

**American FactFinder**  
<http://factfinder.census.gov>  
**Thematic Maps**

American FactFinder has two types of maps, reference and thematic maps. Reference maps display boundaries, such as states, counties, cities, and towns. Thematic maps display statistics in a graphical format, such as population density, income, and race. This tutorial is a guide to creating a thematic map that illustrates the percent of children below the poverty level by states. Data is from the 2000 Census of Population and Housing. However, the map covers 1999 because respondents indicate economic information for the previous year. [Click here](#) for a guide to reference maps.

1. Select Maps and Geography on the American FactFinder home page. (figure 1)

**Figure 1**  
**American FactFinder Home Page**

The screenshot shows the American FactFinder home page. At the top, it says "U.S. Census Bureau" and "American FactFinder". Below that is a navigation bar with links: Main, Search, Feedback, FAQs, Glossary, Site Map, Help. On the left is a vertical menu with categories: FACT SHEET, PEOPLE, HOUSING, BUSINESS AND GOVERNMENT, CENSUS OVERVIEW, DATA SETS, MAPS AND GEOGRAPHY, REFERENCE SHELF, TOOLS. The main content area has the heading "Your source for population, housing, economic, and geographic data". It includes sections for "Fast Access to Information" with bullet points linking to Fact Sheet, People, Housing, and Business and Government; "Getting Detailed Data" with links to Census Overview and Data Sets; and "What's New". On the right, there's a "U.S. Population Estimate" section showing "288,368,698" as of July 1, 2002, with a link for "real-time population clocks". Below that are links for "Religion or Genealogy?" and "Basic Facts?". The "In the Spotlight" section features a photo of a house and the title "American Homes: 2000".

2. Select Thematic Maps in figure 2.

**Figure 2**  
**Thematic Maps**

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Main ▶ Maps and Geography

**MAPS IN AMERICAN FACTFINDER**

American Factfinder (AFF) has two tools for creating, viewing, printing, and downloading maps:

- [Reference Maps](#) - A tool to view the boundaries of census geographies, such as counties, cities and towns, urban areas, congressional districts, census tracts, census blocks, and more.
- [Thematic Maps](#) - A tool to view census data in graphical format for all geographies - national to individual census blocks. Data are available for Census 2000, the 1990 Census, the 1997 Economic Census, and 2002 Population Estimates.

For guidance in using these mapping tools, see the [Creating and Using Maps](#) tutorial.

3. The system defaults to a map that displays population density for states using statistics in Summary File 1 (SF 1). (figure 3) Change the data set to Summary File 3 (SF 3) that includes poverty statistics by clicking on Data Sets with Thematic Maps

**Figure 3-**  
**Default Map-Population Density by States, part 1**

**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 | [Options](#) | [Print / Download](#) | [Related Items](#)

[TM-P002. Persons per Square Mile: 2000](#)

Universe: Total population

Current Data Set: [Census 2000 Summary File 1 \(SF 1\) 100-Percent Data](#)

United States by:

Select an option, then click on the map [Quick tips](#)

zoom in to state  recenter and zoom in  identify [Go to selection](#)

NOTE: For information on confidentiality protection, nonsampling error, and definitions, see <http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.



4. Select Census 2000 Summary File 3 (SF 3)-Sample Data and click Next. (figure 4)

**Figure 4**  
**Select Summary File 3 (SF 3)**

U.S. Census Bureau  
American FactFinder

Main Search Feedback FAQs Glossary Site Map Help

**Select a Data Set**

You are here: [Main](#) > [All Data Sets](#) > [Data Sets with Thematic Maps](#) [Load Query](#) | [Clear all selections](#)

Select a data set and click 'Next'

- ==== Decennial Census =====
- Census 2000 Summary File 1 (SF 1) 100-Percent Data
- Census 2000 Summary File 3 (SF 3) - Sample Data**
- 108th Congressional District Summary File (Sample)
- 108th Congressional District Summary File (100-percent)
- Census 2000 Redistricting Data (Public Law 94-171) Summary File
- 1990 Summary Tape File 1 (STF 1) - 100-Percent data
- 1990 Summary Tape File 3 (STF 3) - Sample data
- ==== Economic Censuses and Surveys =====
- All sectors: Economic-Wide Key Statistics: 1997
- ==== Population Estimates =====
- 2002 Population Estimates

What's this?

Next ▶

[See list of all data sets](#)

Census 2000 Summary File 3 (SF 3) – Sample Data

Click Next.

5. Choose Nation in the “Select a geographic type” box, highlight the United States in the box immediately below, and click next. (figure 5)

**Figure 5**  
**Select Geographies-All 50 States**

U.S. Census Bureau  
American FactFinder

Main Search Feedback FAQs Glossary Site Map Help

**Select Geography**

You are here: [Main](#) > [All Data Sets](#) > [Data Sets with Thematic Maps](#) > [Geography](#) > Themes > Results  
Census 2000 Summary File 3 (SF 3) - Sample Data, Thematic Maps

Choose a selection method

list name search address search map

[Show all geography types](#) | [Explain Census Geography](#)

Select a geographic type

Nation

Nation.

Select a geographic area and click 'Next'

United States

United States.

Next ▶

Next.

6. Select Table “TM-PCT052. Percent of Related Children Under 18 Years Below Poverty Level in 1999: 2000” (the last option on the list), and click Show Result. (figure 6)

**Figure 6**  
**Select Table “TM-PCT052 Percent...”**

■ Choose theme selection method

by subject   by keyword   **show all themes**

■ Select a theme and click 'Show Map'

TM-PCT043. Percent of Persons of Sub-Saharan African Ancestry: 2000	
TM-PCT044. Percent of Persons of Swedish Ancestry: 2000	
TM-PCT045. Percent of Persons of Swiss Ancestry: 2000	
TM-PCT046. Percent of Persons of Ukrainian Ancestry: 2000	
TM-PCT047. Percent of Persons of United States or American Ancestry: 2000	
TM-PCT048. Percent of Persons of Welsh Ancestry: 2000	
TM-PCT049. Percent of Persons of West Indian (excluding Hispanic groups) Ancestry: 2000	
TM-PCT050. Median Earnings of Male Full-Time, Year-Round Workers in 1999: 2000	
TM-PCT051. Median Earnings of Female Full-Time, Year-Round Workers in 1999: 2000	
<b>TM-PCT052. Percent of Related Children Under 18 Years Below the Poverty Level in 1999: 2000</b>	<b>Show Result ►</b>

What's this?

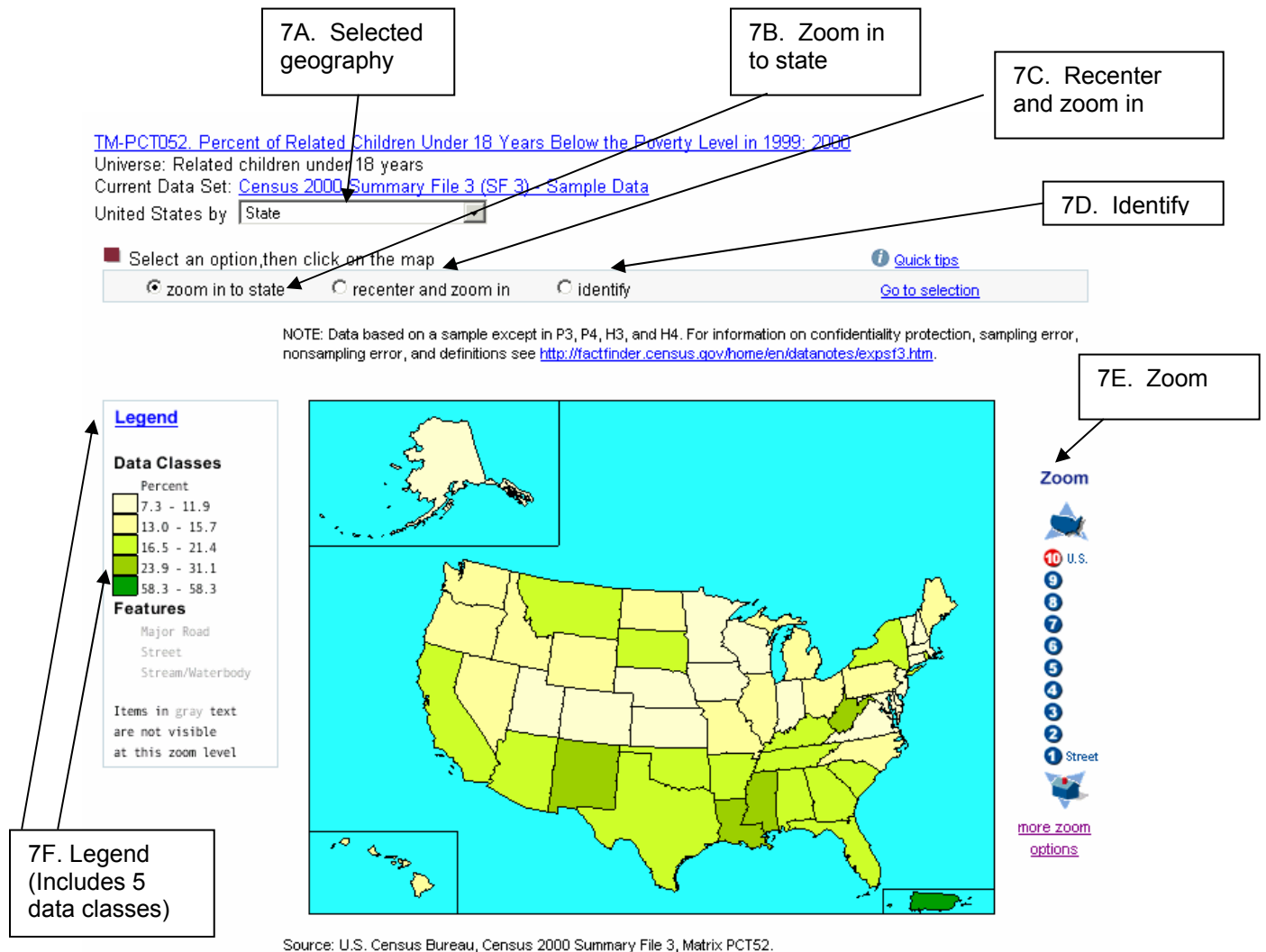
Show Result ►

TM-PCT052. Percent of Related Children Under 18 Years Below Poverty Level in 1999: 2000

Show Result

7. The map in figure 7 illustrates the percent of children in the U.S. living in poverty. Descriptions below describe significant parts of figure 7.

**Figure 7**  
**Percent of Children in U.S. Living in Poverty by States**



**7A. Selected geography:** Display the theme using one of 5 geographies: states, counties, metropolitan areas, 106<sup>th</sup> Congressional districts, or 3-digit Zip Code Tabulation areas (the initial three digits of Zip Codes).

**7B. Zoom in to state:** Click on a state to zoom in.

**7C. Recenter and zoom in:** Click on any part of the map to recenter it at that point and zoom in.

**7D. Identify:** Click on an area state to view its statistics. Doing so in figure 7 displays statistics for the specified state.

**7E. Zoom:** FactFinder offers 10 zoom options. Ten is the least magnified choice displaying the entire nation, and 1 maximizes magnification illustrating streets.

**7F. Legend:** Figures 8-11 display 4 different parts of Legend: classes, boundaries, features, and title. Click update to view the revised map after making changes in the legend.

**Classes Tab:** Number of classes is the number of data categories on the map. The 5 classes on the map in figure 7 are reflected in figure 8. If viewing the map in color, each class appears in different shades of green. (figure 8)

**Figure 8  
Legend-Classes**

Click to redraw a map after making changes in the Legend.

5 classes or data groups appear in different shades of green.

4 classing methods

The following simplified examples explain the four classing methods American FactFinder uses. The basis of each is twelve selections from a deck of cards.

First card	1	Seventh card	3
Second card	1	Eighth card	4
Third card	2	Ninth card	5
Fourth card	2	Tenth card	6
Fifth card	2	Eleventh card	6
Sixth card	2	Twelfth card	6

**Natural breaks** displays data based upon a frequency distribution. That is, groupings are by the number of times a particular card appears. Using the above example, 4 groupings are illustrated below.

<b>Number of cards</b>	<b>Percent</b>
2 ones	17%
4 twos	33%
1 three, 1 four, and 1 five	24% (8% each)
3 sixes	25%
<b>12 cards</b>	<b>100%</b>

**Equal intervals** categorize data according to their values, regardless of the number of times a value appears. Three groupings of card numbers are 1-2, 3-4, and 5-6.

**Quantile** categorizes data by the number of times a value occurs. The 12 cards categorized into two quantiles include card numbers 1 and 2 (50% of the cards) and card numbers 3-6 (50% of the cards).

**User Defined** classing offers flexibility for developing customized categories.

**Boundaries Tab:** Identify and/or label specified boundaries using the Boundaries tab. Select state boundary and label in figure 9, and click update to display a revised map with state names. (figure 10)

**Figure 9**  
**Legend-Boundaries**

Choose a survey instance and select a group of boundaries

No Boundaries

... or select boundaries from the table

Boundary	Label	
<input type="checkbox"/>	<input type="checkbox"/>	Region
<input type="checkbox"/>	<input type="checkbox"/>	Division
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	State
<input type="checkbox"/>	<input type="checkbox"/>	2000 County
<input type="checkbox"/>	<input type="checkbox"/>	2000 County Subdivision
<input type="checkbox"/>	<input type="checkbox"/>	2000 Subbarrio
<input type="checkbox"/>	<input type="checkbox"/>	2000 Census Tract
<input type="checkbox"/>	<input type="checkbox"/>	2000 Block Group
<input type="checkbox"/>	<input type="checkbox"/>	2000 Block
<input type="checkbox"/>	<input type="checkbox"/>	2000 Place
<input type="checkbox"/>	<input type="checkbox"/>	1997 Economic Place
<input type="checkbox"/>	<input type="checkbox"/>	2000 Consolidated City
<input type="checkbox"/>	<input type="checkbox"/>	2000 American Indian Area/Alaska Native Area
<input type="checkbox"/>	<input type="checkbox"/>	2000 American Indian Off-Reservation Trust Lands/Hawaiian Home Land
<input type="checkbox"/>	<input type="checkbox"/>	2000 Tribal Subdivision
<input type="checkbox"/>	<input type="checkbox"/>	2000 Tribal Census Tract
<input type="checkbox"/>	<input type="checkbox"/>	2000 Tribal Block Group
<input type="checkbox"/>	<input type="checkbox"/>	2000 Alaska Native Regional Corporation
<input type="checkbox"/>	<input type="checkbox"/>	2000 Metropolitan Statistical Area/Consolidated Metropolitan Stastical Area
<input type="checkbox"/>	<input type="checkbox"/>	2000 Primary Metropolitan Statistical Area
<input type="checkbox"/>	<input type="checkbox"/>	2000 Central City of MSA/CMSA
<input type="checkbox"/>	<input type="checkbox"/>	2000 New England County Metropolitan Area
<input type="checkbox"/>	<input type="checkbox"/>	2000 Central City of NECMA

State Boundary and Label.

## Figure 10 Revised Map Displaying State Boundaries

[TM-PCT052. Percent of Related Children Under 18 Years Below the Poverty Level in 1999: 2000](#)

Universe: Related children under 18 years

Current Data Set: [Census 2000 Summary File 3 \(SF 3\) - Sample Data](#)

United States by

Select an option, then click on the map

[Quick tips](#)

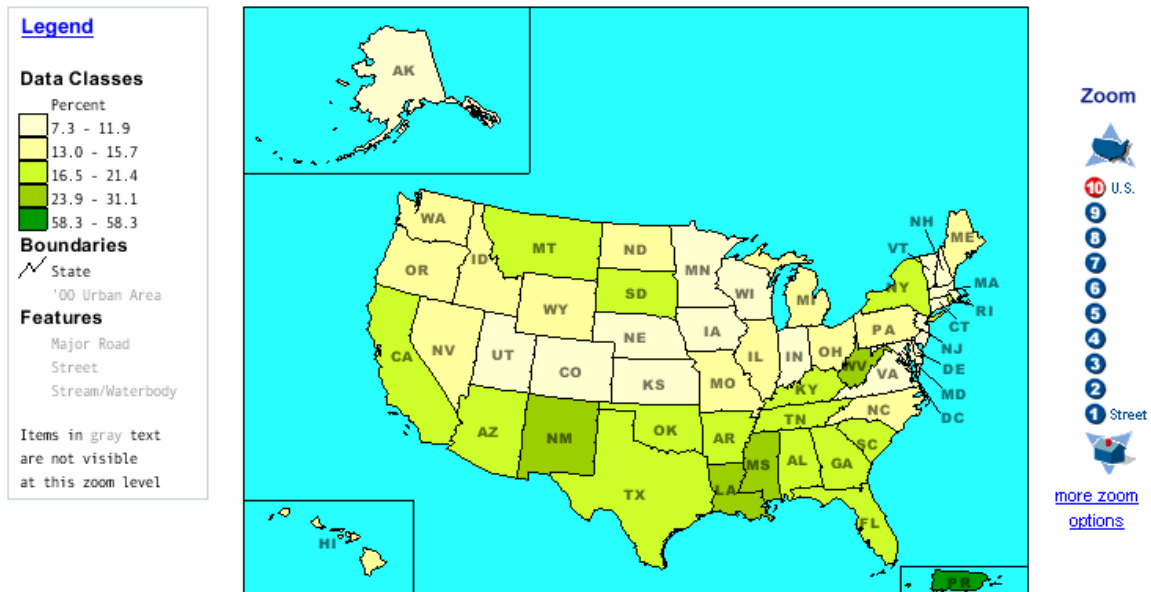
zoom in to state

recenter and zoom in

identify

[Go to selection](#)

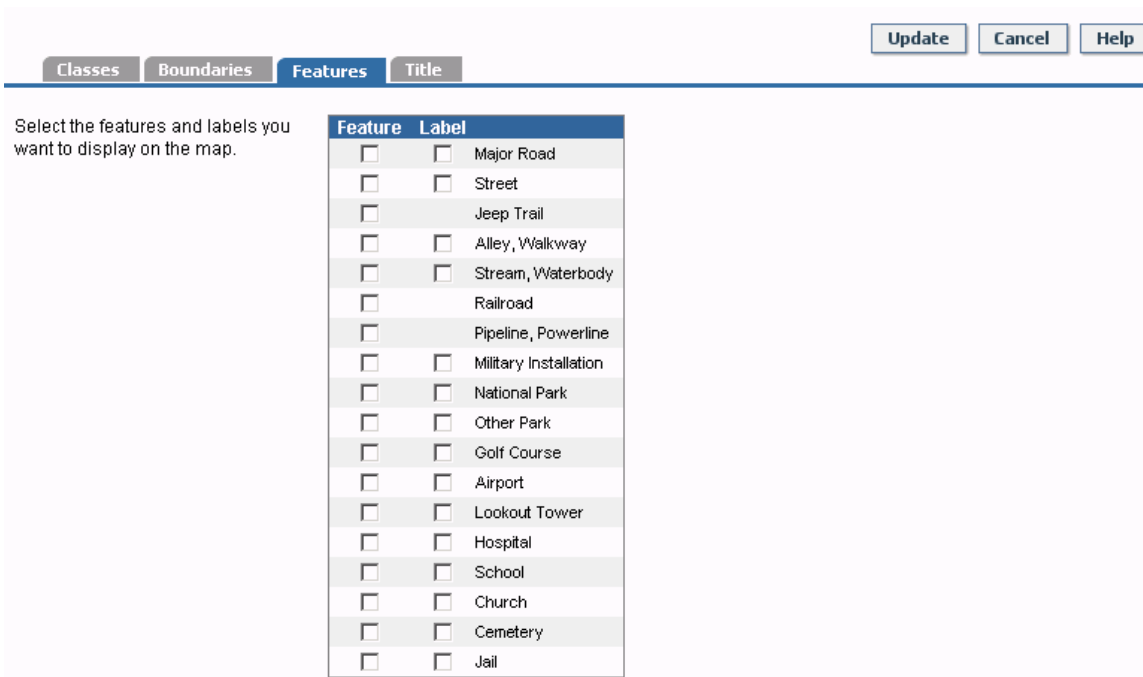
NOTE: Data based on a sample except in P3, P4, H3, and H4. For information on confidentiality protection, sampling error, nonsampling error, and definitions see <http://factfinder.census.gov/home/en/datanotes/expsf3.htm>.



Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrix PCT52.

**Features Tab:** Identify major roads, streets, and other key places in your local area with the Features tab. (figure 11)

**Figure 11  
Legend-Features**

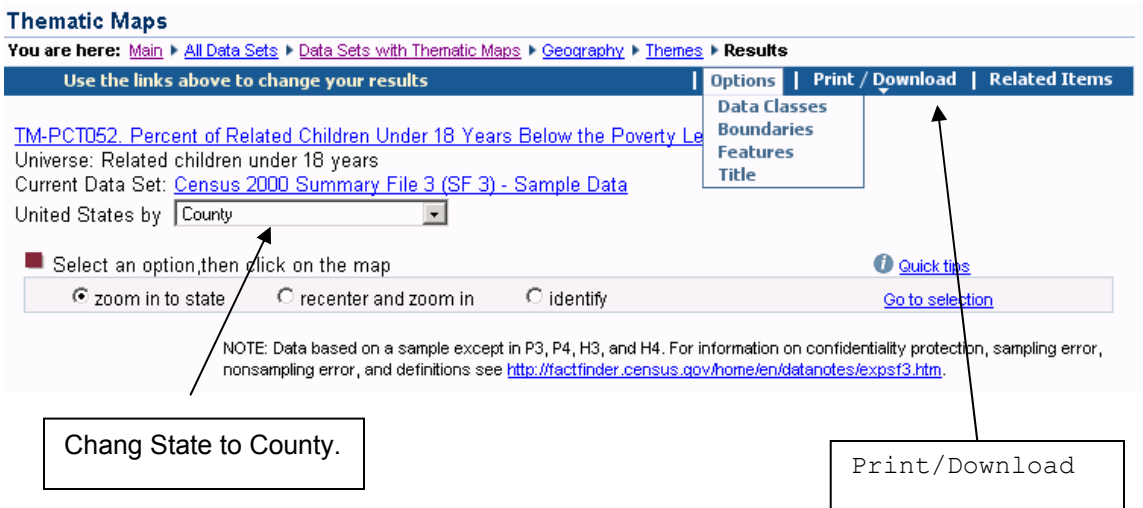


**Title Tab:** Add a title to the map with this tab. (figures 8, 9, and 11)

Note, selecting Options in figure 12 also provides access to the 4 parts of the legend.

8. Use the geography option (figure 7, part 7A) to redraw the map by counties. (figure 12)

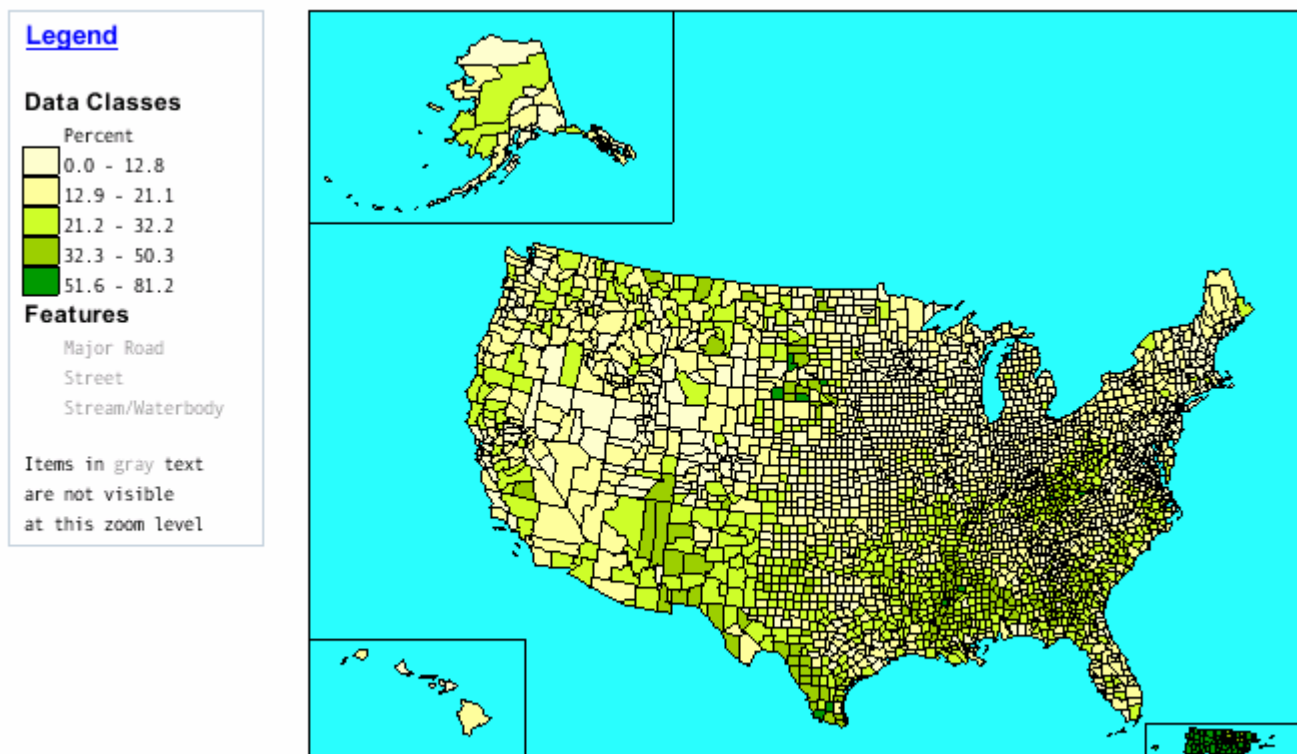
**Figure 12  
Percent of Children in U.S. Living in Poverty by Counties**



Chang State to County.

Print/Download

**Figure 12**  
**Percent of Children in U.S. Living in Poverty by Counties**  
**(Continued)**



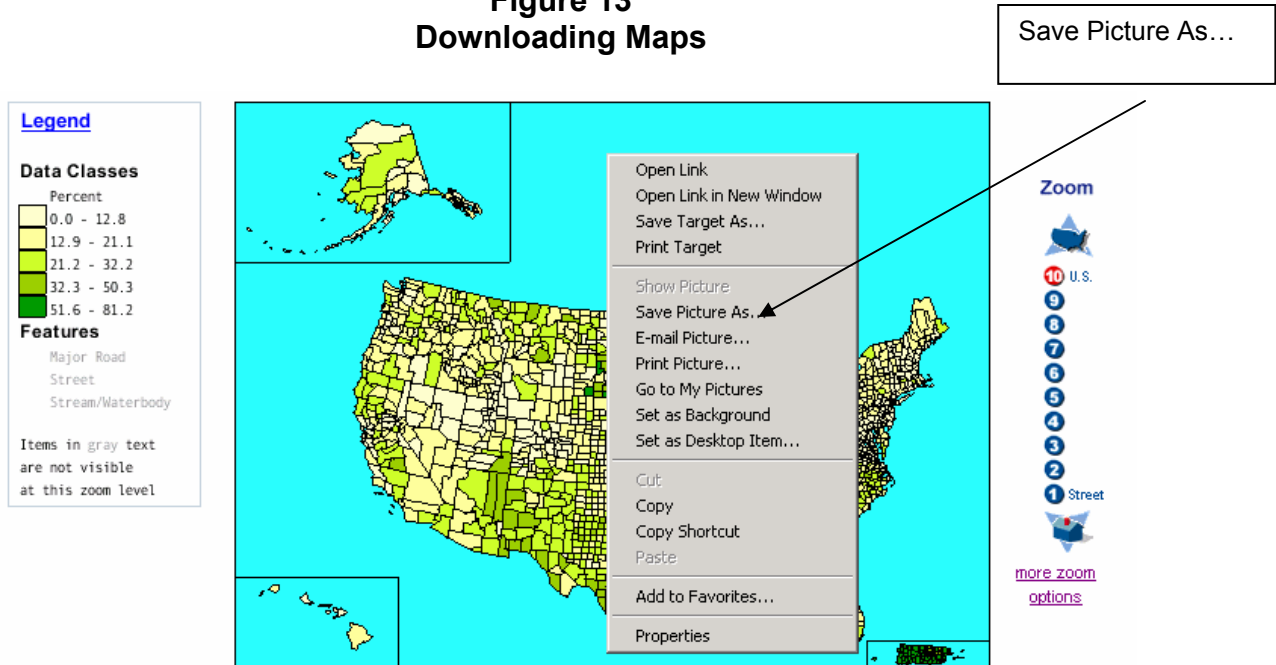
Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrix PCT52.

9. **Print/Download:** Use the Print/Download option at the top of figure 12. Download creates a data file of statistics on which the map is based.

Use the Windows copy feature to download the map as an image. Right click on the mouse, select Save Picture As..., and enter your file name with either gif or bmp extensions. (figure 13)

Mac users, hold the mouse key over the image until the menu appears, and select Download Image To Disk.

**Figure 13**  
**Downloading Maps**



Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrix PCT52.

Edward Herman  
 Business and Government Documents Center  
 Lockwood Library  
 University at Buffalo  
 December 2003  
[http://ublib.buffalo.edu/libraries/units/lml/govdocsubj/census2000/ThemMap\\_Tut.pdf](http://ublib.buffalo.edu/libraries/units/lml/govdocsubj/census2000/ThemMap_Tut.pdf)