

# **CALCULATING DAMAGES IN DISABILITY ACCESSIBILITY CASES: AN ECONOMIST'S PERSPECTIVE**

**A Presentation to NAPAS**  
**June 2004**

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# Example One

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- ❑ Quick service restaurant chain with store layout alleged to preclude persons in wheelchairs from approaching order counter.
  - ❑ Damages per transaction are defined in state law (\$4,000).
  - ❑ The challenge is to calculate number of transactions
  - ❑ Estimate must meet Daubert standards
-

## The Response: Table One

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- ❑ Not to have all the numbers you need is normal
  - ❑ Proceed by breaking the problem into pieces. Opinions on bottom line = speculative; opinions on reasonable intermediate assumptions within a transparent, explicit model = science
  - ❑ Useful estimates can be produced early in litigation for settlement; use discovery for refinement.
-

**TABLE ONE**  
**DAMAGES ESTIMATE FOR CORPORATE-OWNED RESTAURANTS IN THE STATE OF EUPHORIA,**  
**FROM [START OF CLASS PERIOD] TO [DATE OF SETTLEMENT NEGOTIATION]**

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Store No.	Total Transactions Reported by the Company				Average Transactions Per Day in the 2 Years for Which Full-Year Data are Available		Estimated Transactions from [start of class period] through [date of settlement negotiation]						Estimated In-Store Transactions from [start of class period] through [date of settlement negotiations]	Does Store Have Known Architectural Barriers?	County where Store is Located
	2000	2001	2002	2003	2001	2002	Average of These Two Years	15	365	365	138	883			
								2001 (15 days)	2002 (365 days)	2003 (365 days)	2004 (138 days)	TOTAL from [start of class period] to [date of settlement negotiations]			
1	0	83,554	155,614	68,993	426	426	6,395	155,614	144,727	56,371	363,107	127,087			San Martin
2	0	68,058	129,456	56,477	355	355	5,320	129,456	118,472	46,145	299,393	104,787	yes		San Martin
3	0	69,139	24,633	0	521	521	7,811	24,633	0	0	32,444	11,356			Jefferson
4	0	75,896	140,847	55,057	386	386	5,788	140,847	115,493	44,985	307,113	107,490			San Martin
5	364	218,831	203,973	89,409	600	559	8,688	203,973	187,553	73,052	473,266	165,643	yes		Metropolis
6	0	65,807	144,144	61,935	395	395	5,924	144,144	129,921	50,604	330,593	115,708			San Martin
7	364	147,519	132,527	64,865	404	363	5,754	132,527	136,067	52,998	327,347	114,571			Citrus
8	304	206,861	268,684	116,186	567	736	9,771	268,684	243,723	94,930	617,109	215,988	yes		Capitol
9	0	72,522	0	0	521	521	0	0	0	0	0	0			Jefferson
10	364	239,095	226,357	93,677	655	620	9,564	226,357	196,506	76,539	508,967	178,138	yes		Metropolis
11	12	0	0	0	521	521	0	0	0	0	0	0			Jefferson
12	0	45,252	0	0	521	521	0	0	0	0	0	0			Jefferson
13	0	86,925	163,921	71,534	449	449	6,736	163,921	150,057	58,447	379,162	132,707	yes		San Martin
14	362	114,607	112,657	0	314	309	4,670	112,657	0	0	117,327	41,064	yes		Prairie
15	364	225,176	226,927	100,933	617	622	9,290	226,927	211,727	82,468	530,412	185,644			Capitol
16	363	170,560	0	0	521	521	0	0	0	0	0	0			Jefferson
17	364	183,528	165,447	72,612	503	453	7,171	165,447	152,318	59,328	384,264	134,492	yes		Citrus
18	266	218,178	218,572	96,147	598	599	8,974	218,572	201,688	78,557	507,791	177,727			San Mateo
19	0	0	271	0	521	521	0	271	0	0	271	95	yes		Jefferson
20	364	265,916	262,948	113,003	729	720	10,867	262,948	237,046	92,330	603,191	211,117			Metropolis
Per-Store Average:					Average:		Average:		Average:		Average:		Stores:		8
Change 2001 to 2002:					0.8%										

(b) (i) (s) (t) (u) (v) (w) (x) (y) (z)

Store No.	% of County Population Who Use Wheel-chairs	Total In-Store Transactions from [start of class period] through [date of settlement negotiations]	Class Damages from [start of class period] through [date of settlement negotiation]	Rate at Which Damages Increase Per Day after [date of settlement negotiation]		Additional Damages Which Will Accrue from [date of settlement negotiation] through [date of trial]			
				All Stores	Stores w/Known Architectural Barriers				
2	0.68% 0.68% 0.68% 0.67% 0.68% 0.68% 0.53% 0.74% 0.68% 0.67% 0.68% 0.68% 0.76% 0.74% 0.68% 0.53% 0.64% 0.68% 0.67%	864	\$3,456,776	0.97	\$3,889	\$1,353,298			
		713	\$2,850,219	0.80	\$3,183	\$1,107,796			
		77	\$308,871	0.00	\$0	\$0			
		731	\$2,923,715	0.78	\$3,103	\$1,079,943			
		1,110	\$4,439,236	1.24	\$4,965	\$1,727,967			
		787	\$3,147,246	0.87	\$3,491	\$1,214,855			
		607	\$2,428,914	0.71	\$2,850	\$991,666			
		1,598	\$6,393,251	1.78	\$7,127	\$2,480,075			
		0	\$0	0.00	\$0	\$0			
		1,194	\$4,774,106	1.30	\$5,202	\$1,810,452			
		0	\$0	0.00	\$0	\$0			
		0	\$0	0.00	\$0	\$0			
		902	\$3,609,618	1.01	\$4,032	\$1,403,139			
		312	\$1,248,357	0.00	\$0	\$0			
		1,374	\$5,495,065	1.55	\$6,191	\$2,154,489			
0	\$0	0.00	\$0	\$0					
713	\$2,851,238	0.80	\$3,190	\$1,110,104					
1,137	\$4,549,809	1.28	\$5,101	\$1,774,986					
1	\$2,580	0.00	\$0	\$0					
1,414	\$5,657,932	1.57	\$6,276	\$2,183,957					
TOTAL:		13,534	\$54,136,934	15	\$58,600	7	\$27,700	\$20,392,728	\$4,648,523
Stores:		20	8	20		8	4	20	

Notes on Data Sources and Computational Procedures:

- (a) - (e) Data supplied by the company.
- (f) Column (f) = column (c) / 365 days if Column (b), (c), and (d) are all nonzero; otherwise, blank.
- (g) Column (g) = column (c) / 365 days if Column (c), (d), and (e) are all nonzero; otherwise, blank.
- (h) If either Column (f) or (g) is nonblank, Column (h) is the average of the non-blank entries in those columns; otherwise, Column (h) is 644, which is the average of all non-blank entries in Columns (f) and (g).
- (i) Column (i) = 0 if Column (d) = 0. Otherwise, Column (i) = the minimum of [1] Column (c) and [2] Column (h) \* 15 days.
- (j) Column (j) = Column (d).
- (k) Column (k) = Column (e) \* 2.0977. The data referred to in footnotes (a) - (e) was created on the 175th day of the calendar year and therefore must report transactions for no more than the first 174 days of the year. To estimate transactions for the full year, the reported transactions were multiplied by  $365 / 174 = 2.0977$ .
- (l) Column (l) = Column (k) \*  $1.032 * 138$  days.  $1.032$  -- that is,  $3.02\%$  -- represents the 8% average annual rate of growth of company sales between 2001 and 2002 (see bottom row of Column (d) ) multiplied by  $138 / 365$ .
- (m) Column (m) = the sum of Columns (l) through (i).
- (n) Column (n) = Column (m) \*  $35.0\%$ .  $35.0\%$  is the proportion of store transactions which are in-store rather than drive-through, reported in the corporate annual report for 2003, p. 65.
- (o) Identified by plaintiffs' attorney.
- (p) Identified from store addresses supplied by the company.
- (q) U.S. Census <http://www.census.gov/hhes/www/disable/census/tables/tab3ca.dat> Table 3, Selected Population Characteristics for States and Counties Including Model-Based Estimates of the Prevalence of Specific Disabilities Among Persons 16 and Over, Euphoria. Statewide average of .68% used if county is not known.
- (r) Column (r) = Column (n) \* Column (q).
- (s) Column (s) = Column (r) \* \$4,000.
- (t) Column (t) = Column (s) if Column (o) = yes; otherwise, blank.
- (u) Column (u) = [Column (l) / 138 days] \*  $35.0\% * \text{Column (q)}$ .
- (v) Column (v) = Column (u) \* \$4,000.
- (w) Column (w) = Column (u) if Column (o) = yes; otherwise, blank.
- (x) Column (x) = Column (v) if Column (o) = yes; otherwise, blank.
- (y) Column (y) = Column (v) \* 348 days from [day after settlement negotiations] through [scheduled date of trial].
- (z) Column (z) = Column (x) \* 348 days from [day after settlement negotiations] through [scheduled date of trial].

## Example Two

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- ❑ Allegedly, failure of training company to provide interpreter for hearing-impaired student in CPA review class caused complainants delay in obtaining CPA credential.
  - ❑ Number of transactions is known (2 individuals)
  - ❑ Challenge is to estimate damages per transaction
  - ❑ Damage estimates used to document economic harm for liability, not just estimate make whole relief
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# The Response: Table Two

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- ❑ Quantify value of CPA credential—5 estimates from 10%-29% (salary surveys, divorce settlement, GS scales). Use median of these estimates, 16.7%.
  - ❑ Add fringe benefits of 34.2% to both scenarios.
  - ❑ Estimate delay - from Dec. '02 to Dec. '03.
  - ❑ Calculate present value to payment date, Dec. '04
  - ❑ Estimate covers only economic damages, not compensatory or punitive.
-



TABLE TWO

## ECONOMIC DAMAGES EXPERIENCED BY MS. JANE BEANE COUNTER

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Scenario	Employer in 2003	Projected Job Title in 2003	Annual Salary in 1992	Projected Salary in 1993	Fringe Benefits (34.2% of Salary)	Total Earnings (salary + fringes)	Interest from 2003 (when loss in earnings occurred) to 2004 (when compensation check will be received)	Total Economic Damages (Present value in 2004)
CPA Obtained Dec. 2002 (no delay)	MSI, Inc. Taxwizards	Accounting Supervisor Tax Accountant (self-employed)	--	\$35,579	\$12,168	\$47,747		
			--	\$50,574	\$0	\$50,574		
				Smaller of the Two:		\$47,747		
CPA obtained Dec. 2003 (one year delay)	MSI, Inc.	Staff Accountant	\$29,036	\$30,488	\$10,427	\$40,915		
Difference in Earnings During 2003						\$6,833	\$458	\$7,291

Selected Notes on Data Sources and Computational Procedures:

- (e) 1993 salary as staff accountant at MSI assumes a 5% raise from actual 1992 salary; 1993 salary as Accounting Supervisor at MSI assumes a 16.7% raise from actual 1992 salary. 1993 salary at Taxwizards is based on an actual job offer contingent on holding a CPA credential.
- (f) Assumes fringe benefits are worth \$.34 for each \$1 of salary, based on U.S. Chamber of Commerce survey of fringe benefit rates for salaried employees of private employees, 2002, data for manufacturing employers with 500-1,000 employees.
- (g) Assumes interest is compounded annually at an interest rate of 6.7%, which is the average prime interest rate for the years 1991-2001 (data from U.S. Federal Reserve Board).



# Department of Justice

FOR IMMEDIATE RELEASE  
FRIDAY, MAY 13, 1994

CR  
(202) 616-2765

## NATION'S LARGEST CPA REVIEW COURSE AGREES TO PROVIDE SERVICES FOR STUDENTS WITH DISABILITIES

WASHINGTON, D.C. -- The nation's largest CPA review course has agreed to provide sign language interpreters and other auxiliary aids to students who need them under a settlement reached today with the Justice Department.

Today's settlement resolves the first suit ever filed by the Justice Department under the Americans with Disabilities Act (ADA). In the suit, the Justice Department alleged that Becker CPA Review, Inc. violated the ADA by refusing to provide interpreters and other necessary auxiliary aids to students who are deaf or have hearing impairments. Title III of the ADA prohibits discrimination by public accommodations, such as educational services, against persons with disabilities.

"Today we have opened the gateway to the accounting profession for persons with disabilities," said Assistant Attorney General for Civil Rights Deval L. Patrick. "While the path to becoming a public accountant is a rigorous one, we have smoothed the way for students with hearing impairments."

(MORE)

In 1992, shortly after Title III went into effect, the National Center for Law and Deafness filed a complaint with the Justice Department against Becker. According to the complaint, Becker, which prepares students for licensing tests to become certified public accountants, refused to provide an interpreter for a student with a hearing impairment.

After unsuccessfully attempting to resolve the complaint with Becker, the Justice Department sued the accounting course in federal court. Thereafter, the Department learned about numerous other students who said they had been denied interpreters, help from student assistants, or seats near the front of the class so they could lipread.

Under the proposed consent decree, submitted for approval to the U.S. District Court in Washington, D.C., Becker will:

- provide sign language interpreters and a variety of other auxiliary aids to students who need them for full participation in the course;
- pay \$20,000 to the Department of Justice to be distributed to deaf and hearing impaired students who provide recommendations for further improvements in Becker's use of auxiliary aids. Payments will be distributed among up to seven students who claim they were denied appropriate auxiliary aids;
- establish a \$25,000 scholarship fund for accounting students who have hearing impairments and who attend California State University, Northridge;
- train its 800-person staff on its new policy;
- include information about the policy in advertising and registration materials; and
- appoint a national coordinator to respond to requests for auxiliary aids.

(MORE)

Under the agreement the Company will no longer only offer audiotape transcripts used by the instructors. After consultation with students requesting auxiliary aids, Becker now will provide an interpreter to any student who articulates an expected inability to benefit effectively from the transcripts.

"While Title III does not require interpreters on demand, neither does it allow covered businesses to require that every individual use a single form of auxiliary aid in a class, regardless of his or her means of communication," Patrick said.

The Justice Department may seek an order seeking compliance, damages, and penalties if Becker fails to comply with the terms of the agreement.

# # #

94-256

Approved by  
the Court 5/16/94

MAY 15 1994  
CLERK U.S. DISTRICT COURT  
DISTRICT OF COLUMBIA

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

THE UNITED STATES OF AMERICA,  
  
Plaintiff,  
  
v.  
  
BECKER C.P.A. REVIEW,  
  
Defendant.

CV 92-2879 (TFH)

JOINT MOTION TO APPROVE CONSENT ORDER

Plaintiff United States of America and Defendant Becker C.P.A. Review now jointly move this Court to approve and enter the attached Consent Order in settlement of the above captioned matter.

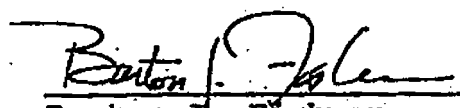
Respectfully submitted on this 13th day of May, 1994,

For the Plaintiff:



V. Colleen Miller  
Public Access Section  
Civil Rights Division  
U.S. Department of Justice  
P.O. Box 66738  
Washington, D.C. 20035-6738  
Tel: (202) 307-0663

For the Defendant:



Burton J. Fishman  
Tucker, Flyer and Lewis  
1615 L Street, N.W.  
Washington, D.C. 20036  
Tel: (202) 429-3208

# Some Useful Data Sources

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- For experts, National Association of Forensic Economics, [www.nafe.net](http://www.nafe.net)
- Census data: See attached.

## Disability

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### CENSUS BUREAU DATA ON DISABILITY

The United States Bureau of the Census provides data on disability based on three primary sources: the Survey of Income and Program Participation (SIPP), the decennial census of population, and the Current Population Survey (CPS). The SIPP, a national household survey that began in 1984, has featured a design in which a panel of households entered the survey at the beginning of each calendar year and were interviewed at four month intervals over a period of two years or more (the 1996 panel design is different; a larger panel of households will be followed over a three year period and no new panels will be introduced until interviews with the 1996 panel are complete). An extensive and reasonably consistent set of disability questions was asked in the 1990, 1991, 1992, and 1993 SIPP panels; earlier panels also contained sets of questions relating to disability but the earlier sets were not as extensive or consistent as the later ones. The long-form questionnaires used in the 1970, 1980, and 1990 decennial censuses contained questions about disability status. The 1970 census had questions about work disability, the 1980 census had questions about work disability and the ability to use public transportation, and the 1990 census had questions about work disability, the ability to go outside the home alone, and the ability to take care of personal needs. The third data set, the CPS, identifies persons who are out of the labor force because of a disability and, in each March survey since 1980, identifies persons who have a health problem which "prevents them from working or limits the kind or amount of work they can do".

The extensive set of disability questions that have been asked in SIPP makes it the preferred source for examining most disability issues. The Americans with Disabilities Act of 1990 (ADA) defines disability as a "physical or mental impairment that substantially limits one or more of the major life activities". For person 15 years old and over, the SIPP disability questions cover limitations in functional activities (seeing, hearing, speaking, lifting and carrying, using stairs, and walking), in ADL's or activities of daily living (getting around inside the home, getting in or out of a bed or chair, bathing, dressing, eating, and toileting), and in IADL's or instrumental activities of daily living (going outside the home, keeping track of money or bills, preparing meals, doing light housework, and using the telephone). The SIPP also obtains information on the use of wheelchairs and crutches, canes, or walkers; the presence of

certain conditions related to mental functioning, the presence of a work disability, and the disability status of children. In contrast to the comprehensive data available from the SIPP, the decennial census provides data on only a few dimensions of disability, and the CPS data concern only work disability.

The major drawback to the SIPP as a disability data source is the relatively small sample size of the survey. In general, the SIPP cannot provide reliable estimates below the regional level. Persons interested in state and local estimates generally use the decennial census as their source of information on the disability status of the population. Because of the demand for more comprehensive data at the state and local level, the Bureau of the Census, under a contract with the Department of Health and Human Services, developed a methodology for producing model-based estimates of certain disability statistics for these geographic units. For additional information, see the section below on **ESTIMATING THE NUMBER OF PERSONS IN STATES AND COUNTIES WITH SPECIFIC DISABILITIES: A NOTE ON METHODOLOGY**.

Source: U.S. Census Bureau

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Contact the HHES Information area at 301-763-3242 or mail to [hhes-info@census.gov](mailto:hhes-info@census.gov) for further information on Disability Statistics.

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[Go to Disability](#)

Last Revised: Thursday, 22-Aug-2002 16:04:03 EDT

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## Disability

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This symbol indicates a document is in the Portable Document Format (PDF). In order to view these files, you will need the Adobe® Acrobat® Reader which is available for **free** from the Adobe web site.

### Introduction to Census Bureau Data on Disability

### **Reports and Data from Census Surveys**

Survey of Income and Program Participation includes a module on Adult and Child Functional Limitation. Data from this survey are available in reports, tables, and downloadable files.

- Americans with Disabilities: 1997 (P70-73)
- Americans with Disabilities: 1994-95 (P70-61)



- Disabilities Affect One-Fifth of All Americans (Census Brief 97-5:)
- Selected Data on Disability Status: 1991-1992

Census 2000 includes 2 questions with a total of six subparts with which to identify people with disabilities. Data from the long form are primarily available through American Factfinder.

- Disability Status 2000 (C2KBR-17)
- Disability Status by Sex and Selected Characteristics: 2000 Tables
- Explanation of products on American Factfinder which include disability data.
- The Demographic Profiles were released in May 2002.
  - Step-by-step instructions for accessing the disability data in the Demographic Profiles.
- Definition of disability items in Census 2000. (Extract from Appendix B of the Summary File 3 Technical Documentation.)

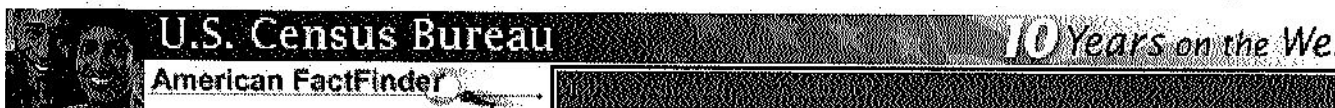
1990 Census included 4 questions on disability status. Summary file 3 data is available through American Factfinder.

- Characteristics of persons with disabilities by state, metropolitan area, and county, and Model-Based Estimates of the prevalence of specific disabilities for states and counties.
- Subject definitions from Appendix B.

Annual Social and Economic Supplement to the Current Population Survey is the official source of data for the poverty report and the annual health insurance report. It includes a few questions that can be used to identify people with a work disability.



- Uses and limitations of CPS data on work disability.
- Description of the work disability measure.



## Thematic Maps

You are here: [Main](#) ▶ [All Data Sets](#) ▶ [Data Sets with Thematic Maps](#) ▶ [Geography](#) ▶ [Themes](#) ▶ [Results](#)

Use the links above to change your results

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TM-P046. Percent of Persons 21 to 64 Years With a Disability: 2000

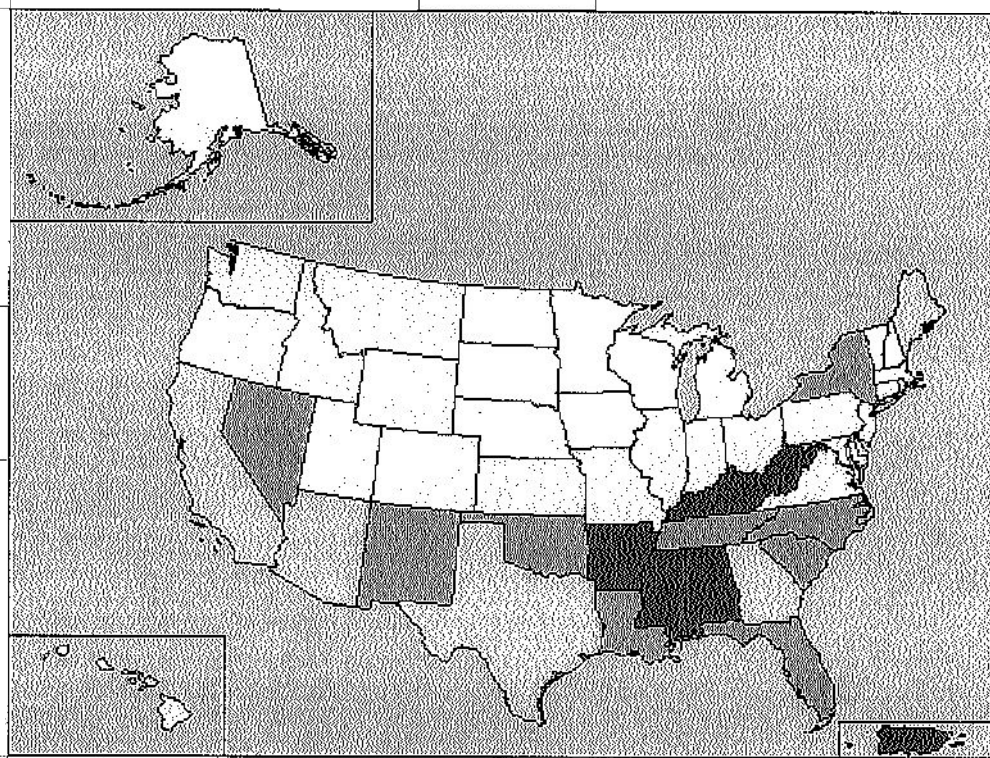
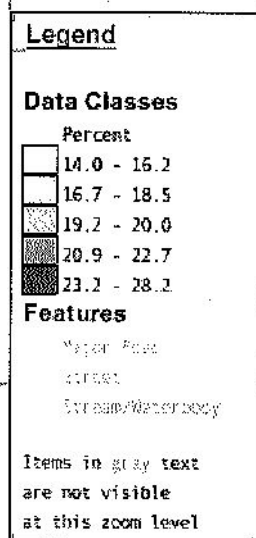
Universe: Civilian noninstitutionalized population 21 to 64 years

Current Data Set: Census 2000 Summary File 3 (SF 3) - Sample Data

United States by State

☒ Select an option, then click on the map [Quick tips](#)  
☒ zoom in to state ☐ recenter and zoom in ☐ identify [Go to selection](#)

NOTE: Data based on a sample except in P3, P4, H3, and H4. For information on confidentiality protection, sampling error, and definitions see <http://factfinder.census.gov/home/en/datnotes/expsf3.htm>.



Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrix P42.

To reposition the map...

☒ enter an **address** or a ZIP code and click 'Go'

Street Address [Quick tips](#)  
City State ZIP Code

Or...

☒ enter a **latitude/longitude** coordinate and click 'Go'

- [Annual tables of work disability by age, education, employment, and income.](#)

## Research Papers



[Employment, Earnings, and Disability](#) (Paper presented July 3, 2000 at the annual meeting of The Western Economic Association International)



[Employment, Earnings, and Disability - Tables](#)

*Source: U.S. Census Bureau*

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[Other Census Bureau sites with disability data.](#)

[Related Internet Sites](#)

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Contact the HHES Information area at 301-763-3242 or mail to [hhes-info@census.gov](mailto:hhes-info@census.gov) for further information on Disability Statistics.

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Last Revised: May 11, 2004

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<b>ID</b> 410
<b>Topics</b> Census 2000 People
<b>Date Created</b> 04/15/2004 04:22 PM
<b>Date Updated</b> 04/21/2004 03:17 PM

Do you have a report on the disability status of the population?

**Question**

Do you have a report on the disability status of the population?

**Answer**

Yes, we have released the following report: Disability Status of the Civilian Noninstitutionalized Population by Sex and Selected Characteristics for the United States and Puerto Rico: 2000 PHC-T-32. Data are available in Excel, PDF, and CVS formats.

Tables for each state show the following data:

Table 1. Selected Types of Disability for the Civilian Noninstitutionalized Population 5 Years and Over by Age: 2000

Table 2. Employment and Earnings by Disability Status for the Civilian Noninstitutionalized Population 21 to 64 Years: 2000

Table 3. Employment and Earnings by Disability Status for the Civilian Noninstitutionalized Population Men 21 to 64 Years: 2000

Table 4. Employment and Earnings by Disability Status for the Civilian Noninstitutionalized Population Women 21 to 64 Years: 2000

For a more complete listing of information on disability, go to Subjects A to Z on the home page, go to D, and select Disability.