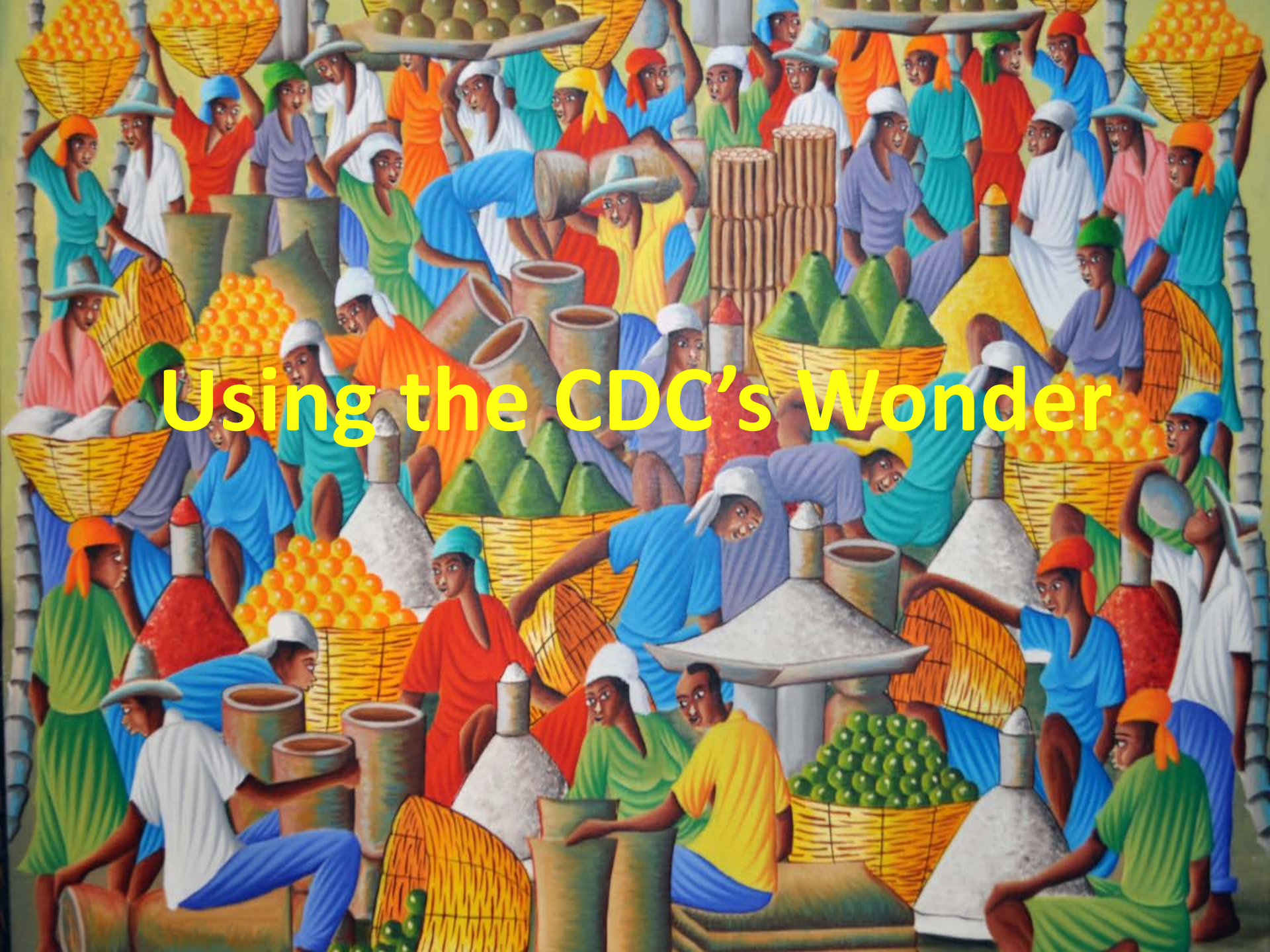
Using the CDC's Wonder

Using the CDC's Wonder

Access to Vital Statistics and Other Data

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Demography Conference

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Vital Statistics

Vital Statistics

- Quantitative data regarding the important life events that occur among members of a population.
  - Births
  - Marriages
  - Deaths
  - Diseases
  - Migration
- The CDC's Wonder Web site is a source where certain vital statistics can be accessed.

Some Key Population Measures Based On Vital Statistics

- **Crude Birth Rate:** The number of births per 1000 people in the population.
- **Age specific birth rate:** The number of births to mothers in a specified age cohort per 1000 people in that age cohort.
- **Fertility rate:** The number of births per 1000 women ages 15-44
- **Age specific fertility rate:** The number of births to mothers in a specified age cohort per 1000 women in that age cohort.

Some Key Population Measures Based On Vital Statistics

- **Total Fertility Rate:** The total number of children that 1000 women in a given population can be expected to bear if they all conform to the population's age specific fertility rates and survive beyond the age of 44.
- **Crude Death Rate:** The number of deaths per 1000 people in the population.
- **Age Specific Death Rate:** The number people within a specified age cohort who die per 1000 people in that age cohort.

The Wonder Web Site

There are several data sets that can be accessed on the Wonder site.

Vital Statistics

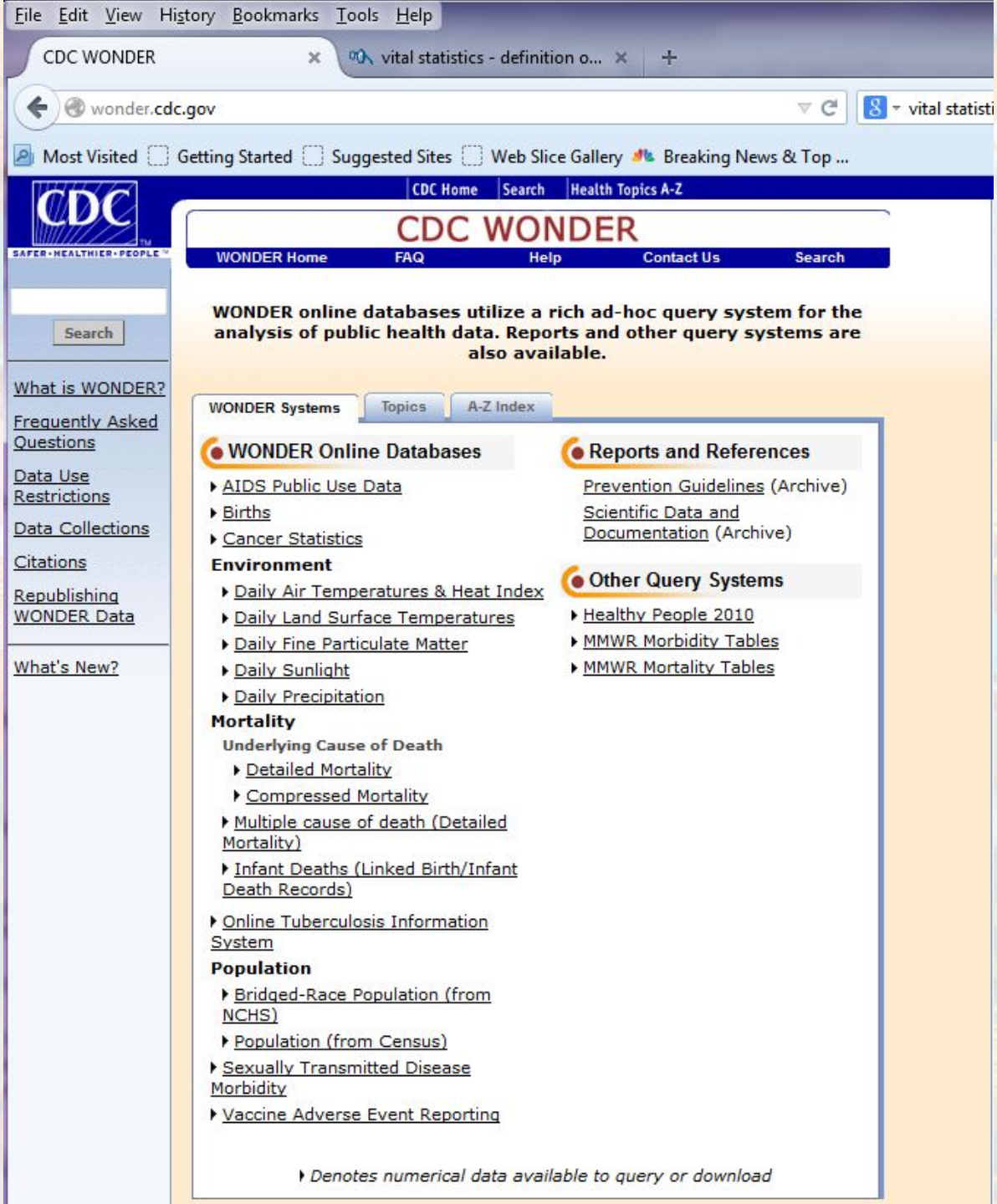
- **Disease data**
  - AIDS
  - Cancer
  - Tuberculosis
  - STDs
  - Adverse reactions to vaccines
- **Birth data**
- **Mortality data**

Other Data

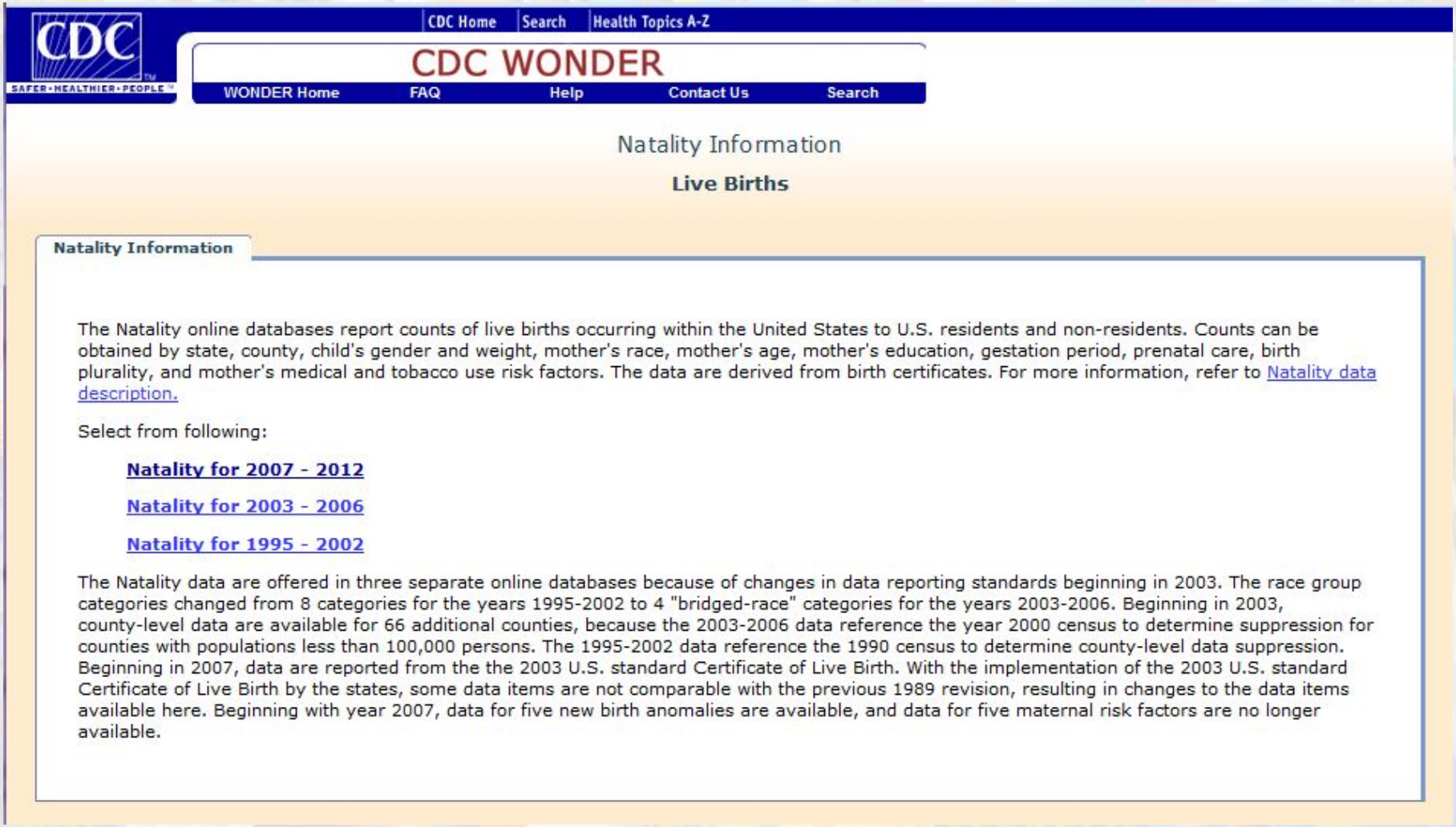
- **Environmental Data**
  - Temperature
  - Particulate matter
  - Daily Sunlight
  - Daily Precipitation
- **Population Data**

http://wonder.cdc.gov/

Go to the Wonder site now!



Click "Births"



Click “Natality for 2007 – 2012”

Data Restrictions

- General restrictions for all data:
  - The data are provided for statistical purposes only.
  - Linking data to other data sets for the purpose of identifying individuals is prohibited.
  - If the identity of an individual is inadvertently discovered it should not be used or disclosed and it should be reported to CDC.
- There are additional restrictions for some data:
  - For sub-national geography, counts or rates for mortality or births that are based on fewer than 10 events cannot be presented or published.
- You must agree to the restrictions that apply to each data set in order to gain access to it.

About Natality, 2007-2012

Note: *Any use of these data implies consent to abide by the terms of the data use restrictions.*

This dataset has counts of births occurring within the United States to U.S. residents and non-residents. Counts can be obtained by state, county, child's gender and weight, mother's race, mother's age, mother's education, gestation period, prenatal care, birth plurality, medical and tobacco use risk factors (mother). The data are derived from birth certificates issued in years 2007 - 2012.

Data Use Restrictions:

The Public Health Service Act (42 U.S.C. 242m(d)) provides that the data collected by the National Center for Health Statistics (NCHS) may be used only for the purpose for which they were obtained; any effort to determine the identity of any reported cases, or to use the information for any purpose other than for health statistical reporting and analysis, is against the law. Therefore users will:

- Use these data for health statistical reporting and analysis only.
- For sub-national geography, do not present or publish birth counts of 9 or fewer or birth rates based on counts of nine or fewer (in figures, graphs, maps, tables, etc.).
- Make no attempt to learn the identity of any person or establishment included in these data.
- Make no disclosure or other use of the identity of any person or establishment discovered inadvertently and advise the NCHS Confidentiality Officer of any such discovery.

Eve Powell-Griner, Confidentiality Officer
National Center for Health Statistics
3311 Toledo Road, Rm 7116
Hyattsville, MD 20782
Telephone 301-458-4257 Fax 301-458-4021

Sanctions for Violating Rules:

Researchers who violate the terms of the data use restrictions will lose access to WONDER and their sponsors and institutions will be notified. Researchers who are suspected of violating the rules may be prevented from using WONDER until an investigation can be completed. Deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal government violates 18 USC 1001 and is punishable by a fine of up to $10,000 or up to 5 years in prison, or both.

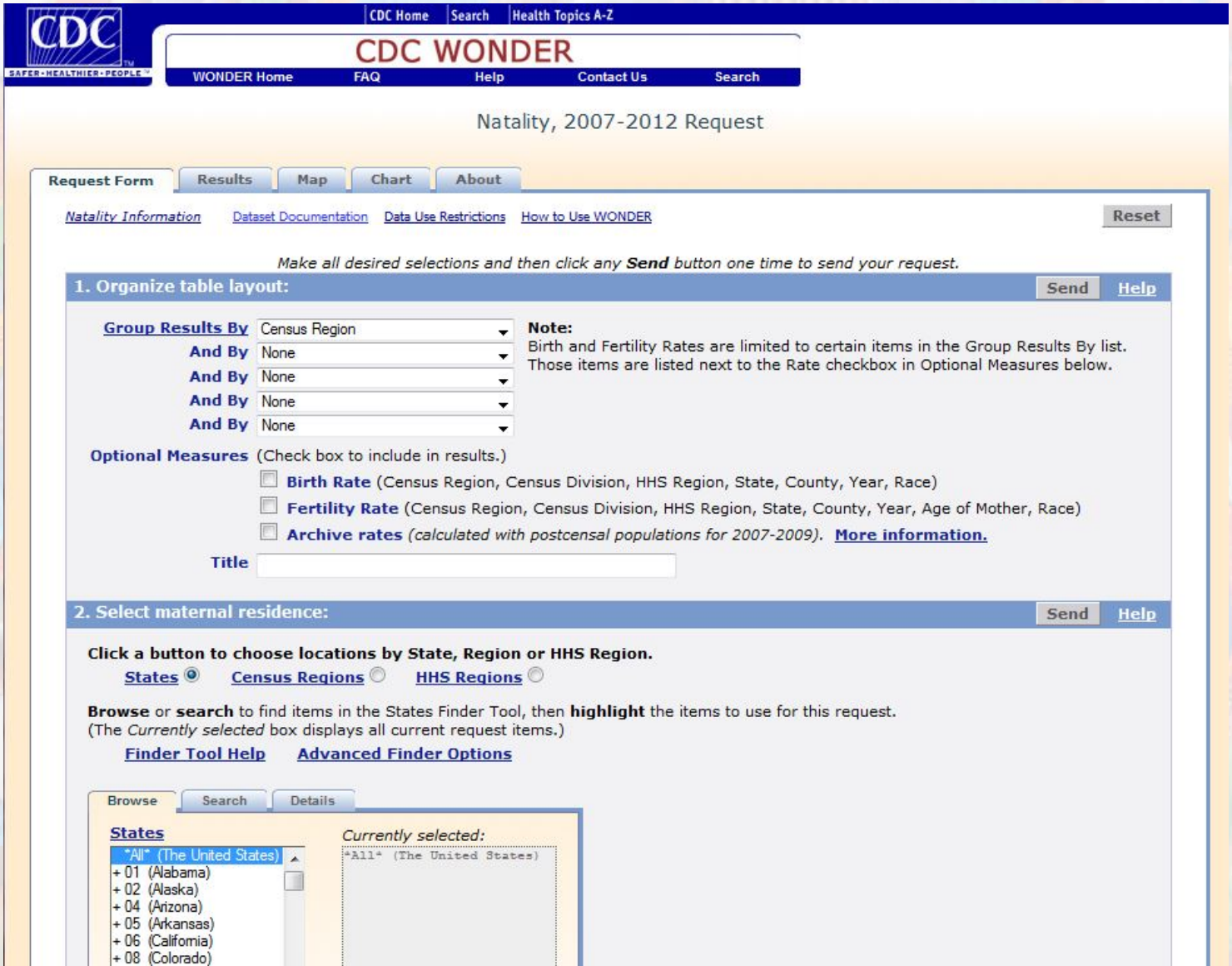
By clicking the "I Agree" button ***I signify that I will abide by the terms of data use stated above*** *and understand the sanctions and legal penalties for violation of these terms of use.*

I Agree

Click Dataset Documentation for complete information about this dataset.

Click “I Agree”

You should now be at the Data Request Screen.



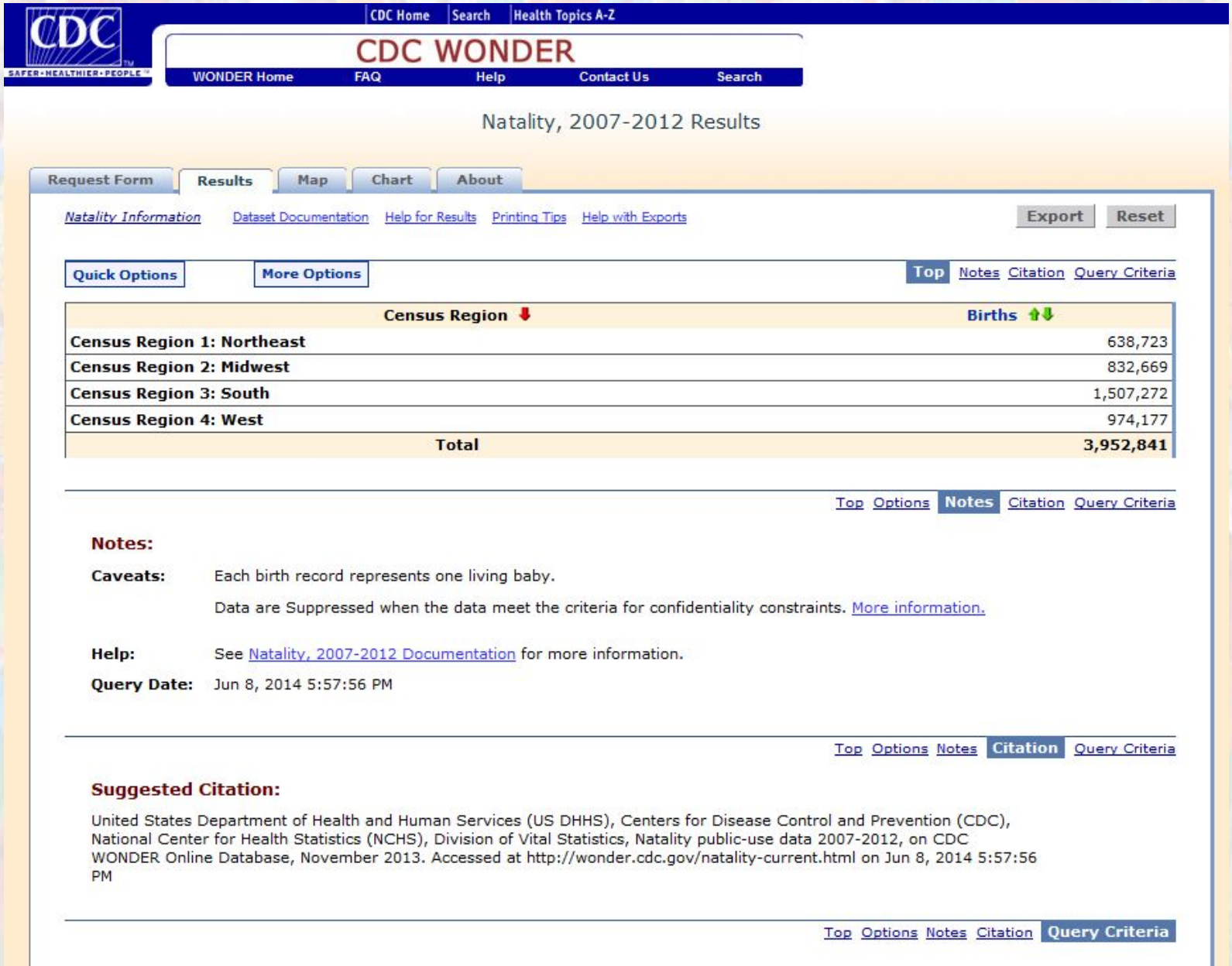
Four Main Data Screens

1. **Data Request Screen**
   - A screen on which you specify the content and structure of the data table you would like to create.
2. **Results Screen**
   - A screen where a table of the data you requested appears and from which you can modify and download that table.
3. **Map Screen**
   - A screen where you can create maps to represent your data request.
4. **Chart Screen**
   - A screen where you can create charts to represent your data request.

Accessing Data

- To start with, don’t change anything.
- Click one of the “Send” buttons on the right hand side of the page.
- This will send a request for a data table using the default parameters.
- After your request has processed, you will be taken to the “Results” screen.

The Results Screen



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Natality, 2007-2012 Results

Request Form | Results | Map | Chart | About

Natality Information | Dataset Documentation | Help for Results | Printing Tips | Help with Exports

Export | Reset

Quick Options | More Options

Top | Notes | Citation | Query Criteria

Census Region	Births
Census Region 1: Northeast	638,723
Census Region 2: Midwest	832,669
Census Region 3: South	1,507,272
Census Region 4: West	974,177
Total	3,952,841

Top | Options | Notes | Citation | Query Criteria

Notes:

Caveats: Each birth record represents one living baby.

Data are Suppressed when the data meet the criteria for confidentiality constraints. More information.

Help: See Natality, 2007-2012 Documentation for more information.

Query Date: Jun 8, 2014 5:57:56 PM

Top | Options | Notes | Citation | Query Criteria

Suggested Citation:

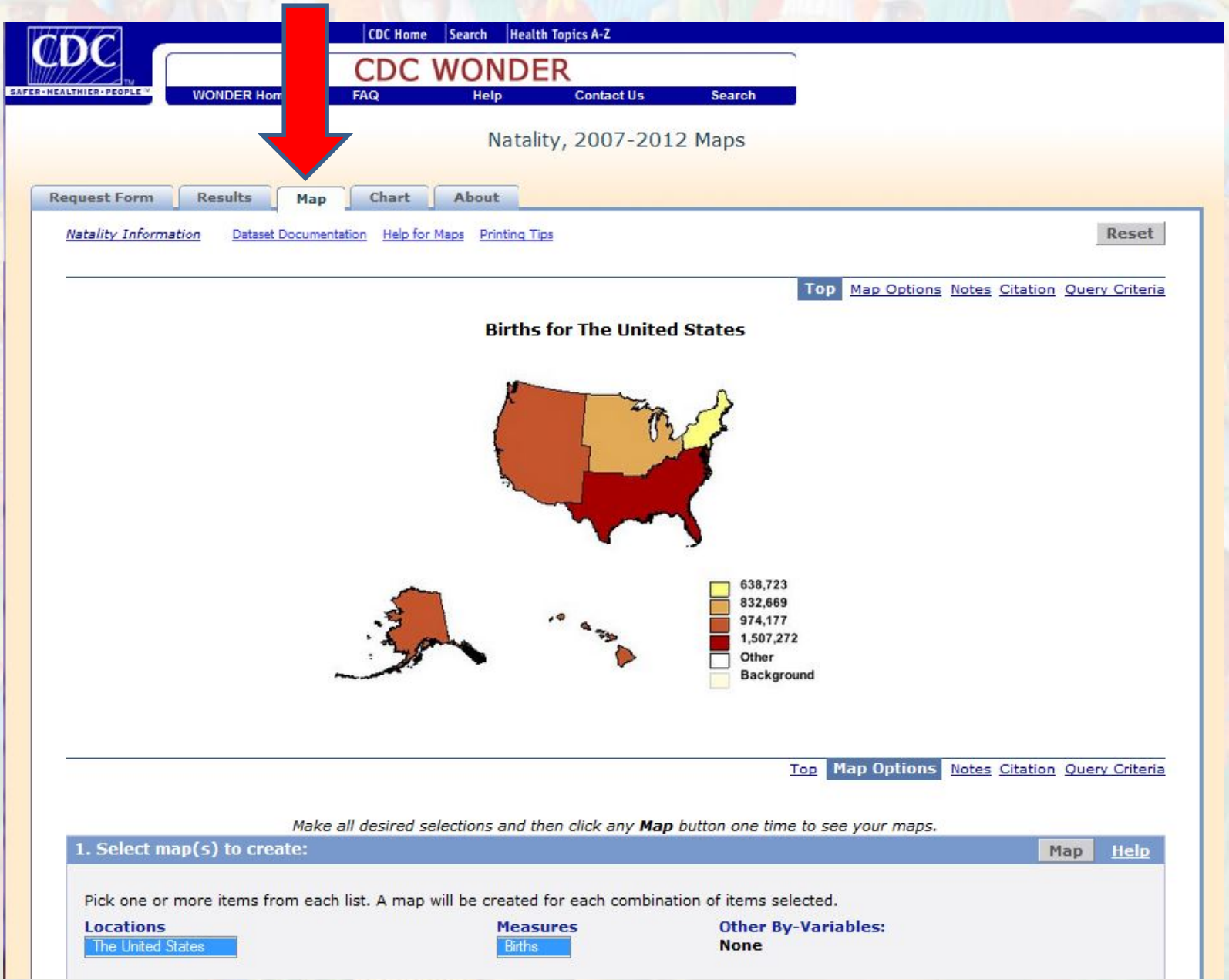
United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2007-2012, on CDC WONDER Online Database, November 2013. Accessed at http://wonder.cdc.gov/natality-current.html on Jun 8, 2014 5:57:56 PM

Top | Options | Notes | Citation | Query Criteria

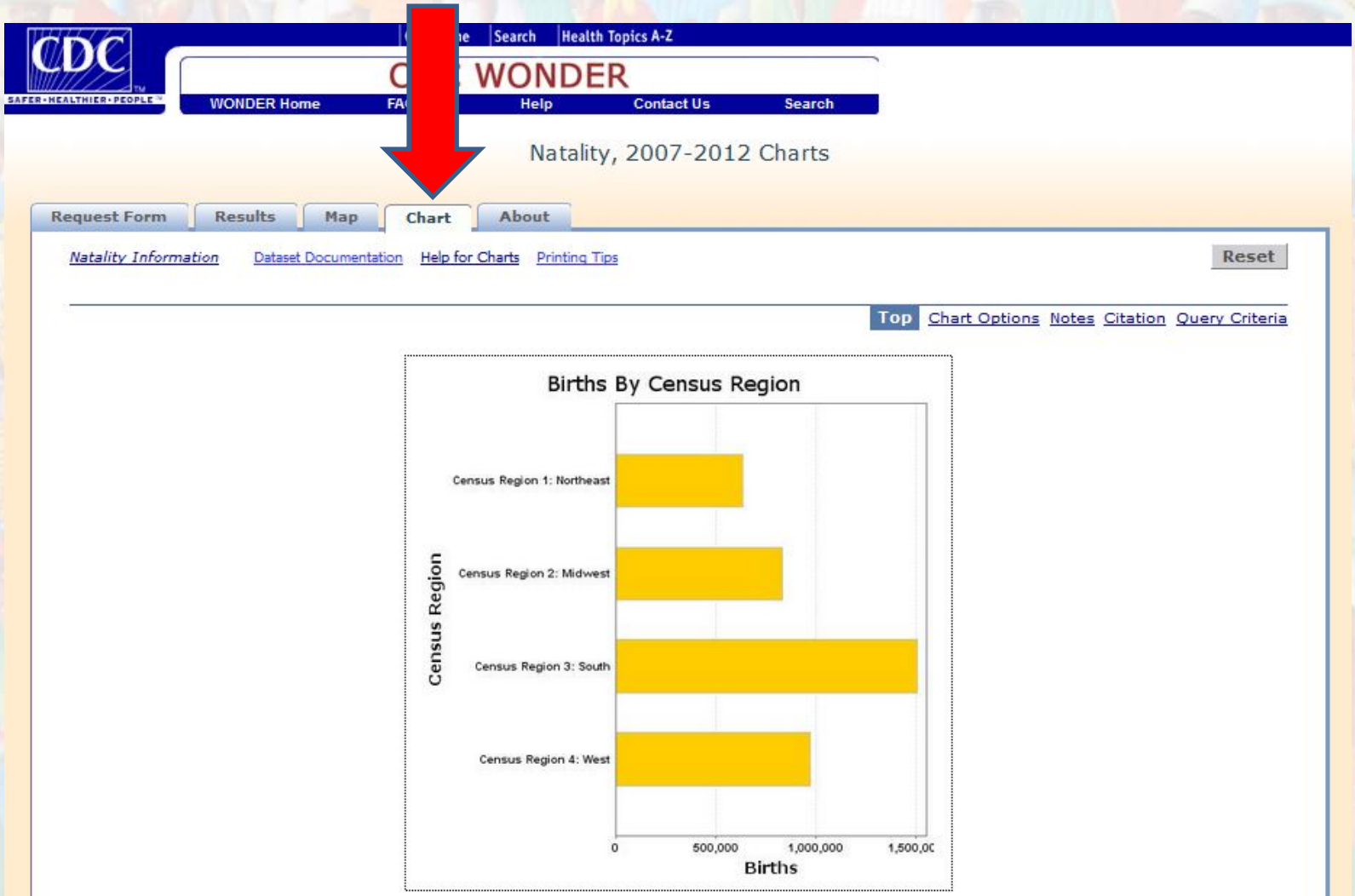
Accessing Data

- You can select among the different screens by clicking on the tabs for Request Form, Results, Map, or Chart that you see near the top of the web page.
- Go to the Map and Chart screens.
  - They should also look like the following screenshots.

The Map Screen



The Chart Screen



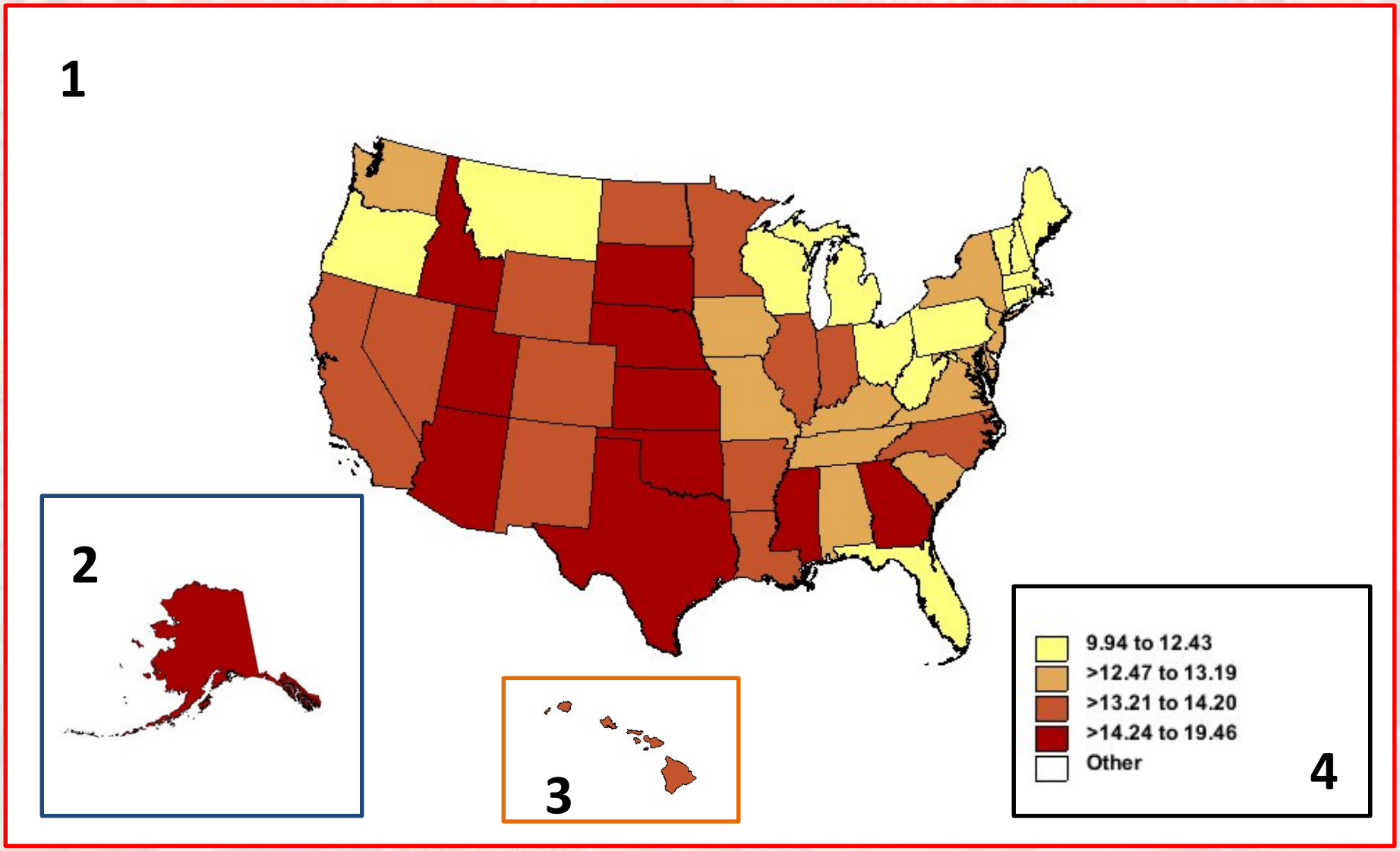
Structuring a Data Request

1. Data requests are structured using what are called **“by”** variables which are used to organize the data.
2. If you go to the Request Page and scroll down you will see that it is organized into 6 sections.
3. **Section 1** allows you to select the **“by”** variables that will structure your results.
4. **Sections 2, 3, 4, and 5** include variables that affect the scope of your results, for example, you can limit your results to certain states, races, ages, or medical conditions.
5. **Section 6** allows you to select among several formatting options for your data table.

Saving Data Tables, Maps & Charts

- From the results screen you can download your table into a tab delimited text file for use in another software program by clicking the “Export” button.
- You can click the map or chart tabs to create different kinds of graphic data displays.
- Use the map options or chart options links to format your map or chart.
- Save your map or chart by right clicking on it and selecting the “save as” option.
- Your map may include more than one image so you may need to save more than one image.

Save All Four parts of The Map!



Assignment

- **Find the information needed to answer the following four questions:**

1. What was the fertility rate for South Dakota teens 15 to 19 years of age in both 2011 and 2012.
2. What was the total number of South Dakota births in 2012?
3. What were the total numbers of South Dakota Births in 2012 broken down by race?
4. What state, or states, had higher fertility than South Dakota in 2011 and 2012?

1. What was the fertility rate for South Dakota teens 15 to 19 years of age in both 2011 and 2012.

- **On the Request page:**
  1. Section 1: Group results by “Year” and make sure that the box for “Fertility Rate” is checked.
  2. Section 2: Select “South Dakota” as the state.
  3. Section 3: Select “15-19” as the age of the mother and make sure that the “All” option is set for everything else.
  4. Section 4: Select “2011” and “2012” as the years, using “control-click” to select more than one option. Make sure that the “All” option is set for everything else.
  5. Section 6: Select Calculate Rates Per “1000”
  6. Click one of the “Send” buttons.

2. What was the total number of South Dakota births in 2012?

- **On the Request page:**
  1. Section 1: Group the results by “State.”
  2. Section 2: Select “South Dakota” as the state.
  3. Section 3: Make sure that everything is set to the “All” option.
  4. Section 4: Select “2012” for the year. Everything else should be set to the “All” option.
  5. Click one of the “Send” buttons.

3. What were the total numbers of South Dakota Births in 2012 broken down by race?

- **On the Request page:**
  1. Section 1: Group the results by “Race.”
  2. Section 2: Select “South Dakota” as the state.
  3. Section 3: Everything should be set to the “All” option.
  4. Section 4: Select “2012” as the year. Everything else should be set to the “All” option.
  5. Section 6: Select Calculate Rates Per “1000”
  6. Click one of the “Send” buttons.

4. What state, or states, had higher fertility than South Dakota in each of the years 2011 and 2012?

- **On the Request page:**
  1. Section 1: Group the results by “State” in the first box and “Year” in the second box. Make sure that the box for “Fertility Rate” is checked.
  2. Section 2: Select “All” for states.
  3. Section 3: Make sure that the “All” option is selected for each item.
  4. Section 4: Select “2011” and “2012” for Year using control-click to select more than one year. Everything else should be set to the “All” option.
  5. Section 6: Select Calculate Rates Per “1000”
  6. Click one of the “Send” buttons.
  7. On the results page, click on the “Quick Options” link and select “Hide Totals Rows.”
  8. Click on the down arrow next to “Fertility Rate Per 1000” to sort the rows in order of magnitude.

If you are doing this for college credit…

- If you have saved or recorded all of the results then you have almost finished your assignment for this workshop. Using these results, you need write brief answers to the four questions and email them to Mike McCurry at:
- Michael.McCurry@sdstate.edu

The End