



GeoLytics

Estimates & Projections CensusCD Products USER GUIDE

Estimates, Consumer Expenditures, and Profiles

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A. Installation

During Set-Up the disk will install over from 250 Mgs up to 1+ Gigs of data on your hard drive. Before you install make sure that the drive you are installing the disk onto has enough free space.

1. Insert the **Disk** into your DVD drive.
2. Click the **Start** button on the taskbar and choose **Run** from the Start menu. Type **D:/setup.exe** (assuming D is the letter of your DVD drive).

OR

Click on the “My Computer” Icon; choose the DVD Drive (often D:). Click on the “Set Up” Icon (it looks like a blue computer)

3. Click **OK**.
4. Follow the instructions on the screen. **Preferably, use the default settings. All path directories and folders must not contain spaces.** If you don't have enough free space on the default drive then choose another subdirectory with space and create a subdirectory.
5. When prompted, enter you Name, Organization, and Serial Number. You **MUST** enter a name and organization. Your serial number can be found on your invoice (it is the **SO** number at the bottom of the page). Type the serial number with all of the dashes and punctuation. Pay careful attention to upper and lower case letters. It is very important to enter it exactly as it is written.
6. After the installation is complete, you can start your estimates DVD product by choosing Programs on the Start menu and then choosing the estimates product that you installed.

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You must agree to the End User License Agreement (EULA) for the estimates DVD during Setup or the product will not install and you will have no right to use the product or resulting data. A copy of the EULA can be found under the Help menu. You can also view a copy of the EULA at <http://www.geolytics.com/Licensing.asp>.

B. Introduction

This guide is intended to give an orientation and explanation about the software and variables. The on-line help section has more detailed definitions of data terminology and technical documentation. There is also a complete description of the methodology in the Help section of the disk and on the Geolytics website at www.Geolytics.com. A specific help section to explain the map viewer is available from both the main help contents and the Map Viewer itself.

C. Five Steps to Producing Files and Maps

<u>Request</u>
conexp.req
<u>Area</u>
States, 3
<u>SubArea</u>
ZIP
<u>Counts</u>
13 selected
<u>Run</u>
DBF + Map
<u>View</u>
<u>Config</u>
<u>Help</u>

1. Name your **Request** (file) – where to save the report (data files and maps) you are about to generate
2. Select the **Area** (If you think of a map this will be the entire area covered)
3. Select the **SubArea** (If you think of a spreadsheet this is the individual lines of data) – how is the area broken up
4. Select the **Counts** (variables) that you want to see for these areas (in a spreadsheet the columns of data)
5. **Run** the Report. Report formats are Summary, Dbase File, ASCII, or Maps.

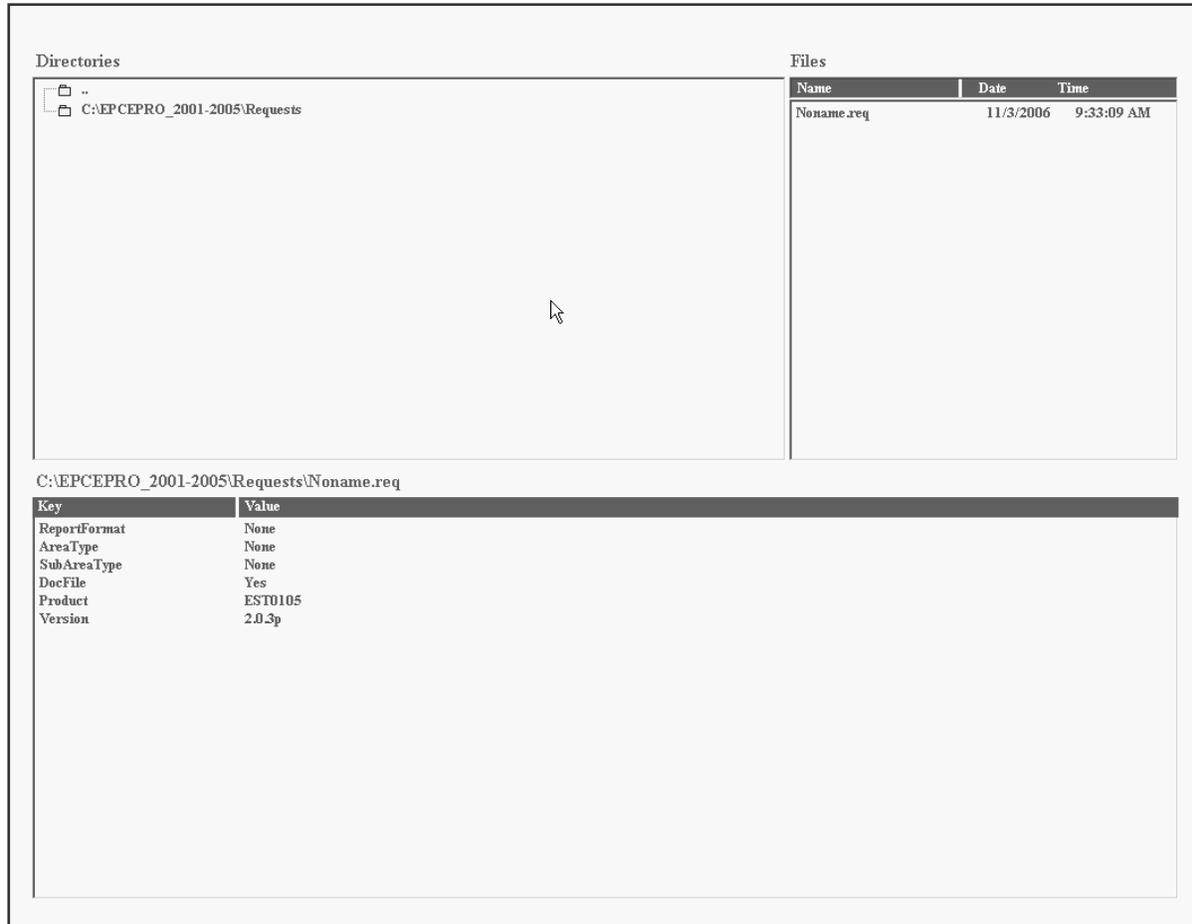
1. Name your File (using a REQUEST file)

The interface creates request files to describe to the report engine what kind of a report should be generated. A request file stores all the information about the report format, areas to be covered by the report, subarea to break it out into, and counts to be included with the report. If you do not change it, the default name is Noname.req. Before the report is generated, the current request is automatically saved to a hard disk directory reserved for this purpose. If you use the default request Noname.req, its previous content is overwritten.

Click on the “Request” on the left and a window will open. It includes the directory box on the left, the file box on the right, and the request file content box below. The current request name is displayed below the Request screen button. Use the directory box to navigate through the hard disk directory structure. Use the file box to select a request file. Use the

content box to view the request file content. Double-clicking a file name is the same as clicking the Ok command. Clicking a selected file name opens it for renaming.

Sample Request File Directory Screen



Creating a new request.

In order to create a new request, click the **New** button. A new file name in New_0.req format will be created. The next one will be New_1.req etc so that the new name will be unique for the request directory.

Saving a request.

Click the Save button to save the current request under the current name.

Opening an existing request.

Click a name in the file box. It will become selected. Click the **Open** command. The file content is displayed in the content box and it becomes your current request.

Re-naming and deleting requests.

Select a file name in the file box and click it again. It opens for renaming. Type a new name preserving the .req extension and press Enter key. Press Esc key to abandon the change.

Select a file name and press the **Delete** command to delete a file.

2. Select the Area

Geographic areas available include:



When you select a geographical area the window appears so you can select which areas you want to use. For example if you select Counties then the pull down window will show you the states, when you select the state(s) the counties in those states will appear in the Counties drop down box. Then select the county(ies) you want.

You can **select up to 240 areas** of the same type in one pass. If you need more than 240 areas you should probably select a larger “area” to begin with. For example, to select all of the zip codes in a state – the area is the State – not ZIP. Then select ZIP as the subarea.

To find a specific area you can select the type of area, for example Counties, and then select “SEARCH” on the far right side. Then you can key in the name of the county that you are looking for and it will give you back all of the counties with that name.

3. Select the Subarea – you must select a subarea

The subarea is the geography that you want the area to be sub-divided. There are six choices Nation, States, Counties, Tracts, Block Groups and Zip Codes. So for example, you can run all of the Tracts in the state or all the Block Groups in a county. In these examples the subarea is the Tract and the Block Groups.

4. Select the Counts (Variables)

Specify the counts, or variables, that you want to include in your file. In other words, “what demographics or variables are you interested in?” Choices vary depending on the product you choose – i.e. basic vs. professional.

The eight selections below are for the Professional estimates products. The basic products will only have Geography and Summary.



To select variables from multiple Groups – first select one Group, the variables in the Group will be shown in the Counts window. Select the Counts you want (they will appear in the selected counts window on the right side). Then click on the second Group and the new set of counts will appear, select the counts that you want from this category. You will note that though the counts screen changes the “selected counts” still remembers your original selections.

Variable Codes – Variables have different codes for each year. Each variable begins with the year code – “f” for 2001, “g” for 2002, “h” for 2003, “i” for 2004, and “j” for 2005. The current year variables begin with “e” and the 5-year projection variables begin with “p”.

Geography – these are geographic references that let you match your subarea geography to other geographies. Thus, if you are running block group data you can see the county or state that the block group is in by selecting it as a geographic identifier. These are useful identifiers for sorting data at later phases of analysis. It also includes Latitude and Longitude of the center of the geography. Land area in square miles is also included in this section

Summary – these are the variables included in the basic population demographics and are a Summary of the further breakouts that come in the categories below. Variables include the population broken out by Age, Race, Hispanic, Gender, and Race by Gender. Then Households and Families are included. The Housing data includes owners, renters and vacant units. And then there are a series of Income variables for the total population.

Population – these variables are the cross-tabulations of sex by age by race and includes sex by age by Hispanic.

Households – these counts include data on households, such as size and structure of the household. It also includes race and age for the head of household.

Housing – these counts include the number of rooms as a total and broken out by tenure (owner vs. renter), and vacancies.

Income – these include income broken into buckets (i.e. under \$10,000, \$10,000-\$14,999 etc), median income (totaled, broken out by race, and by age of the head of household), and aggregate income, (totaled, broken out by race, and by age of head of household).

Expenditures – this includes about 100 Expenditures for each year. These figures are in dollars per household. A cautionary note, many of the variables are subcategories of each other. For example the category “Meat, Poultry, Fish and Eggs” is then broken out into 6 subcategories: beef, pork, other meats, poultry, fish and seafood, and eggs.

Profiles – this includes almost 50 different profiles (affluence by race, long term residents, recent movers, etc). The scale on the Profiles is from 0-1000. Where the national average is 100. The weighting of the profiles is based on the ratio of that rate to the national rate – so it is not a linear relationship. If a profile is 120 it means that it is 20% more than the national average. Likewise if they are 80 it means that they are 20% less than the national average. One should not add these profiles to obtain an average because if Area 1 is half as likely as the national average and Area 2 is twice as likely then Area 1 = 50 and Area 2 = 200 so the average would be $(50+200) = 250 / 2 = 125$, which would indicate a 25% increase over the national average. If instead you multiply them as 0.50 and 2.00 then you would get 1.00. But this would assume that the areas were equal in size if they aren't than in fact you really should weight them by size before trying to average them.

To select your counts:

1. Select the **Group** you want from the icons across the top of the page.
2. The available variables for that Group will be listed in the window that opens. Select the variables you want. When you select a variable you will see it appear under “Selection”.
3. Select **OK** from the far right when you are done.

Counts For Selected Tables	
Key	Value
fPOP	POP: Total Population 2001
fWAT	POP: White Alone, total 2001
fWAM	POP: White Alone, total males 2001
fWAM0_4	POP: White Alone, males 0-4 years old 2001
fWAM5_9	POP: White Alone, males 5-9 years old 2001
fWAM10_14	POP: White Alone, males 10-14 years old 2001
fWAM15_19	POP: White Alone, males 15-19 years old 2001
fWAM20_24	POP: White Alone, males 20-24 years old 2001
fWAM25_29	POP: White Alone, males 25-29 years old 2001
fWAM30_34	POP: White Alone, males 30-34 years old 2001
fWAM35_39	POP: White Alone, males 35-39 years old 2001
fWAM40_44	POP: White Alone, males 40-44 years old 2001
fWAM45_49	POP: White Alone, males 45-49 years old 2001
fWAM50_54	POP: White Alone, males 50-54 years old 2001
fWAM55_59	POP: White Alone, males 55-59 years old 2001
fWAM60_64	POP: White Alone, males 60-64 years old 2001
fWAM65_69	POP: White Alone, males 65-69 years old 2001
fWAM70_74	POP: White Alone, males 70-74 years old 2001
fWAM75_79	POP: White Alone, males 75-79 years old 2001
fWAM80_84	POP: White Alone, males 80-84 years old 2001
fWAM85P	POP: White Alone, males 85+ years old 2001
fWAF	POP: White Alone, total females 2001
fWAF0_4	POP: White Alone, females 0-4 years old 2001
fWAF5_9	POP: White Alone, females 5-9 years old 2001
fWAF10_14	POP: White Alone, females 10-14 years old 2001
fWAF15_19	POP: White Alone, females 15-19 years old 2001
fWAF20_24	POP: White Alone, females 20-24 years old 2001
fWAF25_29	POP: White Alone, females 25-29 years old 2001
fWAF30_34	POP: White Alone, females 30-34 years old 2001
fWAF35_39	POP: White Alone, females 35-39 years old 2001
fWAF40_44	POP: White Alone, females 40-44 years old 2001
fWAF45_49	POP: White Alone, females 45-49 years old 2001
fWAF50_54	POP: White Alone, females 50-54 years old 2001
fWAF55_59	POP: White Alone, females 55-59 years old 2001
fWAF60_64	POP: White Alone, females 60-64 years old 2001
fWAF65_69	POP: White Alone, females 65-69 years old 2001
fWAF70_74	POP: White Alone, females 70-74 years old 2001
fWAF75_79	POP: White Alone, females 75-79 years old 2001
fWAF80_84	POP: White Alone, females 80-84 years old 2001

5. Run your Report

From “Run”, select Summary, CSV or TSV, DBF, or DBF + Map. When you click on one of these files and hit OK, it will run and automatically save your file.

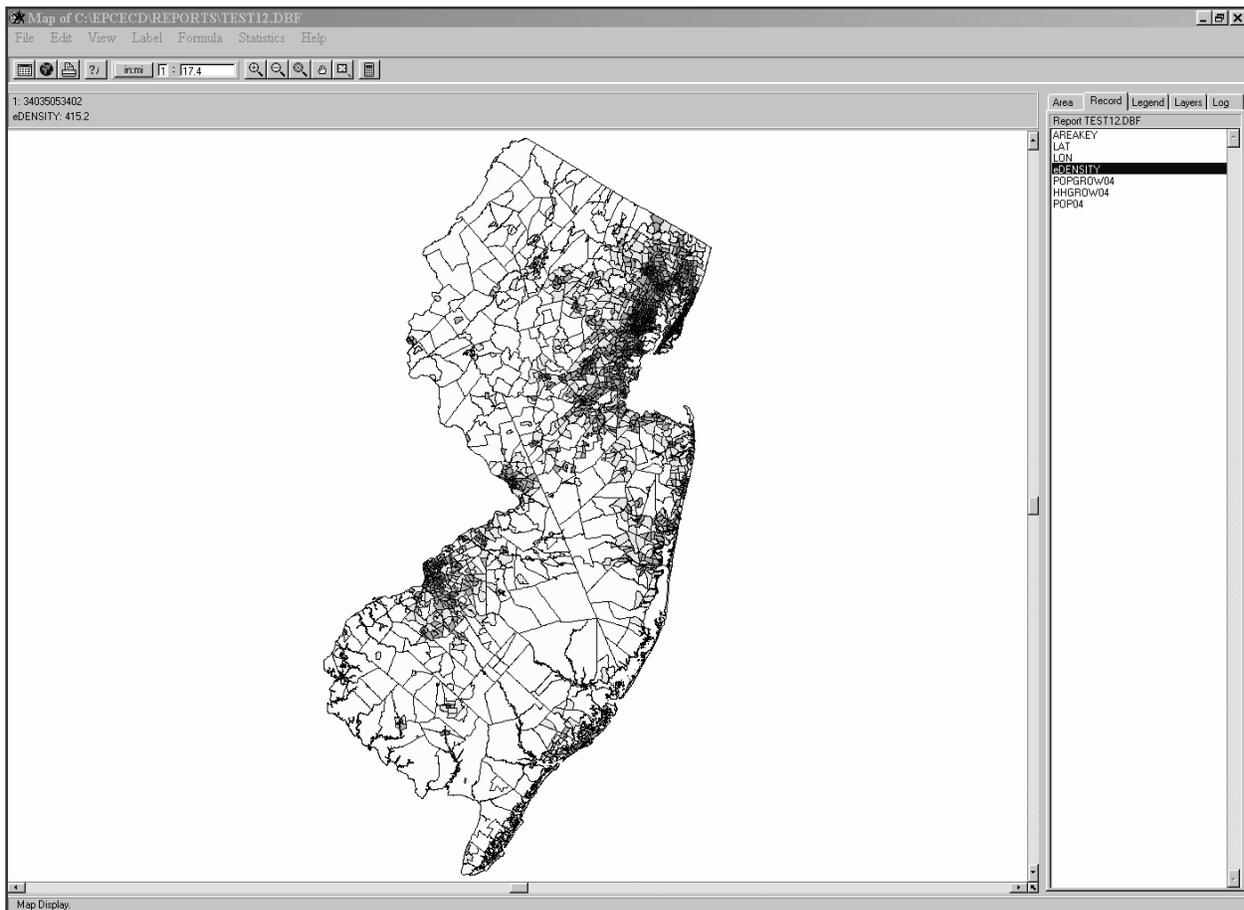
Summary – a sum for the area (without listing subarea numbers) for the counts selected.

CSV and TSV files – these are ASCII files (.csv are comma separated and .tsv are tab separated files) and are available with or without headers. Files will have a .csv or a .tsv extension and can be imported into statistical or spreadsheet packages.

DBF – a dBase-compatible data file with a .dbf extension that easily imports into statistical and spreadsheet packages.

DBF + Map – this produces a map that you can see and manipulate with our map viewer. Additionally, the polygons can be exported as either shape or mid/mif files and will have an accompanying .dbf file with the data. You can import these files into ArcView, MapInfo, and other mapping software. When the map has run you will have an image like the one below.

Example of a Map Viewer

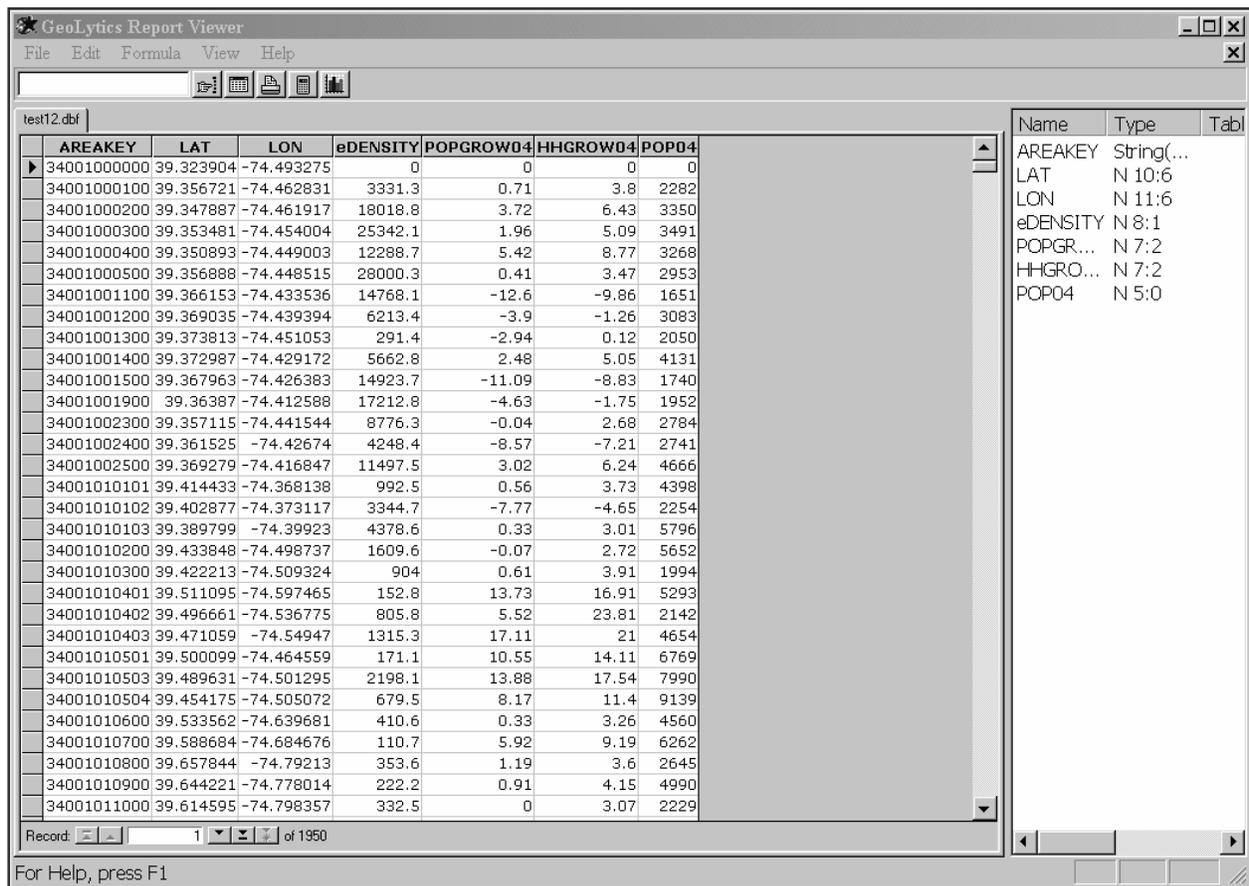


Your output file is in the **REPORT** subdirectory that you installed the product under and has the file name that you selected when you named the request file. If you didn't save the request file then the default is "noname".

Recommendation: when running a dbf or ASCII report, first run and print a summary report so that you can view the full variable name and code as a reference when looking at the data.

Finally, you can use the file data as in input to other systems like **statistical** (e.g. SAS, SPSS), **database** (e.g. Access, Oracle), **spreadsheet** (e.g. Excel, 1-2-3), or **mapping** (e.g. Arc View, MapInfo) packages.

Example of a Report Viewer

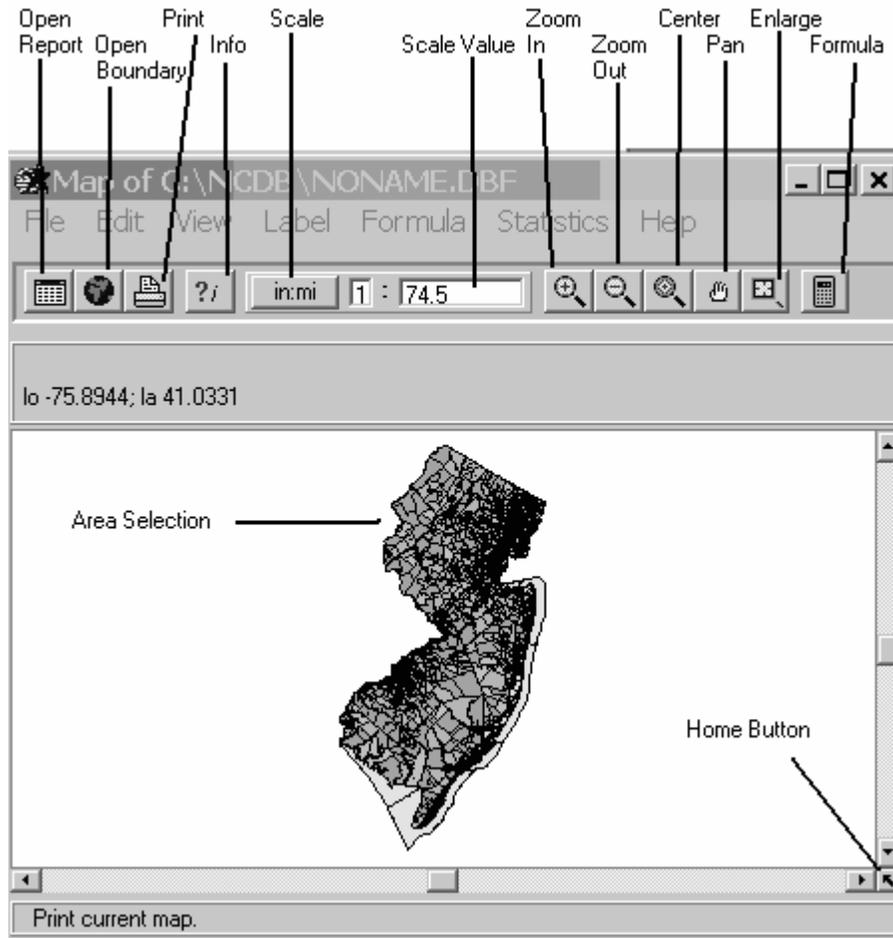


6. Saving your data

SAVING your report – this is **automatically done**. Your output file can be found under the subdirectory and file name that you selected when you named the request file. If you didn't save the request file then your output file will be found under the subdirectory you installed the product on with the name "noname".

D. Using the Map Viewer

When you create a map with an estimates DVD product, you can use the map viewer to view and change data themes, ranges, and color schemes. The map viewer allows you to print your map as well as export boundaries and data in desktop mapping formats (ArcGIS or MapInfo).



To print it use the icon of the printer at the top of the page or pull down the “File” menu and select print. To export ArcGIS / ArcView shape files or MapInfo mid/mif files, go to “File” at the top left-hand of the menu and select “Export”, then select “ArcView’s Shape” or “MapInfo’s MIF”. Your exported shape file or mid/mif file will be located in the subdirectory where you installed the estimates product, along with the associated dbf file.

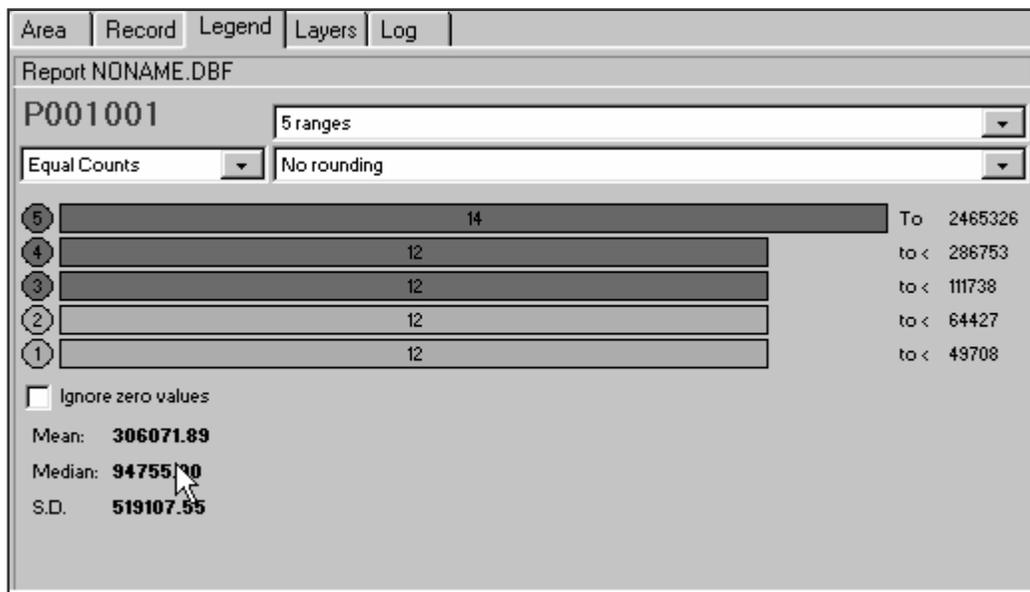
To save the map as a bitmap (.bmp) file, which can be imported or pasted into most word processing, spreadsheet, and graphics software packages, go to the “File” and select “Save as Bitmap”.

The map viewer also provides a variable calculator  for creating and displaying virtual variables based on the data in your file. So you can do mapping analysis with an estimates DVD product if you do not already have a mapping software package. These calculated fields are held in a temp file but cannot be exported. Recommendation: take a bitmap image of the map so that you can capture the image.

Creating a map automatically generates a dBase file, which can be exported to use with other software including statistical (SAS, SPASS), database (Access, Oracle), and spreadsheet (Excel, 1-2-3). A specific help section for the map viewer is available from the main help contents and in the map viewer itself.

To change the scale of the map you can either use the icons at the top, which are magnifying glasses with the “+” and “-“ in them to make it bigger or smaller. There is also a scale that shows the ratio of inches: miles. You can change this ratio to enlarge or decrease the size of the map.

There are lots of ways to manipulate the map that you are looking at. On the side of the map is a series of tabs (Area, Record, Legend, Layers, Log).



- 1) Area – Lists each area that is mapped. If you click on an area listed here it will hash out the appropriate location on the map.
- 2) Record – Lists the counts in a file, change the count being mapped by clicking on a different count. If you left click on a variable in this list you can select it to use as a label.
- 3) Legend – Choose the ranges and colors for your map. It also shows the mean, median, and standard deviation (see above). With this tab you can make the following changes:
 - a) Ranges – instead of having your data broken into 5 ranges you can pull down the arrow at 5 Ranges and increase or decrease the number.
 - b) Equal Counts – each range will have the same number of occurrences in the range. You can change this to Equal Range. The vales of each range will be the same from 0 to the top number, above this would be 2,465,326 so instead of getting 12 tracts in each range the ranges would be divided into 5 groups 0-493,065, then 493,066-986,130 etc. You can

also customize the ranges. For example if you wanted to see 0-15, 16-22, 23-54 you could change them. Select Custom from the pull-down arrow. Then click on the number after to lowest “to <” in the example above it is 49708. Instead type in the 15. Then go up to the next number above it and type in 22, etc.

- c) Change the colors of the ranges. If you click on the colored circle to the left of the bar a window will open with a palette of colors to choose from.
- 4) Layers – Control the border thickness and color, add labels, and add internal or external boundary map:
 - a) Add a layer – click on the blue “+” at the top of the tab. A window will open over the map with the geographies that are available to be layered over your map. Select the appropriate one and click ok. A status bar will spin and then you will have the new layer over your existing map.
 - b) Change the thickness of the new layer – sometimes when you add a layer it is hard to see the boundaries, so you can increase the thickness for better viewing. At the bottom of this tab is a section titled “Properties of Layer 1”. There is a box labeled “Thick” with a default 1. Change it to a 2 or 3 for a thicker line. You can also change the color from the default black to another color for the boundary lines of this new layer (though black is usually the easiest to see).
 - c) Add labels to the map – in the “Properties” section. Click on the “open book” icon that is labeled “More”. This will open a window with the options for the labels. You can select the “Style”, “Frequency (always, never, when it fits)” and “Font”.
 - 5) Log – Records what has been mapped and how long it took to run.

E. Frequently Asked Questions

Why isn't my CD working?!???

First, take a deep breath. Read the bottom left-hand line on the screen in blue, it will often prompt you for the steps that are missing from your report request. If it says you can now run a report then check: did you install the software with the correct serial number? Is the correct disk in the computer when you try to run a report?

How do I save a report that I just ran?

When you run a report it is automatically saved to your computer. When you save your request you name the file and set the path. If you don't save your request, it is given the default name of “Noname” and it's path defaults to the directory and subdirectory where you installed your product.

How do I find a report that I just ran?

When you save your request you name the file and set the path. If you don't save your request, it is given the default name of “noname” and it's path defaults to the path that you installed the program under. The list of default path names is at the end of this section. Additionally, the path name is recorded in the blue bar along the top of your screen.

How do I select a gray scale for my map?

When you are looking at a map on the screen and you want to change it to a gray scale, simply go to “View” (one of the choices along the top bar) and using the drop down menu select gray scale. To have the image revert back to multi-color, go to View and un-select gray scale.

How do I change the colors of the map?

When looking at the map, to the right is a column heading with 5 tabs (area, record, legend, layers, log). Select the Legend tab. You will then see the ranges and the color bars. If you select the colored circle next to each range and click on it a palette with lots of color choices will appear, make your selection and click OK. To save the map with these colors go to Statistics and select Save Colors.

How do I change the number of ranges of my data shown on the map?

When looking at the map, to the right is a column heading with 5 tabs (area, record, legend, layers, log). Select the Legend tab. You will then see 3 fields: 5 ranges, equal ranges, and no rounding. Select 5 ranges. This will have a pull down menu where you can select the number of ranges that you want to see your data broken into. Your map will be updated instantly.

How do I find the mean, median and standard deviation of my data?

When looking at the map, to the right is a column heading with 5 tabs (area, record, legend, layers, log). Select the Legend tab. You will then see ranges in colored bars, under that are the mean, median and standard deviation.

How do I label the different areas on my map?

When looking at the map, to the right is a column heading with 5 tabs (area, record, legend, layers, log). Select the Layers tab. The bottom line has 2 colored squares (color and borderclr) between them is an icon that looks like a book and is labeled “More”. Select More. A new window will pop up and you can then select the second field. It defaults to Never (show labels). If you select “When Possible” it will label only those areas that are not too close to each other so that you can see the label easily. If you select “Every Object” it will label all areas regardless of whether the labels are superimposed upon each other.

How do I add layers on the map viewer?

When looking at the map, to the right is a column heading with 5 tabs (area, record, legend, layers, log). Select the Layers tab. Click on the “+” sign under the tabs. This will bring up the “Add a new Layer...” box. Here you can click on the layer you wish to add. For example, you have tract level data selected as the subarea and want to overlay the counties as a layer. After you add a layer, you can highlight the layer and change the thickness from “1” to a “2” or “3”. This will add more contrast and definition to your new layer, making it easier for viewing.

Looking at the map, how do I tell which variable is which?

There are two ways to do this. Either you can open Word and go to the document that is affiliated with the map that you just produced and print it out. This will indicate which variables are included in the correct order.

Alternatively, the name of the variables is listed to the right of the map (under the 5 tabs) under “Record”. If you can’t see the whole name you can move the map viewer screen. If you place

your cursor on the column between the map and the column with the counts names you will get the parallel lines sign and you can then drag the column bar over. This will give more screen space to the counts names. However, it will also make your map smaller.

F. Help

GeoLytics' Estimates and Projections products contain extensive online help. From the main menu, select "Help", and then select "Contents". Also, on the bottom bar of your screen (in blue) you will receive "automatic advice" for "next step" prompting.

The on-line help contains additional information about selecting, mapping, and exporting geographic data and boundaries. A specific help section to explain the map viewer is available from both the main help contents and the Map Viewer itself.

G. Discussion of Zip Codes

Zip code definitions come from at least two different federal agencies and they don't always line up perfectly. The data in this product defines zip codes using the US Postal Service (USPS) definitions. But the geographic boundaries are derived from the Census Bureau's (USCB) Tiger files and are officially Zip Code Tabulation Areas (ZCTA). Most of the time these two are relatively in accord, but there are some differences. For example the USPS has zip codes for PO Boxes. The USCB does not – no one "lives there" though many people receive mail there and it is an official mailing address. Also, the USCB seeks to cover the entire country, so for example it will assign NYC's Central Park or Yosemite a zip code. The USPS may not include these areas because in fact they are not official mailing addresses thus they will be holes because there is no data for them.

H. Contacting GeoLytics

To contact GeoLytics about technical support/sales regarding the product functioning

Email:	support@GeoLytics.com
Phone:	732-651-2000
Web Site:	www.Geolytics.com
Fax:	732-651-2721
Mail:	GeoLytics, Inc. P.O. Box 10 East Brunswick, NJ 08816