

Effects of Hurricane Katrina on BLS Employment and Unemployment Data Collection and Estimation

On This Page

- » [Effects of Hurricane Katrina on the Current Employment Statistics Survey](#)
- » [Effects of Hurricane Katrina on the Current Population Survey](#)
- » [Effects of Hurricane Katrina on Local Area Unemployment Statistics](#)
- » [Effects of Hurricane Katrina on the Quarterly Census of Employment and Wages](#)

The Bureau of Labor Statistics (BLS) produces a wide range of data that track economic developments for the Nation, states, and local areas. The widespread destruction caused by Hurricane Katrina and its aftermath will have both short and long-term economic consequences, and data from Bureau programs may help policymakers and the public gauge these effects.

The information below provides Questions and Answers to help data users understand the issues created by the storm for the Current Employment Statistics (CES) survey and the Current Population Survey (CPS), the steps BLS took to address those issues, and how the data from those surveys might be useful in understanding ongoing developments. A separate page provides [similar information about the Quarterly Census of Employment and Wages \(QCEW\)](#).

How the disaster will affect key economic indicators will depend, in part, on the concepts and definitions used by the various programs. The definition of employment, for example, differs somewhat in the Bureau's two monthly surveys of the labor market—the CES and the CPS, as well as in the quarterly census totals released by the QCEW. Those definitional differences may affect each program's measure of employment in the disaster's wake.

The magnitude of destruction caused by the storm also presented operational challenges for several Bureau programs. Much of the data produced by the Bureau comes from surveys of businesses and individuals. The evacuations of people and destruction to property caused by the storm influenced the Bureau's ability to contact people and businesses in the affected areas. The impact of missing reporters and other operational problems on BLS economic measures varied because of differences in the way information is gathered and measures derived. In the Bureau's monthly survey and quarterly census of business establishments, for example, some information is supplied by home offices or central reporters that are located outside the affected areas.

Effects of Hurricane Katrina on the Current Employment Statistics Survey

The [Current Employment Statistics](#) (CES) survey, also known as the payroll survey, publishes estimates of employment, hours, and earnings at national, state and metropolitan area levels on a monthly basis. The CES survey is a federal/state cooperative program in which BLS produces national level estimates and individual State Workforce agencies produce the state and area estimates. The CES national estimates for the month of September 2005, published on October 7, were the first to reflect the impact of Hurricane Katrina, subject to the collection and estimation issues discussed below. September estimates for state and metropolitan areas were first published on October 21. The hurricane struck the Gulf Coast on August 29, with catastrophic effects in parts of Louisiana, Mississippi, and Alabama.

For the September 2005 CES estimates, BLS and its state partners made several modifications to the usual estimation procedures. These adjustments were designed to help the estimates more accurately reflect the employment situation for September. The changes can be summarized as:

- Imputation procedures for survey non-respondents were modified in the most heavily impacted disaster areas to recognize the likelihood of businesses being temporarily or permanently out of business.
- Sample weights were adjusted as needed for sample units in the more broadly defined disaster area to compensate for lower-than-average survey response rates.
- The business net birth/death model used for adjusting sample-based employment estimates was left unchanged for national estimates, aside from the use of reported employment of zero from affected businesses, but was modified for states and metropolitan areas in recognition that the statistical relationship between business births and deaths may have changed in the disaster areas.

For the October 2005 CES estimates, BLS and its state partners continued some of these modifications, as appropriate.

For November 2005 and subsequent months, the CES program has returned to using its standard methodology.

The questions and answers below provide more detailed information on payroll survey concepts relevant to the post-hurricane environment, impacts on survey data collection, and the estimation procedure adjustments made by BLS to improve the accuracy of the CES estimates for September and October.

CES Concepts and Definitions

1. How are people who are absent from their jobs counted by the payroll survey?

Workers who are paid by their employer for all or any part of the pay period including the 12th of the month are counted as employed in the payroll survey, even if they were not actually at their jobs. Workers who are temporarily or permanently absent from their jobs, but not being paid, are not counted as employed.

2. Are military reservists who were called up to aid in the disaster relief counted as employed in the payroll survey?

Active duty military personnel are not counted by the payroll survey; it is a count of civilian jobs.

3. How are workers from other parts of the country who may be on temporary assignment to the disaster area, such as utility workers, counted by the payroll survey?

These workers are counted as employed at their usual place of work. For example, utility workers from Virginia working temporarily in Louisiana would be counted in the Virginia employment estimates, but not in the Louisiana estimates.

CES Data Collection Issues

4. Was BLS able to collect information from businesses that are located within the disaster areas in Louisiana, Mississippi, and Alabama?

For September:

BLS and its state partners attempted to collect September reports from all of the businesses in the CES sample. Response rates were lower than normal in Louisiana and Mississippi, particularly in the heavily impacted areas in and around New Orleans and the Mississippi Gulf Coast, where businesses may be temporarily or permanently closed. For the first preliminary September estimates, BLS received 57 percent of the sample in Louisiana (50 percent in the most heavily impacted counties), and 62 percent in Mississippi (53 percent in the most heavily impacted counties). This compares to 67 percent of sample received across all states. The 67 percent national response rate for September is within a normal range for the payroll survey for the first preliminary estimates.

It is important to note that over one-third of the sample reports covering the hurricane-affected areas in these states actually originate from outside of the local areas. Large national and regional companies with many locations across the country often report data for all of their locations from a single central site. BLS received a normal first response from these businesses.

For October and subsequent months:

BLS continues efforts to collect reports from all businesses in the CES sample including those in the hurricane-affected areas. For October, response rates continued to be below normal in the hurricane-affected areas. The gap between the hurricane-affected areas response rates and the rest of the country closed considerably in November.

5. Did BLS make any extra efforts to collect sample reports from the hurricane-affected areas?

For September:

BLS uses several different data collection techniques in the payroll survey, including several forms of respondent-initiated self response, mostly touchtone data entry, fax, and mail. BLS attempted telephone follow-up with all respondents who did not initiate a self-response during the collection cycle. This effort helped to increase response rates in these areas.

For October and subsequent months:

BLS continued to use telephone follow-up with respondents, to the extent possible, for those who did not initiate a self-response.

CES Estimation Procedures

6. How did BLS modify its imputation procedures to recognize that survey non-respondents in the most heavily impacted disaster areas may be temporarily or permanently out of business?

For September:

For sample units that BLS was unable to contact in the most heavily impacted disaster areas, CES assumed the business was not operating and therefore had an employment level of zero—except for firms where further research indicated that the business was paying their employees for the pay period including the 12th of the month. September employment was set to zero for 82 sample units that were in the most heavily impacted disaster areas and that normally respond to BLS for its first preliminary estimates.

If CES had followed its usual imputation procedure for non-respondents, all non-responding units in these areas would have had the over-the-month change trend of all other sample units in the estimation cell assigned to them. This assumption, given the circumstances in the affected areas, was unlikely to be accurate, and, therefore, following standard imputation procedure carried a strong risk of understating employment loss.

For purposes of this procedural adjustment, BLS defined the most heavily impacted disaster areas to be those geographic areas designated by the Federal Emergency Management Agency (FEMA) as being flooded and/or having catastrophic or extensive damage. This includes portions of several Louisiana parishes in and around the city of New Orleans, and portions of several Mississippi counties in and around the cities of Gulfport and Biloxi.

For October and subsequent months:

For the sample units with imputed employment levels of zero for September, a zero employment level also was imputed for subsequent months if no report had been received from the business. There were 71 sample units that had a zero employment level carried forward to October.

7. How did BLS adjust for lower than average survey response in the disaster areas?

For September:

After review of the response rates in the geographic areas designated by FEMA as eligible for individual and public disaster assistance, BLS determined that the September survey response rates in the Mississippi and Louisiana disaster areas were substantially lower than usual. Those sample units reporting data were re-weighted to reflect sample units that did not respond. (In Alabama response rates were about normal, and no sample from this state was re-weighted.) This procedure results in a more correct representation of the disaster areas in the CES estimates. If there were large differentials in response rates and sample units were not re-weighted, disaster areas would be under represented in the estimates. Re-weighting adjustments were done for 1,260 sample units. Individual sample unit weights were increased by about 30 percent on average.

For October and subsequent months:

The re-weighting procedure was continued for October. The re-weighting procedure was discontinued after the October estimates.

8. How did BLS change its method for estimating employment from business births and deaths in the disaster areas?

For September and October:

BLS and states made two adjustments to normal birth/death estimation procedures: First, under standard CES estimation procedures, sample units with a reported employment level of zero are excluded from estimate calculation. This is done as a method to offset new business birth employment which the survey is unable to capture on a real time basis. This technique is used because research has shown that in most months, employment gain from business births and employment loss from business deaths largely offset each other. However, in September for the disaster areas, this assumption of reported business deaths accurately imputing for unsampled births was unlikely to hold. Therefore, any sample units from the most heavily impacted disaster parishes and counties in Louisiana and Mississippi with employment levels of zero reported were used in the calculation of September estimates. There were 111 sample units with reported zero employment for September 2005 that were used in the CES estimates. There were 57 sample units with reported zero employment for October that were used in the estimates.

Second, under standard procedures, the CES program adds a net birth/death employment adjustment, derived from a time series model, to account for the residual net of birth/death employment not captured by technique described above. This model-based component will be omitted from the September employment estimates for the metropolitan areas most heavily impacted by the hurricane: New Orleans, Gulfport-Biloxi, and Pascagoula. The change will affect the employment estimates slightly for these metropolitan areas and minimally for the Louisiana and Mississippi statewide estimates. This modification did not affect national estimates because the residual net birth/death adjustment originating from these areas is negligible at the national level.

For November and subsequent months:

These special procedures were discontinued because the level of reported zeros for CES sample units had returned to near normal levels. Additionally, the assumptions underlying the standard birth/death estimation procedures are now more appropriate than those underlying the modified procedures, as clean-up and rebuilding efforts are underway in the hurricane-affected areas.

9. Do these procedural changes apply to the CES hours and earnings estimates?

Only the sample re-weighting (described in Question 7 above) directly impacts the production worker, hours, and earnings data. The rationale is the same as for the all employee estimates; re-weighting will allow the units in the affected area to be more correctly represented in the estimates of hours and earnings.

For sample units with reported or imputed zero total employment, their hours and payroll are also zero, by definition. This means those firms will not be represented in the calculation of average weekly hours or average hourly earnings. This could possibly have had some influence on the published hours and earnings estimates only if these firms had substantially different average hours and earnings from the sample units that remained in the sample.

10. When will these special estimation procedures be discontinued?

The special estimation procedures described in detail above have been discontinued effective with the November 2005 estimates.

11. Do the payroll survey estimates reflect employment increases that may result from hurricane evacuees finding jobs in their new locations?

The CES has a large and representative nationwide sample and is expected to capture employment increases in the overall employment estimates resulting from workers starting jobs in new locations. The survey cannot quantify this effect separately.

12. Were there special procedures for seasonally adjusting the payroll employment series?

For September:

CES national estimates utilize a concurrent seasonal adjustment methodology which incorporates estimates up through the most current reference month. While there were no methodology changes, BLS carefully reviewed the estimates to determine whether any industry series should be treated as outliers for September 2005. Outlier treatment essentially recognizes September as an atypical month and mitigates any smoothing of the September employment change back across earlier months. Industries that were selected as outliers for seasonal adjustment are identified at the following link: <https://www.bls.gov/web/empsit/cesseasadj.htm>

For October and subsequent months:

BLS continues to use the same basic procedures described above for the national estimates.

State seasonal adjustment factors are updated annually, with January estimate publication, and are not be subject to any changes until the January 2006 estimates are released.

13. Has BLS previously modified CES estimation procedures in the aftermath of other disasters?

No, the CES program has always been able to obtain fairly normal survey response rates following other disasters and estimation procedures were not modified. However, the extent of the destruction over a large geographic area and near total evacuation of a major US city were unprecedented, and it was unlikely that CES would be able to complete all of its normal sample data collection for September 2005 and possibly a number of subsequent months. It was also unlikely that some of the underlying assumptions concerning business births and deaths inherent in normal CES estimation would hold true in the immediate aftermath of the hurricane.

14. Will BLS attempt to quantify the overall impact of Hurricane Katrina on employment for September and October 2005?

The Bureau's primary goal for the payroll survey is, as always, to provide accurate estimates of employment, hours, and earnings. It was not possible to precisely quantify the impact of the hurricane on the overall September 2005 estimates because its effects cannot be separated from other influences on the economy, particularly at the national level. Comparisons of the September employment levels against the trend for recent months provided a general indication of the impacts at the [national level](#). The September CES state and metropolitan area estimates provided further indications of impact at a [more local level](#).

The same basic analytical approach was used for the October 2005 estimates. [National estimates for October 2005](#) were released on November 4. [State and metropolitan area estimates](#) were released on November 22.

15. Which metropolitan areas were directly affected by the storm?

The following areas had one or more counties designated as disaster areas eligible for individual and public assistance by FEMA:

- Louisiana:
 - Baton Rouge
 - Houma-Bayou Cane-Thibodaux
 - Lafayette
 - Lake Charles
 - New Orleans-Metairie-Kenner
- Mississippi:
 - Gulfport-Biloxi
 - Hattiesburg
 - Pascagoula
- Alabama:
 - Mobile

Effects of Hurricane Katrina on the Current Population Survey

The [Current Population Survey](#) (CPS), also known as the household survey, provides estimates of employment and unemployment among the U.S. civilian noninstitutional population age 16 years and over. Major indicators that come from the CPS include the national unemployment rate, jobless rates for major worker groups, the labor force participation rate, the duration of unemployment, reasons for unemployment, and a range of employment measures, including estimates of the number and type of part-time workers.

Information from the CPS is gathered from a monthly sample survey of 60,000 households nationwide. For all members of the household age 16 and over, questions are asked to determine whether they are employed, unemployed, or out of the labor force during the survey reference week—the week including the 12th of the month. The sample includes households in all 50 states and the District of Columbia, including some areas affected by Hurricane Katrina.

Katrina made landfall on the Gulf Coast well after the August survey reference period; thus, the data for August did not reflect any impact from the storm. The reference period for September was the 11th through the 17th; the interviews were conducted the following week. Thus, the data produced for the September reference period were the first from the CPS to reflect any impacts of the storm. Key points regarding the September 2005 CPS operations and estimates are:

- The Census Bureau attempted to contact sample households in the storm-affected states except for households in areas under mandatory evacuation orders.
- Nonresponse was higher in affected areas because many people had not yet returned to their homes. In accordance with standard procedures, the survey was not conducted in temporary shelters, hotels, or motels—areas where some respondents were staying during the reference week.
- Whether people who were affected by the storm area were classified as employed or unemployed depended on their activities during the survey reference week (September 11 to September 17).

Starting in October, the Census Bureau attempted to contact sample households in all storm-affected areas. As in September, standard survey estimation procedures were followed, and the employment status of individuals was determined using standard concepts and definitions.

The following questions and answers provide more detailed information about CPS concepts and definitions, survey operations, and estimation that will be useful in understanding how the storm affected national employment and unemployment estimates as measured by the household survey.

CPS concepts and Definitions

1. Did everyone who had a job in the affected areas become unemployed according to the household survey?

No. Whether an individual was classified as employed or unemployed was determined in accordance with the standard concepts and definitions discussed below. By the time of the survey reference periods in the months following the hurricane, some individuals in the affected areas had returned to work. Others still had jobs from which they were temporarily absent and to which they expected to return; these individuals were counted as employed. Some who had lost their jobs were looking for work and were available to take a job; such persons were counted as unemployed. Individuals who neither worked nor looked for work, perhaps because they were dealing with the aftermath of the storm, were classified as "not in the labor force." Many of these circumstances are temporary, and will change as more information becomes available to affected individuals and as long-term choices are made.

The concepts and definitions used in the CPS for classifying a person's employment status (which were not modified in any way) are given below:

Employed persons are those who did work for pay or profit during the survey reference week or had a job from which they were absent, including for weather-related reasons. Thus, if a survey respondent did any work during the survey reference week, he or she was counted as employed in the *Employment Situation* report. Those who responded that they have a job but were not at work during the survey week due to weather-related reasons (such as their employer being temporarily shut down due to storm damage) also were counted as employed, whether or not they received pay during the period.

Unemployed persons are those who were not employed and who both looked for and were available to work some time during the 4 weeks prior to the interview. Neither losing a job nor filing for unemployment insurance, by itself, qualifies someone as unemployed in the CPS. Some of those living in Katrina-

affected areas were without work and also looking for a job during the 4-week period prior to their interview (and hence were classified as unemployed). Others may not have searched for work or been available to take a job because they were dealing with the aftermath of the storm (and thus were not classified as unemployed.)

Persons not in the labor force are those who are neither employed nor unemployed. Some people living in Katrina-affected areas fell into this category because, in the aftermath of the storm, they were facing situations that prevented them from seeking work or taking a job.

CPS Data Collection Issues

2. How did the Census Bureau conduct CPS interviews in the affected areas?

The CPS sample is chosen from a listing of housing units from the 2000 Decennial Census that is continually updated using information such as new construction permits.

In September, Census interviewers attempted to contact the sample households in most areas affected by the storm. No attempts to contact households in Orleans and Jefferson Parishes in Louisiana were made, as those areas were under mandatory evacuation orders at the time interviewing assignments were made. Attempts to contact respondents—by both telephone and personal visits—were made in all other areas, including the remaining parishes in Louisiana and the Gulf Coast areas of Alabama and Mississippi.

In September, Census interviewers conducted about 600 fewer interviews in the affected states than in August. Compared with August 2005, in September, 36 percent fewer interviews were conducted in Louisiana and 13 percent fewer in Mississippi. There were 10 percent fewer interviews conducted in Texas, due to the evacuation caused by Hurricane Rita.

In October, Census interviewers attempted to contact the sample households in all areas affected by the storm. Census interviewers conducted about 250 fewer interviews in the affected states than in August. Compared with August, 26 percent fewer interviews were conducted in Louisiana in October and 10 percent fewer in Mississippi. There were 2 percent fewer interviews conducted in Texas.

In November, Census interviewers conducted about 100 fewer interviews in the affected states than in August. In Louisiana and Mississippi, 21 and 9 percent fewer interviews, respectively, were conducted than in August. The number of households interviewed in Texas and Florida was about normal.

In December, Census interviewers conducted about 100 fewer interviews in the affected states than in August. In Louisiana and Mississippi, 20 and 14 percent fewer interviews, respectively, were conducted than in August. The number of households interviewed in both Texas and Florida was normal.

In January, nationally, the number of interviews conducted was about the same as in August. In Louisiana and Mississippi, 17 and 10 percent fewer interviews, respectively, were conducted than in August. The number of households interviewed in both Texas and Florida was normal.

In February, nationally, the number of interviews conducted remained about the same as in August. In Louisiana and Mississippi, 17 and 11 percent fewer interviews, respectively, were conducted than in August. The number of households interviewed in both Texas and Florida remained normal.

In March, nationally, the number of interviews conducted remained about the same as in August. In Louisiana and Mississippi, 16 percent fewer interviews were conducted than in August. The number of households interviewed in both Texas and Florida remained normal. In future months, these operations data will not be updated in this document but will be available [">on request](#).

In all months, employment status information for respondents who were contacted is used to estimate the status of those who were missed. (See question 5 below.)

3. Were people who had to leave their homes because of the storm surveyed?

Individuals in CPS sample households who left their homes temporarily and returned to them by the time of the survey were interviewed. Since the sample unit for the CPS is a house, apartment, or other place where people reside, individuals who moved to shelters, hotels, or other nonresidential units would not be interviewed.

It is possible that some individuals who were *not* in survey sample households and left their homes due to Katrina moved to residences that were in the CPS sample. Such individuals who reported that they could not immediately return to their homes were interviewed at the residence where they were staying during the survey collection week.

4. Did the Census Bureau interview people staying in emergency shelters, motels, or hotels?

No. In the CPS, interviews are not conducted with persons residing in hotels, emergency shelters, places of worship, or other nonresidential units that are out of the scope of the survey.

CPS Estimation Procedures

5. How were missed individuals, destroyed or unreachable sample houses, and interstate moves accounted for in the calculation of the estimates?

In accordance with standard procedures, uninhabitable households, and those for which the condition was unknown, were taken out of the CPS sample universe.

Persons in households that were successfully interviewed were given a higher weight to account for those missed. Thus, the employment status of interviewed persons (primarily persons in the same State) represents the employment status of those who were not interviewed. To the degree that interviewed persons had a different employment status than those who were not interviewed, some inaccuracy is present in the data. For example, if persons who were interviewed were more likely to be employed than those who were not interviewed, the CPS would overstate employment somewhat.

Beginning in November, state population controls used for CPS estimation were adjusted to account for interstate moves by evacuees. This had a negligible effect on estimates for the total U.S.

Special Information on Katrina Evacuees

6. Is there information on the employment status of those who evacuated from their homes due to Hurricane Katrina?

Beginning in October, BLS and the Census Bureau added several questions to the household survey to identify persons who evacuated from their homes, even temporarily, due to Hurricane Katrina. The questions were asked of CPS households throughout the country, since some evacuees relocated far from the storm-affected areas. The questions enabled a determination of whether evacuees had returned to their homes by the time of the survey. This information was cross-tabulated with other information collected in the household

7. Do the estimates based on the questions represent the total number of people who had to evacuate due to Hurricane Katrina?

No. These estimates only represent evacuees residing in households that are in scope for the Current Population Survey. This would include persons who had returned to their homes, had moved in with friends or relatives, or had moved to a new house or apartment. Evacuees residing in places out of scope for the survey, such as shelters and hotels, were not interviewed. BLS and the Census Bureau plan to ask the Katrina-related questions each month until further notice. The total number of evacuees estimated from the household survey may change from month to month as people move in and out of the scope of the survey.

8. What do the household data indicate about the employment status of evacuees?

For the most recent data, see [Employment Status Information on Hurricane Katrina Evacuees](#). In addition, data for October 2005 to March 2006 are below.

In March, evacuees identified in CPS households represented about 1.0 million persons 16 and over. About 54 percent of the group was in the labor force and about 45 percent were employed. About 55 percent of the evacuees identified in the survey were again living in their pre-Katrina residences; the unemployment rate for that group was 5.3 percent, compared to 34.7 percent for those who were living elsewhere. See table below.

Employment status in March 2006 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/,[Numbers in thousands, not seasonally adjusted]

Employment status in March 2006	Total	Residence in March	
		Same as in August	Different than in August
Civilian noninstitutional population	1,024	561	463
Civilian labor force	549	339	210
Participation rate	53.6	60.4	45.4
Employed	458	321	137
Employment-population ratio	44.8	57.2	29.7
Unemployed	91	18	73
Unemployment rate	16.5	5.3	34.7
Not in labor force	475	222	253
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

Evacuees identified in CPS households in February represented about 1.0 million persons 16 and over. About 58 percent of the group was in the labor force and about 51 percent were employed. About 53 percent of the evacuees identified in the survey had returned to their home; the unemployment rate for returnees was 4.8 percent compared to 22.6 percent for those who had not returned. See table below.

Employment status in February 2006 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/ *[Numbers in thousands, not seasonally adjusted]*

Employment status in February 2006	Total	Residence in February	
		Same as in August	Different than in August
Civilian noninstitutional population	1,017	540	478
Civilian labor force	591	333	258
Participation rate	58.1	61.7	53.9
Employed	516	317	200
Employment-population ratio	50.8	58.7	41.8
Unemployed	74	16	58
Unemployment rate	12.6	4.8	22.6
Not in labor force	427	207	220
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

In January, evacuees identified in CPS households represented about 1.2 million persons 16 and over. About 57 percent of the group was in the labor force. About 46 percent of the evacuees identified in the survey had returned to their homes; the unemployment rate for returnees was 2.9 percent compared to 26.3 percent for those who had not returned. See table below.

Employment status in January 2006 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/ *[Numbers in thousands, not seasonally adjusted]*

Employment status in January 2006	Total	Residence in January	
		Same as in August	Different than in August
Civilian noninstitutional population	1,245	575	670
Civilian labor force	707	351	355
Participation rate	56.8	61.1	53.1
Employed	603	341	262
Employment-population ratio	48.4	59.3	39.1
Unemployed	104	10	94
Unemployment rate	14.7	2.9	26.3
Not in labor force	538	224	314
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

In December, evacuees identified in CPS-sampled households represented about 1.1 million persons aged 16 and over who had evacuated from where they were living in August due to Hurricane Katrina. Just over half of these persons had returned to the home from which they had evacuated. Of the 1.1 million evacuees, about 58 percent were in the labor force in December and their unemployment rate was 12.4 percent. See table below.

Employment status in December 2005 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/ [Numbers in thousands, not seasonally adjusted]

Employment status in December 2005	Total	Residence in December	
		Same as in August	Different than in August
Civilian noninstitutional population	1,105	605	500
Civilian labor force	643	353	290
Participation rate	58.2	58.4	58.0
Employed	563	333	230
Employment-population ratio	51.0	55.1	46.0
Unemployed	80	20	60
Unemployment rate	12.4	5.6	20.7
Not in labor force	462	252	210
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

Evacuees identified in CPS-sampled households in November represented about 900,000 persons age 16 and over who had evacuated from where they were living in August due to Hurricane Katrina. Half of these persons had returned to the home from which they had evacuated. Of the 886,000 evacuees, just over half were in the labor force in November, and their unemployment rate was 20.5 percent. See table below.

Employment status in November 2005 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/ [Numbers in thousands, not seasonally adjusted]

Employment status in November 2005	Total	Residence in November	
		Same as in August	Different than in August
Civilian noninstitutional population	886	442	443
Civilian labor force	489	233	256
Participation rate	55.2	52.7	57.7
Employed	389	204	185
Employment-population ratio	43.9	46.1	41.6
Unemployed	100	29	71
Unemployment rate	20.5	12.5	27.8
Not in labor force	397	209	188
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

In October, evacuees identified in CPS-sampled households represented about 800,000 persons age 16 and over who had evacuated from where they were living in August due to Hurricane Katrina. About 4 in 10 of these persons had returned to the home from which they had evacuated. Of the 800,000 evacuees, just over half were in the labor force in October, and their unemployment rate was 24.5 percent. See table below.

Employment status in October 2005 of persons 16 years and over who evacuated from their August residence, even temporarily, due to Hurricane Katrina 1/ [Numbers in thousands, not seasonally adjusted]

Employment status in October 2005	Total	Residence in October	
		Same as in August	Different than in August
Civilian noninstitutional population	791	305	486
Civilian labor force	441	172	269
Participation rate	55.7	56.2	55.4
Employed	333	153	179
Employment-population ratio	42.1	50.2	36.9
Unemployed	108	18	90
Unemployment rate	24.5	10.5	33.4
Not in labor force	351	134	217
1/ Represents persons in the civilian noninstitutional population age 16 and over who resided in households that were eligible to be selected for CPS. These data are not representative of the total evacuee population because they do not include children or people residing in shelters, hotels, places of worship, or other units out of scope for CPS. The total number of evacuees estimated from the CPS may change from month to month as people move in and out of the scope of the survey and because of sampling variability.			
Note: These data use population controls that have been adjusted to account for interstate moves by evacuees.			

Other Hurricanes

9. How did Hurricane Rita affect the CPS estimates?

Hurricane Rita struck the Gulf Coast of Texas and Louisiana during the September collection week. As a result of the evacuations in Texas, about 10 percent fewer interviews were conducted in that state compared with August.

Because respondents who were interviewed were asked about employment status during the week before Hurricane Rita struck, any job loss or other impact that occurred *because* of the hurricane was not reflected in the September 2005 estimates.

In October, the number of interviews was below normal in Texas. Again, in accordance with standard CPS procedures, those who were interviewed are used to represent those who were missed. To the degree that the employment status of those interviewed in September and October was different than those missed, some inaccuracy would be introduced into the data.

Beginning in November, the number of households interviewed returned to normal in Texas. In general, the area impacted by Hurricane Rita was much smaller than the Katrina-affected area. At the national level, the impact on employment and unemployment was not discernible.

10. **How did Hurricane Wilma affect the CPS estimates?**

Hurricane Wilma struck Florida after the October survey reference period and had a negligible effect on data collection and no effect on October estimates from the household survey. As with Hurricane Rita, from November forward the impact on employment and unemployment estimates was not discernible at the national level.
[Hurricane Information](#) | [Labor Market Statistics](#)

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