error <sup>3</sup>	Prevalence	Margin of error <sup>3</sup>
	<i>Number</i>	<i>Number</i>	<i>Percent</i>	<i>Percentage points</i>	<i>Percent</i>	<i>Percentage points</i>
U.S.	116,758,000	124,307	12.2	0.25	4.6	0.18
AK	247,000	1,586	11.6	1.66	4.4	1.31
AL	1,873,000	1,398	13.3	1.66	5.4	1.02
AR	1,149,000	1,432	15.9*	3.19	5.6	1.50
AZ	2,496,000	1,542	13.2	1.51	4.9	.84
CA	12,882,000	9,176	12.0	.74	4.3	.48
CO	1,949,000	2,721	11.6	1.13	5.0	.67
CT	1,388,000	2,601	11.0	1.53	4.1	1.07
DC	277,000	1,917	12.4	1.15	4.2	.73
DE	338,000	1,887	9.4*	.98	3.7*	.73
FL	7,463,000	5,029	12.2	.64	4.9	.48
GA	3,670,000	2,627	14.2*	1.10	5.4*	.66
HI	452,000	1,744	9.1*	1.17	3.0*	.77
IA	1,233,000	2,554	11.6	1.15	4.8	.93
ID	547,000	1,437	11.4	1.37	3.9	.75
IL	4,930,000	3,702	11.1	1.27	4.1	.51
IN	2,483,000	2,029	11.2	1.49	4.3	1.04
KS	1,143,000	1,955	13.8*	1.09	4.8	1.09
KY	1,663,000	1,881	12.6	1.49	4.4	.80
LA	1,647,000	1,167	11.0	1.62	3.7	1.16
MA	2,484,000	1,891	8.3*	1.04	3.8	.96
MD	2,149,000	2,922	9.6*	.82	3.4*	.46
ME	541,000	2,566	13.7*	1.15	6.4*	.98
MI	3,973,000	2,952	12.0	1.45	4.4	.85
MN	2,110,000	3,169	10.3*	.92	4.1	.77
MO	2,421,000	2,230	14.0*	1.31	5.8*	.97
MS	1,149,000	1,207	17.4*	2.22	7.4*	1.40
MT	426,000	1,481	10.9*	1.25	4.4	.76
NC	3,580,000	2,597	13.7*	1.38	4.4	.66
ND	272,000	1,776	6.9*	.93	2.6*	.65
NE	710,000	1,948	10.4*	1.06	4.0	.72
NH	518,000	2,729	8.5*	.83	3.1*	.66
NJ	3,148,000	2,292	10.3*	.97	3.4*	.84
NM	761,000	1,165	14.1*	1.74	4.6	.92
NV	984,000	1,957	12.4	1.67	4.6	.99
NY	7,596,000	4,844	11.3	.95	4.3	.46
OH	4,567,000	3,523	13.3	1.22	5.2	.62
OK	1,414,000	1,648	14.0*	1.41	5.9*	.81
OR	1,498,000	1,733	13.1	1.55	6.6*	1.14
PA	4,970,000	3,835	11.2	.98	4.2	.47
RI	427,000	2,097	11.7	1.44	4.2	.55
SC	1,795,000	1,827	13.1	1.24	5.2	.91
SD	325,000	2,111	10.3*	1.72	4.1	1.06
TN	2,520,000	1,733	13.5	2.00	4.6	.93
TX	8,646,000	5,904	16.3*	1.08	5.7*	.56
UT	861,000	1,308	11.2	1.88	4.5	1.13
VA	2,966,000	2,608	8.6*	1.25	3.3*	.68
VT	261,000	1,837	12.1	1.63	5.7*	1.09
WA	2,599,000	2,151	11.1	1.72	4.3	.56
WI	2,312,000	2,574	10.1*	.72	3.7*	.42
WV	727,000	1,521	12.0	2.03	4.5	1.10
WY	221,000	1,786	9.2*	1.44	2.9*	.81

\*Difference from U.S. average was statistically significant with 90 percent confidence ( $t > 1.645$ ).

<sup>1</sup>Prevalence rates for 1996-98 reported in *Prevalence of Food Insecurity and Hunger, by State, 1996-1998* (Nord et al., 1999) are not directly comparable with the rates reported here because of differences in screening procedures in the CPS Food Security Supplements from 1995 to 1998. Comparable statistics for the earlier period are presented in table 8.

<sup>2</sup>Totals exclude households whose food security status is unknown because they did not give a valid response to any of the questions in the food security scale. These represented about 0.3 percent of all households in each year.

<sup>3</sup>Margin of error with 90 percent confidence (1.645 times the standard error of the estimated prevalence rate).

Source: Prepared by ERS using data from the December 2006, December 2007, and December 2008 Current Population Survey Food Security Supplements.

Table 8

**Prevalence of household-level food insecurity and very low food security by State, 1996-98 (average), 2003-05 (average), and 2006-08 (average)<sup>1</sup>**

State	Food insecurity (low or very low food security)					Very low food security				
	Average	Average	Average	Change	Change	Average	Average	Average	Change	Change
	2006-08	2003-05	1996-98 <sup>1</sup>	2003-05 to 2006-08	1996-98 to 2006-08	2006-08	2003-05	1996-98 <sup>1</sup>	2003-05 to 2006-08	1996-98 to 2006-08
	Percent		Percentage points			Percent		Percentage points		
U.S.	12.2	11.4	11.3	0.8*	0.9*	4.6	3.8	3.7	0.8*	0.9*
AK	11.6	12.2	8.7	-6	2.9*	4.4	4.9	3.6	-.5	.8
AL	13.3	12.3	12.5	1.0	.8	5.4	3.4	3.3	2.0*	2.1*
AR	15.9	14.7	13.7	1.2	2.2	5.6	5.6	4.8	0.0	.8
AZ	13.2	12.2	14.6	1.0	-1.4	4.9	3.8	4.3	1.1*	.6
CA	12.0	11.7	13.3	.3	-1.3*	4.3	3.6	4.3	.7*	0.0
CO	11.6	12.0	10.8	-.4	.8	5.0	3.9	3.8	1.1*	1.2*
CT	11.0	8.2	11.0	2.8*	0.0	4.1	2.6	4.1	1.5*	0.0
DC	12.4	11.4	13.7	1.0	-1.3	4.2	3.8	4.7	.4	-.5
DE	9.4	6.6	8.1	2.8*	1.3	3.7	1.9	2.9	1.8*	.8
FL	12.2	9.4	13.2	2.8*	-1.0	4.9	3.5	4.5	1.4*	.4
GA	14.2	12.4	10.9	1.8*	3.3*	5.4	5.1	3.4	.3	2.0*
HI	9.1	7.8	12.9	1.3	-3.8*	3.0	2.8	3.1	.2	-.1
IA	11.6	10.9	8.0	.7	3.6*	4.8	3.5	2.6	1.3*	2.2*
ID	11.4	14.1	11.3	-2.7*	.1	3.9	3.7	3.3	.2	.6
IL	11.1	9.1	9.6	2.0*	1.5*	4.1	3.2	3.2	.9*	.9*
IN	11.2	11.1	9.0	.1	2.2	4.3	4.1	2.9	.2	1.4*
KS	13.8	12.3	11.5	1.5	2.3*	4.8	4.6	4.2	.2	.6
KY	12.6	12.8	9.7	-.2	2.9*	4.4	4.2	3.4	.2	1.0*
LA	11.0	12.8	14.4	-1.8	-3.4*	3.7	3.6	4.4	.1	-.7
MA	8.3	7.8	7.5	.5	.8	3.8	3.0	2.1	.8	1.7*
MD	9.6	9.4	8.7	.2	.9	3.4	3.6	3.3	-.2	.1
ME	13.7	12.3	9.8	1.4	3.9*	6.4	4.6	4.0	1.8*	2.4*
MI	12.0	11.5	9.6	.5	2.4*	4.4	4.1	3.1	.3	1.3*
MN	10.3	7.7	8.6	2.6*	1.7*	4.1	3.0	3.1	1.1*	1.0*
MO	14.0	11.7	10.1	2.3*	3.9*	5.8	4.0	3.0	1.8*	2.8*
MS	17.4	16.5	14.6	.9	2.8	7.4	4.4	4.2	3.0*	3.2*
MT	10.9	11.2	11.2	-.3	-.3	4.4	4.6	3.0	-.2	1.4*
NC	13.7	13.2	9.8	.5	3.9*	4.4	4.5	2.7	-.1	1.7*
ND	6.9	6.4	5.5	.5	1.4*	2.6	2.2	1.6	.4	1.0*
NE	10.4	10.3	8.7	.1	1.7*	4.0	4.0	2.5	0.0	1.5*
NH	8.5	6.5	8.6	2.0*	-.1	3.1	2.2	3.1	.9	0.0
NJ	10.3	8.1	8.9	2.2*	1.4*	3.4	2.6	3.1	.8	.3
NM	14.1	16.8	16.5	-2.7	-2.4*	4.6	5.7	4.8	-1.1	-.2
NV	12.4	8.4	10.4	4.0*	2.0	4.6	3.0	4.0	1.6*	.6
NY	11.3	10.4	11.9	.9	-.6	4.3	3.1	4.1	1.2*	.2
OH	13.3	12.6	9.7	.7	3.6*	5.2	3.8	3.5	1.4*	1.7*
OK	14.0	14.6	13.1	-.6	.9	5.9	4.8	4.2	1.1*	1.7*
OR	13.1	11.9	14.2	1.2	-1.1	6.6	3.9	6.0	2.7*	.6
PA	11.2	9.8	8.3	1.4*	2.9*	4.2	2.9	2.6	1.3*	1.6*
RI	11.7	12.4	10.2	-.7	1.5	4.2	4.1	2.7	.1	1.5*
SC	13.1	15.5	11.0	-2.4*	2.1*	5.2	6.3	3.5	-1.1	1.7*
SD	10.3	9.5	8.2	.8	2.1*	4.1	3.2	2.2	.9	1.9*
TN	13.5	13.0	11.8	.5	1.7	4.6	4.2	4.4	.4	.2
TX	16.3	16.0	15.2	.3	1.1*	5.7	5.1	5.5	.6*	.2
UT	11.2	14.5	10.3	-3.3*	.9	4.5	5.1	3.1	-.6	1.4
VA	8.6	8.4	10.2	.2	-1.6	3.3	2.7	3.0	.6	.3
VT	12.1	9.5	8.8	2.6*	3.3*	5.7	3.9	2.7	1.8*	3.0*
WA	11.1	11.2	13.2	-.1	-2.1	4.3	3.9	4.7	.4	-.4
WI	10.1	9.5	8.5	.6	1.6*	3.7	2.7	2.6	1.0*	1.1*
WV	12.0	8.9	9.5	3.1*	2.5	4.5	3.0	3.1	1.5*	1.4*
WY	9.2	11.1	9.9	-1.9*	-.7	2.9	4.1	3.5	-1.2*	-.6

\*Change was statistically significant with 90 percent confidence ( $t > 1.645$ ).

<sup>1</sup> Statistics for 1996-98 were revised to account for changes in survey screening procedures introduced in 1998.

Source: Prepared by ERS based on Current Population Survey Food Security Supplement data.