

Tutorial 4(b): Demographic Analysis via System

Introduction

Demographic analysis is a key component of feasibility analysis and market studies. There are a number of sources that can be used in such analysis ranging from official census data which are publicly available to proprietary data which are available on a subscription basis from a number of vendors. Regardless of the source of the processed data, the raw inputs are derived from the 10 year census compilation along with interim updates and other special data collection efforts undertaken by the federal government.

The data available to demographic vendors concludes traditional demographics such as age, income, household size, education, ethnicity, and household status. In addition, depending on the source of the data other information may be compiled about commuting patterns, housing values, housing composition, and household wealth. The data from the Department of Census are available in 10 year increments, while data from vendors may include a continuous time stream of annual data as well as forecast data for various items. The forecast models are used by lenders to project data elements are proprietary and subject to extensive analysis and market testing. Some vendors will be stronger in markets that are more predictable in terms of growth and expansion, while others may be better in rapidly growing markets which are inherently more difficult to model.

The data from the various sources are available at different levels of geography including block data, census tracts, zip codes, municipalities, urbanized areas, regions, and states. The underlying technology that is used to aggregate data into these various geographies is some form of geographic information system (GIS). GIS models come in various forms and have different engines, but surely can't tell you that they are used to conduct spatial analysis of underlying data. Once the data are geocoded and uniquely identified in terms of latitudinal and longitudinal coordinates, precise algorithms are used to combine or aggregate data to the specified geographies.

Once a particular site of interest has been identified and geocoded, most of the commercial GIS packages allow the analyst to generate demographic profiles using ring studies that emanate out fixed distances or increments from the subject property. Such common increments include 3, 5, 7, or 10 mile radii. Once the various circles have been delineated, a special algorithm is used to aggregate the data for the various geographies. In addition to the specified geographies, some of the more advanced GIS packages allow users to develop customized trade areas or areas of interest. Other vendors combined data from transportation studies to automatically generate drive time boundaries around a specific site.

The objective of this tutorial is to provide some guidance for students using the STDBonline demographic package licensed by the real estate studies program at the University of Washington. Users will have to login with their own username and IDs. Once logged on, students are encouraged to follow this tutorial or to use the help files and other tutorials are available directly through the vendor. This tutorial and the licensing information has been provided to students is for academic purposes only. Users desiring to use the service on commercial basis should contact the vendor for their own licenses. Students who have additional questions should contact Prof. Jim DeLisle at jdelsile@u.washington.edu

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Part 1 Logging In and Opening Application

Logging in: User Name/PW Required

To start, go to the STDB Online website at <http://www.stdbonline.com>. Once you access the site, you will need to enter a username and password to gain access to the demographics application. The username you will be using is XXXX and the password is YYYY (insert your own), these input boxes can be found at the top of the page.

Once you have logged in you will see a member services section located in the top left corner of the page. Under which, will be a link the ESRI Site Analysis, which is the application designed to capture demographic data of any area, which you wish to capture.

The screenshot displays the STDBonline.com website. At the top, the logo reads "Power Up with STDBonline.com your Site To Do Business". Below the logo is a navigation bar with tabs for "STDB HOME", "TRAINING", "BUSINESS TOOLS", "CCIM INSTITUTE", and "SPECIAL OFFERS". A date and user information bar shows "Date: November 09, 2008 - Logged in as: University of Washington Li60 - Log Out" and links for "news", "financial", "sports", "help", and "home".

On the left side, there is a "MEMBER SERVICES" section with a list of links: "ESRI Site Analysis", "QUICK Maps", "QUICK Demographics", and "Map Library". Below this is a "MORE SERVICES" section with links: "Fabulous Prints", "expresscopy.com", "REI WISE login", "Find a CCIM Pro", "CCIM", "CCIM.NET Email", "ITQ", and "Check Your Email". At the bottom left is a "PREMIUM SERVICES \$" section with links: "Environmental", "RE BackOffice", "LifeSteps Journal", "Financial Statements", "PPR", "New Plans", and "Pictometry".

The main content area features a "Take a look at our new lineup of Premier Products & Services" section with a "CLICK TO LEARN MORE" link. Below this are several product logos: "ANGELVISION", "RE BackOffice Real Estate. Simplified.", "Environmental Risk Information for Informed Real Estate Decisions", "REALHOUND! Commercial Real Estate Software", "expresscopy.com", "REI Wise", "FABulousPRINTS", "Retail Lease Trac", "Lead-Trac.com", and "VEXRAY".

On the right side, there is a "2008 2013 Population Trend Maps Now Available!" advertisement with contact information for Ashley Sloan (ashley@stdbonline.com, 469-232-2606). Below it is another advertisement for "New Low Prices Starting at just \$14.95" for FABulousPRINTS, featuring a woman in a red shirt holding a product.

At the bottom of the page, there is a "Member News" section and a footer with navigation links: "STDB-HOME | CCIM | BUSINESS TOOLS | TRAINING | STDB STAFF CONTACTS" and "news | financial | sports | help | FAQs | Terms Of Service".

Initial Map Screen

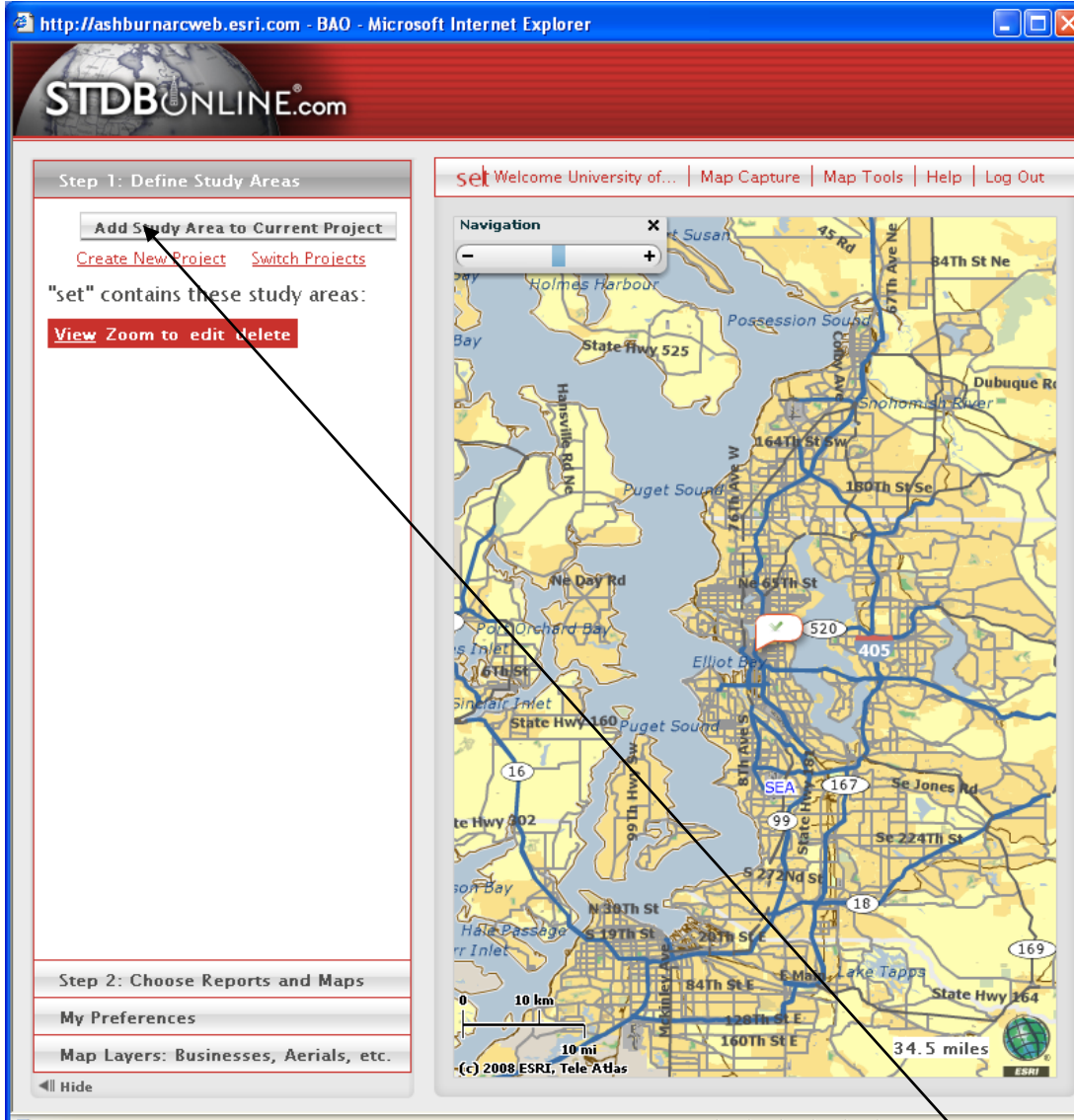
After clicking on the link, the application will launch via a popup window. It should take a little bit to load, but not longer than 20 seconds. If it does not simply refresh the page and this should correct the problem. You should be directed to the screen shown below.



Step 1: Creating a Project and Defining a Study Area

Finding a Site

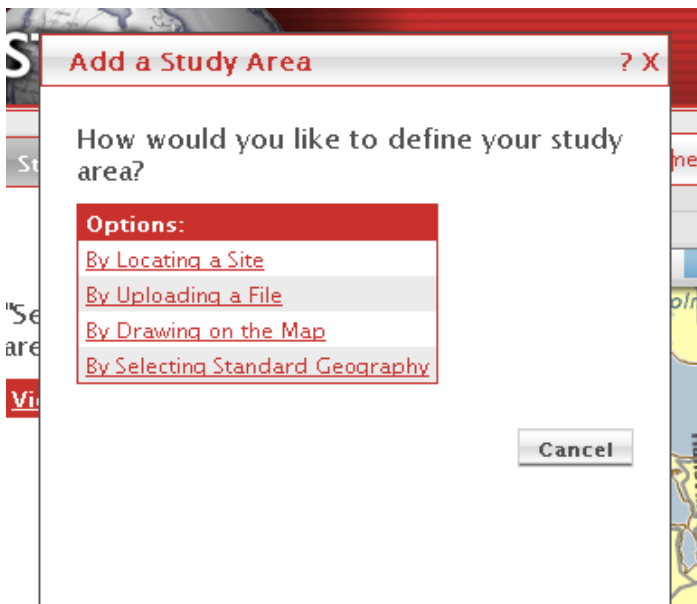
For this tutorial we will be using Seattle as our area of interest. In order to zoom into the city of Seattle, simply type Seattle into the Find box located directly above the map. This should give you a map of Seattle (as shown below) that we will work with to set up our boundaries and generate our demographic reports.



Create a New Project

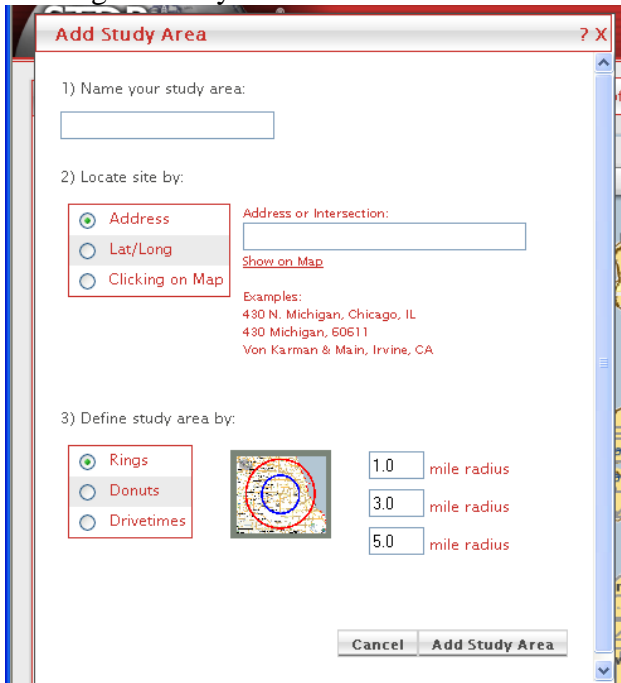
Overview

The next step is to create a new project. To do this, click on Create New Project. A pop up window will appear asking you for a project name. Enter Seattle and click Create. Another popup (as shown below) window will now appear asking you to define the study area. You are given 4 options to do this. By Locating a Site, By Uploading a File, By Drawing on the Map, and By Selecting Standard Geography. For this Tutorial we will walk through all of these except for By Uploading a File.



By Locating a Site

After selecting this option, another pop up window will open (as seen below) and there will be 3 steps to defining the study area.

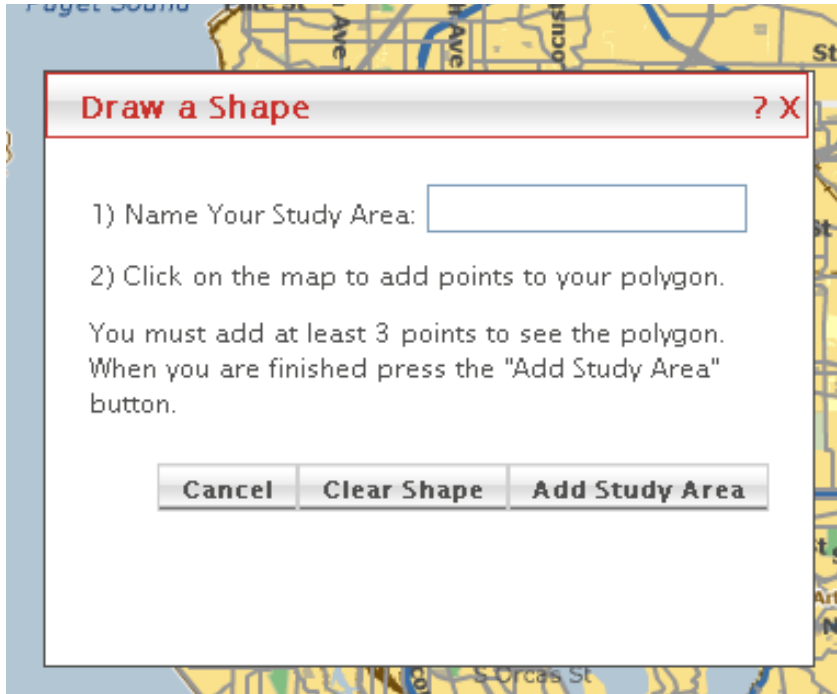


Creating a Study Area

First off, you will want to name your study area. Next, you have three options for locating a site around which to define your study area. You can either enter the address, the Latitude and Longitude for the site, or by simply clicking on the map. The easiest and best option will generally be to enter the address of your site. Finally, you will want to define the study area. Again you are given three options to do this. There is no correct study area to choose. Thus, use your own discretion when deciding your study area keeping in mind the project you are working on and the objectives you want to achieve. Please keep in mind that if your site is located close to a body of water you may want to refrain from using this option to define a study area and one of the two options that will be presented below might be a better fit.

By Drawing on the Map

This is an effective tool when you know the precise area that you want demographic data on or when you site is located near water as it allows you to define the exact area by clicking points on the map to create specific boundaries. After selecting this option you will see the following popup menu.



Once Again you will be prompted to name the study area.

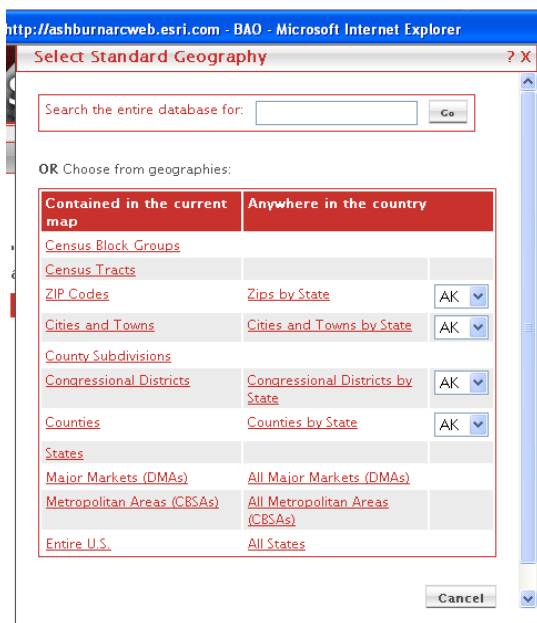
Tutorial 4(b): Demographics via STDBonline

Then all you have to do is click on the map and set the boundaries of your study area and click, Add Study Area. A sample of this can be seen below. Here the study area is the University of Washington campus.



By Selecting Standard Geography

Once you have selected this option you will get a popup menu as seen below.

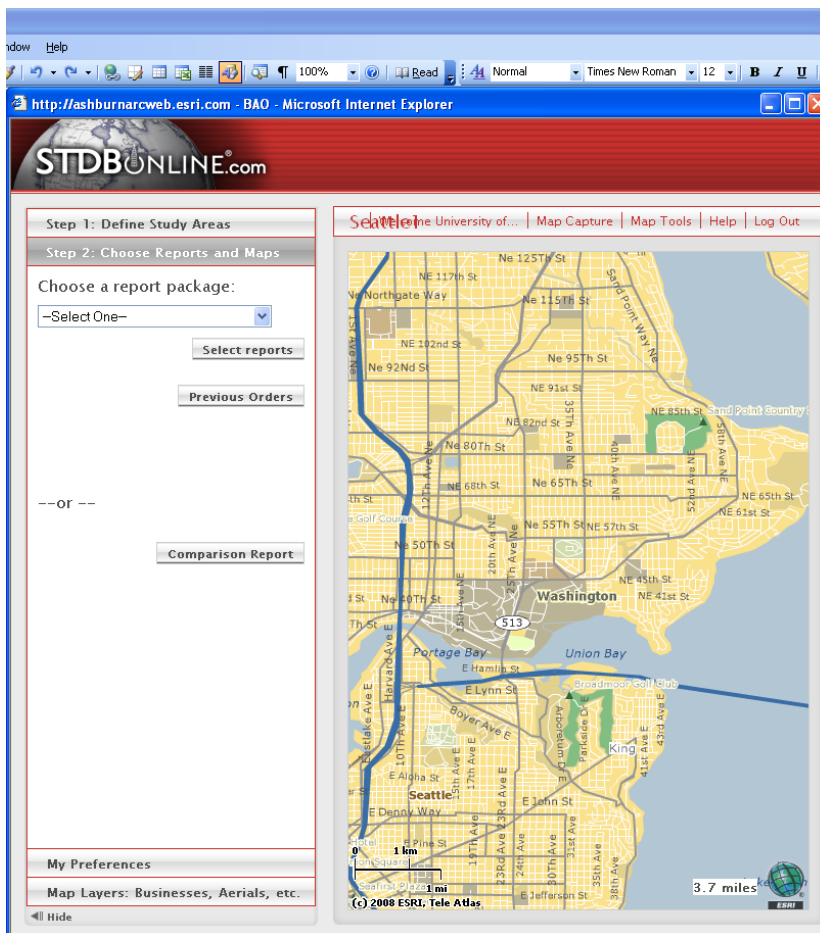


Tutorial 4(b): Demographics via STDBonline

Just select the option that you want in determining your study area. Once you have selected the option you want you will be asked to name the study area and then pick the study area that you want whether it be a specific city, or zip code, or other option.

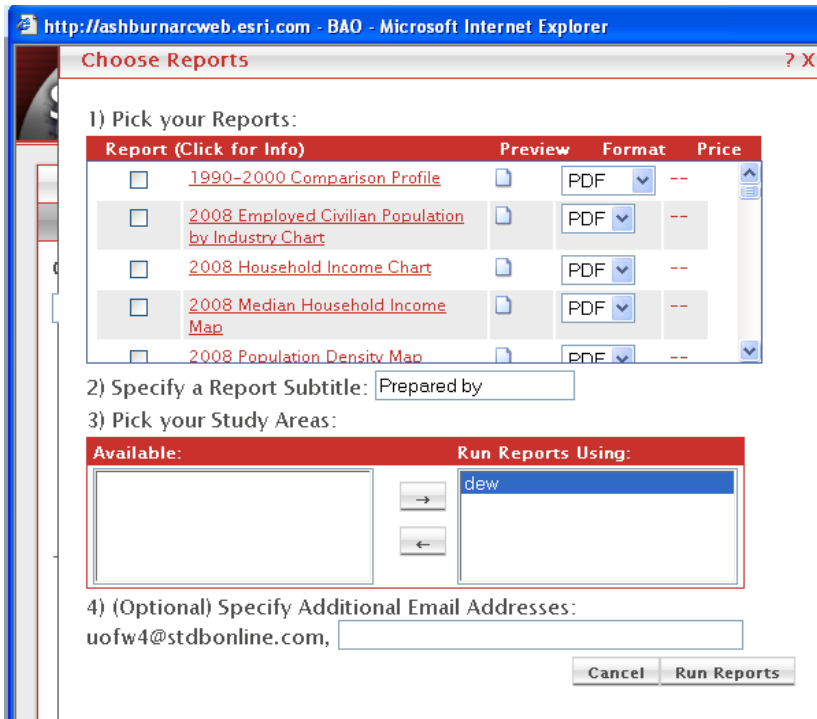
Reports and Maps

Now that you have the study area defined, you can gather the demographic and map data that you want for your defined areas. To start click on Step2: Choose Reports and Maps. This will open the window for selecting the reports and maps you wish to use and analyze. First you are going to want to click on the – Select One- drop down menu. Here you are presented with a variety of report packages that are offered. Choose the one that you wish to use and then click on the Select reports button. This allows you to choose the specific reports you want from the different packages. Use your discretion in picking the reports that will be beneficial to your sites and objectives.

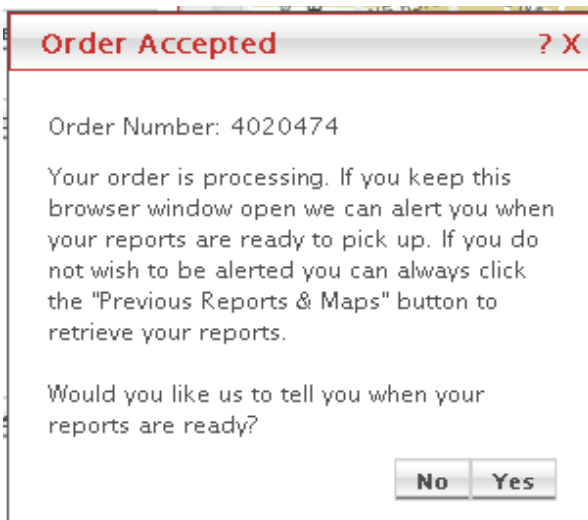


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You should see a popup window resembling the one below. This allows you to choose the specific reports you want from the different packages. Use your discretion in picking the reports that will be beneficial to your sites and objectives. Once you have done this select the Run Reports button.



You will now see a popup window that confirms your report order. Select yes and be sure to leave the window open. This will take a few moments so feel free to do something else while you are waiting. Once your order has been completed it will let you know by a pop up window that says you reports are ready would you like to view them again select yes.



Tutorial 4(b): Demographics via STDBonline

Another pop up window will appear with hyperlinks to your reports simply click on them to view them or you can zip them all into a file or upload them all into a pdf document. The choice is yours.

Finally another option in generating a report is to run a comparison report to do this you will need to have between 2 to 5 defined study areas. To do this select the comparison reports button. It will now prompt you for which study areas you would like to compare. Select the study areas you want a click Get Report. This will open an excel file that compares the study areas using the main major demographic data such as Population, Density, Median Age Income, etc.

Addendum: Examples of Reports



Demographic and Income Profile

Prepared by

35thand80th

Study Area: Custom Shapes

Summary	2000	2008	2013
Population	7,392	7,479	7,676
Households	3,200	3,286	3,376
Families	1,883	1,895	1,929
Average Household Size	2.28	2.26	2.25
Owner Occupied HUs	2,329	2,495	2,526
Renter Occupied HUs	871	790	851
Median Age	39.5	41.9	43.9
Trends: 2008-2013 Annual Rate	Area	State	National
Population	0.52%	1.55%	1.23%
Households	0.54%	1.57%	1.26%
Families	0.36%	1.45%	1.05%
Owner HHs	0.25%	1.34%	1.07%
Median Household Income	3.96%	3.01%	3.19%

Households by Income	2000		2008		2013	
	Number	Percent	Number	Percent	Number	Percent
< \$15,000	261	8.1%	112	3.4%	92	2.7%
\$15,000 - \$24,999	227	7.0%	209	6.4%	155	4.6%
\$25,000 - \$34,999	336	10.4%	154	4.7%	130	3.8%
\$35,000 - \$49,999	478	14.8%	346	10.5%	236	7.0%
\$50,000 - \$74,999	664	20.5%	602	18.3%	512	15.2%
\$75,000 - \$99,999	545	16.9%	623	19.0%	572	16.9%
\$100,000 - \$149,999	450	13.9%	653	19.9%	862	25.5%
\$150,000 - \$199,000	132	4.1%	306	9.3%	328	9.7%
\$200,000+	139	4.3%	280	8.5%	490	14.5%
Median Household Income	\$61,610		\$81,947		\$99,506	
Average Household Income	\$77,381		\$107,136		\$132,670	
Per Capita Income	\$33,962		\$47,577		\$59,023	

Population by Age	2000		2008		2013	
	Number	Percent	Number	Percent	Number	Percent
0 - 4	429	5.8%	395	5.3%	406	5.3%
5 - 9	392	5.3%	424	5.7%	376	4.9%
10 - 14	365	5.2%	437	5.8%	438	5.7%
15 - 19	303	4.1%	364	4.9%	405	5.3%
20 - 24	401	5.4%	330	4.4%	381	5.0%
25 - 34	1,220	16.5%	849	11.4%	759	9.9%
35 - 44	1,315	17.8%	1,362	18.2%	1,226	16.0%
45 - 54	1,216	16.4%	1,281	17.1%	1,409	18.4%
55 - 64	592	8.0%	996	13.3%	1,153	15.0%
65 - 74	519	7.0%	421	5.6%	563	7.3%
75 - 84	486	6.6%	408	5.5%	331	4.3%
85+	137	1.9%	211	2.8%	230	3.0%

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Race and Ethnicity	2000		2008		2013	
	Number	Percent	Number	Percent	Number	Percent
White Alone	6,141	83.1%	5,964	79.7%	5,950	77.5%
Black Alone	115	1.6%	134	1.8%	148	1.9%
American Indian Alone	36	0.5%	37	0.5%	37	0.5%
Asian Alone	748	10.1%	919	12.3%	1,056	13.8%
Pacific Islander Alone	9	0.1%	9	0.1%	9	0.1%
Some Other Race Alone	77	1.0%	97	1.3%	115	1.5%
Two or More Races	266	3.6%	319	4.3%	360	4.7%
Hispanic Origin (Any Race)	192	2.6%	259	3.5%	316	4.1%

Data Note: Income is expressed in current dollars.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI forecasts for 2008 and 2013.

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10/26/2008

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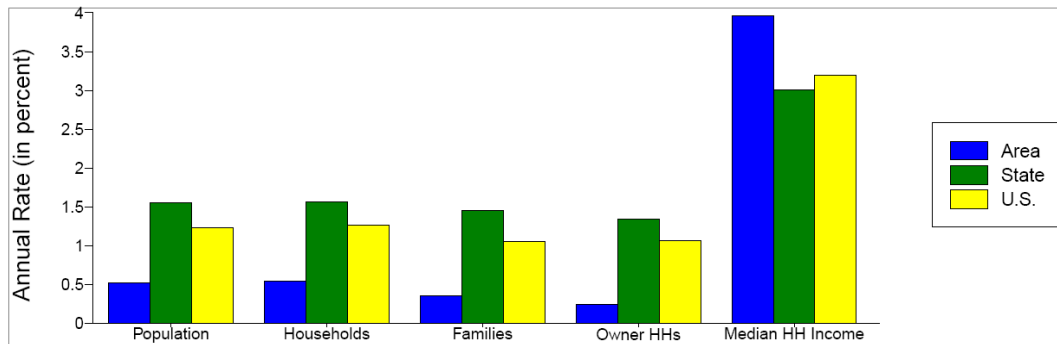
Demographic and Income Profile

Prepared by

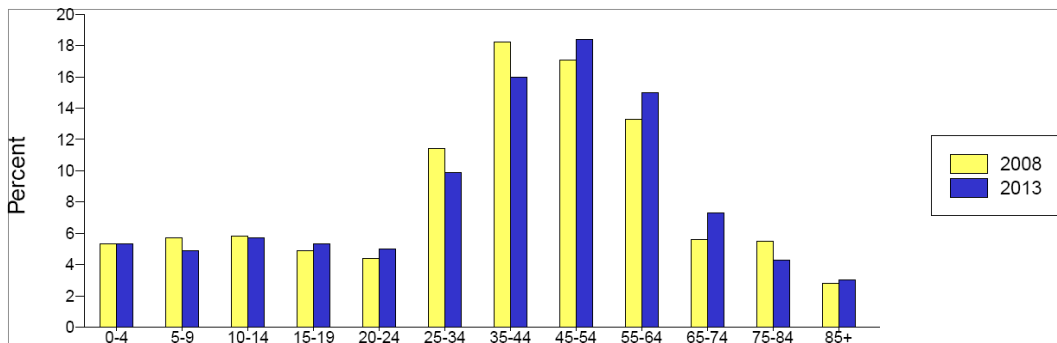
35thand80th

Study Area: Custom Shapes

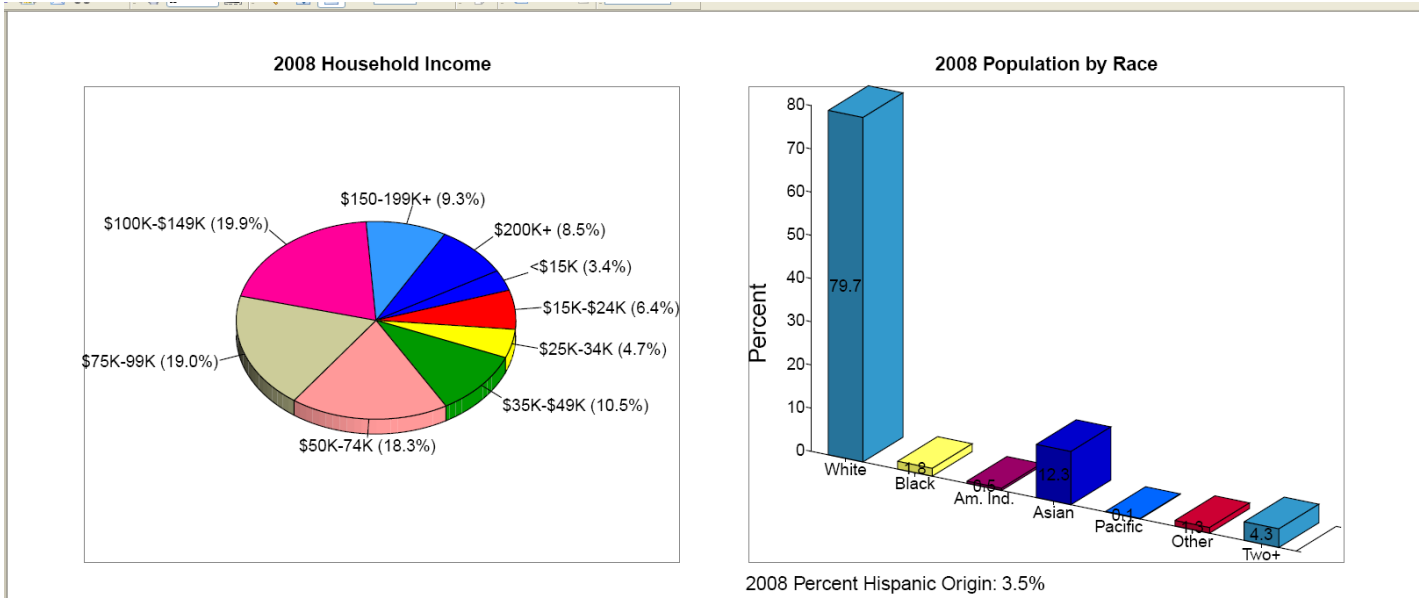
Trends 2008-2013



Population by Age



Tutorial 4(b): Demographics via STDBonline



Income-Employment Profile

35thand80th

Study Area: Custom Shapes

	1990		Census 2000		2008		2013		Percent Change	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	1990-2000	2008-2013
Total Population	7,178		7,392		7,479		7,676		3.0%	2.6%
Total Households	3,126		3,200		3,286		3,376		2.4%	2.7%
Civilian Population 16+ in Labor Force										
Civilian Employed	3,900	97.7%	4,193	96.7%	4,350	97.0%	4,563	97.0%	7.5%	4.9%
Civilian Unemployed	92	2.3%	141	3.3%	135	3.0%	139	3.0%	53.3%	3.0%
Households by Income										
Total	3,124	100%	3,232	100%	3,285	100%	3,377	100%	3.5%	2.8%
< \$10,000	193	6.2%	104	3.2%	69	2.1%	54	1.6%	-46.1%	-21.7%
\$10,000 - \$14,999	127	4.1%	157	4.9%	43	1.3%	38	1.1%	23.6%	-11.6%
\$15,000 - \$19,999	212	6.8%	112	3.5%	124	3.8%	48	1.4%	-47.2%	-61.3%
\$20,000 - \$24,999	321	10.3%	115	3.6%	85	2.6%	107	3.2%	-64.2%	25.9%
\$25,000 - \$29,999	255	8.2%	164	5.1%	76	2.3%	61	1.8%	-35.7%	-19.7%
\$30,000 - \$34,999	232	7.4%	172	5.3%	78	2.4%	69	2.0%	-25.9%	-11.5%
\$35,000 - \$39,999	213	6.8%	166	5.1%	132	4.0%	60	1.8%	-22.1%	-54.5%
\$40,000 - \$49,999	380	12.2%	312	9.7%	214	6.5%	176	5.2%	-17.9%	-17.8%
\$50,000 - \$59,999	343	11.0%	260	8.0%	282	8.6%	141	4.2%	-24.2%	-50.0%
\$60,000 - \$74,999	306	9.8%	404	12.5%	320	9.7%	371	11.0%	32.0%	15.9%
\$75,000 - \$99,999	372	11.9%	545	16.9%	623	19.0%	572	16.9%	46.5%	-8.2%
\$100,000 - \$124,999	92	2.9%	269	8.3%	394	12.0%	509	15.1%	192.4%	29.2%
\$125,000 - \$149,999	32	1.0%	181	5.6%	259	7.9%	353	10.5%	465.6%	36.3%
\$150,000+	46	1.5%	271	8.4%	586	17.8%	818	24.2%	489.1%	39.6%
Median Household Income	\$40,199		\$61,610		\$81,947		\$99,506		53.3%	21.4%
Average Household Income	\$46,698		\$77,381		\$107,136		\$132,670		65.7%	23.8%
Per Capita Income	\$20,799		\$33,962		\$47,577		\$59,023		63.3%	24.1%

Tutorial 4(b): Demographics via STDBonline

	Number	Percent
2008 Households by Disposable Income		
Total	3,286	100.0%
< \$15,000	158	4.8%
\$15,000 - \$24,999	221	6.7%
\$25,000 - \$34,999	249	7.6%
\$35,000 - \$49,999	492	15.0%
\$50,000 - \$74,999	784	23.9%
\$75,000 - \$99,999	511	15.6%
\$100,000 - \$149,999	566	17.2%
\$150,000 - \$199,999	132	4.0%
\$200,000+	173	5.3%
Median Disposable Income	\$64,161	
Average Disposable Income	\$86,267	
2008 Consumer Spending		
Average Consumer Spending	\$829,471	
Average Consumer Spending on Retail Goods	\$309,588	
Census 2000 Population 16+ by Employment Status		
Total	6,159	100%
In Labor Force	4,337	70.4%
Civilian Employed	4,193	68.1%
Civilian Unemployed	141	2.3%
In Armed Forces	3	0.0%
Not in Labor Force	1,822	29.6%
Census 2008 Population 25+ by Educational Attainment		
Total	5,529	100%
Less than 9th Grade	50	0.9%
9th - 12th Grade, No Diploma	104	1.9%
High School Graduate	515	9.3%
Some College, No Degree	899	16.3%
Associate Degree	257	4.6%
Bachelor's Degree	1,987	35.9%
Graduate/Professional Degree	1,717	31.1%

Data Note: Detail may not sum to totals due to rounding. Income represents the annual income for the preceding year. Income for 2008 and 2013 is expressed in current dollars, including an adjustment for inflation.

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing. ESRI converted 1990 Census data into 2000 geography. ESRI forecasts for 2008 and 2013. Consumer Spending data are derived from the 2004 and 2005 Consumer Expenditure Surveys, Bureau of Labor Statistics.