

**SOUTH MIAMI-DADE COUNTY WATERSHED STUDY COVER SHEET**

***Sub-task 1.2: Population Growth***

**Subject:** Projections of population levels and households for the Watershed Study Area for the years through 2025 and 2050 at a sufficient level of detail that enables other subsequent Watershed Study tasks to use the projection levels as inputs for analysis and evaluation.

**Final Work Product:**

***Population Projections***

The Sub-task 1.2 Population Growth Final Work Product (FWP) is based on the usage, formatting, evaluation and extension of the County’s population projections for the Watershed Study Area out to the year 2050. The Keith and Schnars Team completed the sub-task research and analysis based on comments and reviews received by the Miami-Dade County Department of Planning and Zoning (DP&Z). In addition, the projections also consider comments received from the Project Management Team (PMT), Watershed Study Advisory Committee (WSAC) and Technical Review Committee (TRC). The population projections are supplemented with additional background demographic information on population trends. It should be noted that a draft set of revised projections was forwarded to the DP&Z prior to finalizing this report. The Department’s demographers approved the set of projections contained within this report.

**Submission Date to SFRPC Project Manager:**

- Interim Work Product Draft – July 11, 2003
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**Watershed Study Advisory Committee Final Review – June 24, 2004**

**Consensus Score**

<b>Ranking</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Number of Members</b>	0	7	10	0	0

- 5 – Wholehearted Support
- 4 – Support
- 3 – Neutral but Supports Fully to Outside World
- 2 – Questions Pending
- 1 – Blocks Any Decision

Consensus is defined as everyone ranking a work product no less than three.

**Deliverables:**

1. Report (3 electronic copies and 5 hard copies)

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

BEBR	University of Florida - Bureau of Economic and Business Research
CB	U.S. Census Bureau
CDMP	Comprehensive Development Master Plan
CDP	Census Designated Place
CT	Census Tract
DP&Z	Miami-Dade County Department of Planning and Zoning
DU	Dwelling Unit
EAR	Adopted 2003 Evaluation and Appraisal Report – Comprehensive Development Master Plan – Miami-Dade County Florida – October 2003
FKAA	Florida Keys Aqueduct Authority
FWP	Final Work Product
IWP	Interim Work Product
HARB	Homestead Air Reserve Base
HH	Household
MD	Miami-Dade
MSAs	Minor Statistical Areas
PMT	Project Management Team
SMDWSP	South Miami-Dade Watershed Study and Plan
SFRPC	South Florida Regional Planning Council
TAZ	Traffic Analysis Zone
TRC	Watershed Technical Review Committee
UDB	Urban Development Boundary
WSAC	Watershed Advisory Committee
WUP	Water Use Permit

## **EXECUTIVE SUMMARY: SUB-TASK 1.2 – POPULATION GROWTH**

### **Overview of the South Miami-Dade Watershed Study and Plan**

The South Miami-Dade Watershed, an approximately 370 square mile area located in the southeastern portion of Miami-Dade County, is increasingly recognized as one of the most critical watersheds in Florida. The Watershed plays a vital role in the health of Biscayne Bay as well as providing for the urban and agriculture needs of the County.

The South Miami-Dade Watershed Study and Plan (SMDWSP) is a long-term land planning and water resources study required by the Miami-Dade County Comprehensive Development Master Plan. Divided into five major task areas, the 26- to 30-month study includes a wide-ranging look at South Miami-Dade County's population growth; infrastructure; land ownership, including agriculture, industrial and urban land uses; pollution; water resources; wildlife; and natural areas.

The Study will formulate and analyze three potential land use scenarios. The impact of each scenario on water resources, wildlife habitat, infrastructure, agriculture, the economy and property rights will be evaluated. This evaluation will help form a fourth "preferred" scenario.

The results of this collaborative study process will be the development of a Plan designed to balance the various competing interests in South Miami-Dade – providing the framework for a sustainable economy and environment through the year 2050. The Plan will contain the policies, strategies and procedures necessary for implementing the preferred scenario.

The Sub-task 1.2 Final Work Product (FWP) is part of seven inventory and baseline information sub-tasks. This report and the other Task 1 reports provide baseline and reference information necessary to complete the SMDWSP.

### **Sub-task 1.2 – Population Growth**

#### ***Population Projections***

The Sub-task 1.2 Population Growth FWP is based on the usage, formatting, evaluation and extension of the County's population projections out to the year 2050. The Keith and Schnars Team completed this research and analysis based on comments and reviews from the Miami-Dade County DP&Z. In addition, the projections also consider comments received by the Project Management Team (PMT), Watershed Study Advisory Committee (WSAC) and Technical Review Committee (TRC). This FWP is supplemented with additional background demographic information provided in the Appendices: Appendix A: Additional Background Demographic History; Appendix B: Watershed Study Area Square Miles, Population, Households and Housing Units by Census Tract and Corresponding MSA; Appendix C: Projections of Watershed

Populations per Census Tract; Appendix D: Projections of Watershed Households per Census Tract.

**Methodology**

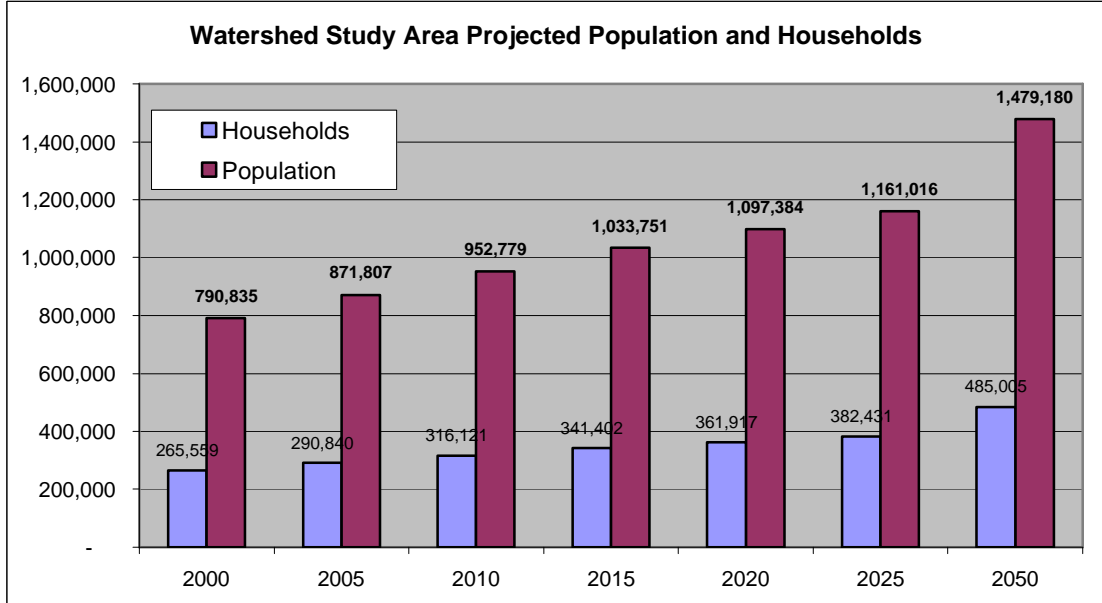
To achieve the necessary level of planning precision, the projections were completed at the census tract level of geographic detail and were coded with their corresponding canal and watershed drainage basin geo-references. This level of geographic detail will allow the Study to precisely measure projected growth pressures and stressors attributable to population and development in future tasks. The formulation of land use scenarios will involve allocating the baseline projected populations at the census tract level (one set of projections) to different sections of the Watershed Study Area based on redevelopment opportunities, natural resources constraints, available vacant land and other factors.

The population projections presented in the Sub-task 1.2 FWP and the summary table below include the Watershed Study Area's functional population (permanent and seasonal populations) and projections for Monroe County because of water resource demands from Monroe County that impact the Watershed Study Area.

**Final Results**

The final results of the population projections are based on methods and projections reviewed and sanctioned by Miami-Dade County. By 2005, the Watershed Study Area number of households is projected to rise to 290,840 from 265,559 in 2000. The corresponding permanent resident population for the Watershed Study Area would be 871,807 by 2005. By 2005, if both the Watershed Study Area's seasonal population and Monroe County's functional population are combined, the projected total functional population for the Area would be 1,081,130. By 2025, the total population is projected to be 1,161,016 and total functional population will be 1,387,482. By 2050, the total population is projected to be 1,479,180 and the total functional population will be 1,725,184.

<b>Watershed Study Area Projections - Using Miami-Dade County Projections Data and Assumptions</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2025</b>	<b>2050</b>
<b>1) Population</b>	790,835	871,807	952,779	1,033,751	1,161,016	1,479,180
<b>2) Households</b>	265,559	290,840	316,121	341,402	382,431	485,005
3) Average Household Size	2.98	3.00	3.01	3.03	3.04	3.05
<b>4) Seasonal/Transient and Special Populations</b>						
Seasonal Population (Average Daily Overnight Visitors) for Peak Month	44,442	46,218	47,993	49,769	53,320	62,197
Monroe County Functional Projected Population	159,113	163,105	166,800	168,802	173,146	183,807
5) Total Functional Population (1+4)	994,390	1,081,130	1,167,572	1,252,322	1,387,482	1,725,184



Source: Miami-Dade County Department of Planning and Zoning. Projections extended and allocated by E&E.

The Watershed Study Area projections are based on adopted Miami-Dade County population projection methodologies. Using similar methods, the Keith and Schnars Team extended the projections beyond 2025, out to 2050 in five-year increments.

## **1.0 INTRODUCTION**

### **1.1 Scope of Final Work Product**

The Final Work Product (FWP) presents projections of population levels for the Watershed Study Area out to the years 2025 and 2050 in five-year increments. The report dataset contains a level of detail that enables subsequent Watershed Study tasks to use the projection levels as inputs for analysis and evaluation. Projections are presented at the census tract and Minor Statistical Area (MSA) level of detail. In addition, the projections for population and households are aggregated to the corresponding watershed drainage basin. This FWP is supplemented with additional background demographic information provided in the Appendices: Appendix A: Additional Background Demographic History; Appendix B: Watershed Study Area Square Miles, Population, Households and Housing Units by census tract and Corresponding MSA; Appendix C: Projections of Watershed Populations Per Census Tract; Appendix D: Projections of Watershed Households Per Census Tract.

### **1.2 Purpose of Final Work Product**

The purpose of the FWP is to present detailed population projections that can be incorporated into subsequent SMDWSP tasks as inputs into analyses. Population and household projections are critically important in determining the demands placed on manmade and natural resources and public services within the watershed. Housing, municipal services (utilities, water, police, education, fire etc.) and infrastructure capacity are all based on expected population and household growth. Evaluating land uses and development densities as well as stressors placed on natural systems are tasks that need to consider future population demands.

#### Scope of Projections

Population projections are prepared for the entire Watershed Study Area (sum of 119 Census tracts) and the corresponding aggregated populations within the respective MSAs. The broader MSA groups are used by the County to define planning tiers. Seasonal or transient populations have also been considered in the population projections. The FWP underlying database contains a sufficient level of detail wherein other team members, agencies and committee members now have the ability to isolate census tracts as well as aggregate these units to their corresponding MSAs, canal basins, or the Watershed. Household and average household size projections corresponding to population growth assumptions are also part of this FWP.

#### Other Considerations

The population projections are being presented at the outset of the SMDWSP before subsequent more detailed work on land use, natural systems and environmental stressors, environmental sustainability, and economic growth projections have been completed. The subsequent more detailed work in these other areas will influence how the projected

populations and households will be distributed within the Watershed Study Area under the various land use scenarios. These growth management tasks will form the basis for the alternatives considered and contribute to the analytical process that leads to a preferred alternative.

### Methods

The methods used for the Study were based on the County's use of logistic curve fitting at the MSA level of detail. In addition, select other methods based on statistical extrapolation methods and other share or shift share methods generally accepted by demographers for sub-area projections were also employed. The projections incorporate research and information gathered from the DP&Z and comments provided by the PMT, TRC and WSAC.

## **2.0 WATERSHED POPULATION AND HOUSEHOLD PROJECTIONS**

### **2.1 Background**

Population and household projections are essential for developing sound growth management alternatives for the Watershed Study Area. One of the challenges demographers face relates to lags in the reporting or release of key data that can provide the most current assessment of the baseline, or launch year from which projections are made. In order to plan for sustainable growth in the Watershed Study Area, long-term population and household projections can guide how resources are effectively utilized. Projections can also help identify key growth management priorities that can be addressed through comprehensive planning initiatives and strategies.

It is also important to revisit population projections at regular intervals, at least every five years. Taking a fresh look at projection assumptions and projected population levels is necessary as new source data becomes available, and as key population growth drivers, such as push and pull forces influencing net migration change over time.

The following sections will discuss the source data and methods used to arrive at the projected population and households for the Watershed Study Area. The projections are then presented at five-year intervals through the year 2050. The key assumptions relied upon and the methods used are explained below.

### **2.2 Source Data**

The source data for the projections of population and households were obtained from DP&Z. It should be noted that the data shown for 2000 in the projections section does not coincide with the Census 2000 data reported and summarized above in select exhibits. The County noted errors in the Census data and made corrections to select areas. These adjustments were reflected in the data that were provided to the consultants.

The data referenced for the population and household projections presented in this report are from the following sources:

1. The U.S. Decennial Census for 1990 and 2000 provided by the Census Bureau's American Fact Finder Database. Census tracts were identified that formed the Watershed Study Area.
2. U.S. Census data for 1990 and 2000 at the tract level aggregated to the corresponding MSAs as identified by the Miami-Dade County Department of Planning and Zoning.
3. The Miami-Dade County Department of Planning and Zoning's population projections for Miami-Dade County's resident population for the years 1990 – 2025.
4. The University of Florida's Bureau of Economic and Business Research projections for the Miami-Dade County population, 2002 – 2030.
5. The Monroe County Department of Department of Planning and Environmental Resources projections for functional population and data for cruise ship passengers and air passenger deplanements for Key West, monthly time series (from 1995 to 2003) provided by the Monroe County Tourist Development Council.
6. The Miami-Dade County Department of Planning and Zoning's report titled, "Seasonal/Transient Population – Miami-Dade County, FL, December 1999."
7. The historical information was obtained from both the U.S. Census (Census 2000) and Miami-Dade County's Department of Planning and Zoning adjustments to 2000 Census data.
8. Miami-Dade County provided the consultants with two projection dataset files [Final 2015 Pop and Housing FSUTMS Dataset.xls and Final 2025 Pop and Housing FSUTMS Dataset.xls] that were evaluated and used for control purposes. The data within these files was at the Traffic Analysis Zone level of aggregation. The consultants first aggregated this data into the corresponding census tracts using a cross reference or concordance table also provided by the County. The next step was to select or isolate the census tracts that corresponded to the Watershed Study Area.
9. The consultants were also provided with a file on development capacity on vacant lands for the area South of Tamiami Trail. This data encompassed an area from Brickell to the Urban Development Boundary (UDB). The data were provided at the Traffic Analysis Zone (TAZ) level of aggregation and included information on total acreage, and units for single-family and multi-family capacities. The consultants aggregated this data into the corresponding census tracts for the Watershed Study Area and compared the sums to the existing occupied housing units reported for the Area for the 2000 Census as well as additional development capacity data provided by the County.
10. The County also provided the consultants with housing data from the Real Property File. This data from the Assessor's Office contained extracts made in May 2003 and another made in November 2003. This data that included population capacity, was also evaluated by the consultants and compared to the Minor Statistical Areas (MSAs) that corresponded to the Watershed Study Area.

11. The County's revised or most recent projections provided at the TAZ level were available for the select years of 2015 and 2030. The TAZ projections data was also grouped into the corresponding census tracts by the DP&Z and allocated to five-year increments and extrapolated (from 2030) by the consultants to 2050.

### **2.2.1 Watershed Study Area Data Aggregation and Management**

Database applications (Microsoft Access) were used to aggregate the Watershed Study Area's projected population and number of households from the census tract level to larger or broader Study Area aggregations.

The Watershed population (either population level counts or the total number of households) was calculated from:

- 1) A summation of the constituent census tracts' data defining the Watershed Study Area based on Study Area boundaries. It should be noted that exact border delineations or allocations of populations within tracts bisected by the Watershed Study Area boundary was not attempted for this task. For this particular task this level of precision was not deemed necessary.
- 2) A summation of the constituent MSAs data within the Watershed Study Area with some tracts in the northern part of the Watershed Study Area representing only part of the complete MSA.
- 3) Use of the Watershed Study Area's population percentage or share of Miami-Dade County's aggregate population data for cross reference and control purposes.
- 4) A summation of census tracts, seasonal transients data sets and Monroe County's projected functional population (permanent plus transient).

## **2.3 Projection Frequency and Composition**

### **2.3.1 Frequency**

Projections were calculated using data measured in years. The projections were made in five-year increments, from 2000 to 2050. For seasonal/transient special populations, monthly data were examined and evaluated by month and by year in order to determine what seasonal trends were present. Long-term trends were determined by aggregating the monthly data to years in order to remove seasonality and to place the data on the most commonly used annual time frames. Both population and total households were projected in the same manner.

### **2.3.2 Composition**

The historic Hispanic population and household data were evaluated separately in order to address key trends and to answer questions germane to this segment of the Watershed

Study Area population. Because of the importance of the resident Hispanic population's representation within the Watershed Study Area, as well as net migration trends that are likely to continue in the short-term, some specific analysis of historic trends for this population segment are provided. However, available estimated data sources for seasonal/transient populations and the Monroe County were not disaggregated by race or ethnicity. The projections were not developed or decomposed by race, sex or ethnicity.

## **2.4 Projection Method**

### **2.4.1 Projection Method for Watershed Study Area (119 tracts)**

The final method used in projecting the Watershed Study Area's population involved the following procedures.

- The Miami-Dade County Department of Planning and Zoning provided a dataset of population projections by census tracts for the years 2000, 2015 and 2030. These point years were originally developed as TAZ level projections. The County (DP&Z) summed these TAZ level point year projections into their corresponding census tracts and minor statistical areas (MSA). The County's process for projecting population to the year 2030 is as follows:
  - Project populations by MSAs. A logistic curve was developed for each MSA based on the historic growth patterns and the estimated residential capacity of each MSA (See DP&Z, *Population Projections by MSA*, p. 5);
  - Sum MSAs for County total;
  - Compare MSA sum to independent County projection. This independent projection is based on births, deaths, domestic in-migration, domestic out-migration and net immigration;
  - Adjust individual MSAs, so the total MSA sum equals the independent County projection; and
  - Population which would normally go to more urban MSAs or other builtout MSAs may be reassigned because no more residential capacity is available in that MSA.
- Linear interpolation was used by the K&S team to estimate the five-year increment or interval years in between the point estimates provided by the County.
- Extrapolating the projections from 2030 to 2050 involved extracting and applying the implied growth rates obtained from the County's projection method of fitting logistic curves to the data at the MSA level of aggregation. The decelerating rate of population growth, implied by the logistic curve plateau area region, was applied to the interval years beyond 2030.
- The rate of change for 2015-2030 was used to project population out to the year 2050, in five-year increments for census tracts.

- The same method of applying extracted logistic curve growth rates was used in extending the projections of households from 2030 to 2050.
- To determine the projected average household size projected population was divided by projected households per individual census tract.

The procedure was conducted for each of the 119 census tracts corresponding to the Watershed Study Area.

#### **2.4.2 Projection Method for Miami-Dade County Seasonal/Transient**

Research and data from Miami-Dade County was used to estimate the relevant share of seasonal/transients population within the Watershed Study Area by referring to the MSAs defining the Watershed Study Area.

#### **2.4.3 Projection Method for Monroe County Data**

Although certain service populations are located outside of the Watershed Study Area's boundaries, these populations place resource demands on South Miami-Dade County and should therefore be considered. Because South Miami-Dade County provides water and other resources to support the Florida Keys, it was decided to also evaluate the seasonal populations frequenting the Keys in order to understand future population demands on water resources and other infrastructure. The Biscayne Aquifer is the groundwater supply source for the Florida Keys Aqueduct Authority (FKAA). The wellfield supplying water to Monroe County is located in a pineland preserve west of Florida City within the Watershed Study Area.<sup>1</sup>

Monthly data relating to airline passenger deplanements and the number of cruise ship passengers for Key West were also used to extend Monroe County's seasonal projections beyond 2015. The seasonal projections were combined with extended permanent resident population projections to determine the functional population projections for Monroe County out to the year 2050.

#### **2.4.4 Factors Influencing Accuracy**

The following factors can influence the accuracy of the population projections.

- *Time.* For long-range forecasts, 5-year periods are more variable than those for 10-15 years, or 20 years or more. Most studies have focused on the time frame of 5 to 20 years for forecasting. On average, the forecast accuracy declines as the time horizon increases. Very little is known about the accuracy of forecasting either for less than 5 years or beyond 25 years. This means that a forecast out to the year 2050 will have some uncertainty associated with it.

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<sup>1</sup> See 2003 Monroe County Public Facilities Capacity Assessment, p. 40.

- *Type of Population.* The errors are not the same for different age group populations being estimated. Large errors (20% - 29%) can be found in the 0-14 and 65+ age group forecasts because of the larger variability inherent in these populations. When Mean Absolute Percent Change errors (MAPEs) are used as the accuracy measurements, the individual age groups' MAPEs are about 40% larger compared to the total population group's MAPE.
- *Size of Population.* The forecast errors decrease as the population size being projected increases. In other words, accuracy improves as the population size increases, but this phenomenon is also tied to the size of the geographic area where the population lives. There appears to be an upper limit or threshold, after which the accuracy of the forecast declines. On average, the following errors have been detected for 10-year forecasts:

**Table 1**  
**Comparison of Projection Error Based on Population Size**

Population Size/Level of Geography	Mean Absolute Percent Change Error (MAPE)
States	4% - 8%
Counties	8% - 14%
Census Tract	15% - 21%

Source: Smith et al., State and Local Population Projections

While there is an effect of population size on the accuracy of the projections, there does not seem to be an effect on the bias – whether the projection is too high or too low, compared to the actual.

- *Population Growth Rates.* Forecast errors are influenced greatly by growth rates of the areas being projected. The errors are smallest for counties that are growing slowly but surely, that possess a small, positive rate. As the growth rate deviates in either direction from this center of gravity, the error will get larger, with the largest errors occurring furthest away from the center.
- *Length of Base Period.* A common rule of thumb is that the length of the base period (that period which provides the historical data) should balance the length of the forecast time period. In other words, if the forecast is for 10 years, then the base period should be at least 10 years long. However, if the forecast is for 40 years or so, there is no benefit in accuracy if the base period is extended 40 years also. If the base period is too short, then short-run fluctuations may be incorrectly interpreted as long-term trends in the forecasts. If the base period is too long, then forecasts may come from historical trends that are no longer valid in the population. Base periods between 10 and 20 years appear to be the most useful in determining projections with reasonable accuracy. The current thinking is that for short-range projections (less than 10 years), a matching short base period is satisfactory, but for long-range projections, at least 10 years of base period is required for accurate results.

- *Uncertainty.* If the forecasts are being used for illustrative purposes only, then there is no uncertainty unless there is an error in the math. However, if the forecasts are being used for planning or other estimation purposes, then there can be substantial uncertainty.

Some methods for expressing uncertainty are the following:

- *Range of forecasts.* In the most common method a range of forecasts is created by using different assumptions for the cohort-component method. No explicit measure of uncertainty can be provided by this range. Ranges usually understate the amount of uncertainty, and the amount can be rather substantial. Ranges are very helpful for observing the differences that occur due to changes in assumptions.
- *Prediction Intervals with Statistical Model Fitting.* If a probability interval is desired for a forecast, whereby the forecast is expected to fall within the interval with a specified probability, then a statistical model is fit to the data, or a measure of variability is derived from the base period data. Autoregressive Integrated Moving Average (ARIMA) models are the most common statistical models used for forecasting purposes. The prediction intervals are valid only to the extent that the underlying assumptions for the models are valid, and that the model fit is acceptable.
- *Prediction Intervals Based on the Distribution of Past Errors.* Using data from past errors of appropriate projections prediction intervals can be calculated for the current projection series. One can look at the errors and calculate prediction intervals for the measure of accuracy that is being used for assessing the projections.
- *Combination of Forecasts.* Combining several (4-5) forecasts into one final forecast usually works better than using an individual forecast because there is more information going into the final forecast when combinations are used. Several forecasts are made with the same or different methods and then combined in one of several ways to produce the final forecast. There is no agreement on how to combine forecasts, and simple averaging is used extensively.

## 2.4.5 Summary of Empirical Evidence on Population Forecasting Accuracy and Bias

Below is a summary of empirical evidence on population forecasting:

- Forecast accuracy generally increases with population size;
- Accuracy is best for places with slow, steady, positive growth rates;
- Accuracy declines as growth rates go high and positive, or negative in any amount;
- Average errors will vary with the launch year mostly for bias measurements;
- Average absolute errors tend to grow steadily and linearly with the length of the projection horizon;
- A base period of 10 years is generally necessary and sufficient for simple methods that project total population;
- No single projection method is consistently more accurate than any other for projections of total population;
- There is no way to predict whether projections will be too high or too low;
- Some reasonable ballpark estimates of mean absolute percent errors are provided in Table 2;
- Projections for very far future time frames are not able to provide highly accurate forecasts; and
- Despite their limitations, projections still provide one of the best tools for planning intelligently for the future.

**Table 2**  
**Typical Mean Absolute Percent Change Errors for**  
**Population Projections by Level of Geography and Length of Horizon**

Level of Geography	Length of Horizon (years)					
	5	10	15	20	25	30
State	3	6	9	12	15	18
County	6	12	18	24	30	36
Census Tract	9	18	27	36	45	54

Source: Adapted from Smith et al., State and Local Population Projections, p 340

## 2.5 Population Projection Results and Discussion

### 2.5.1 Permanent Resident Projected Population

The population projections for 2000–2050 are presented in Table 3 and graphically in Figure 1.

**Table 3**  
**Watershed Study Area Population and Household Projections**

<b>Year</b>	<b>Population</b>	<b>Households</b>	<b>Average Household Size</b>
2000	790,835	265,559	2.98
2005	871,807	290,840	3.00
2010	952,779	316,121	3.01
2015	1,033,751	341,402	3.03
2020	1,097,384	361,917	3.03
2025	1,161,016	382,431	3.04
2030	1,224,649	402,946	3.04
2035	1,288,282	423,461	3.04
2040	1,351,914	443,975	3.05
2045	1,415,547	464,490	3.05
2050	1,479,180	485,005	3.05

Table 3 displays the projected Watershed population, number of households and average household size out to the year 2050. By 2025 the projections show that 382,431 households and 1,161,016 persons will permanently reside in the Watershed Study Area. By 2050 the projections show that 485,005 households and 1,479,180 persons will permanently reside in the Watershed Study Area.

**Figure 1**

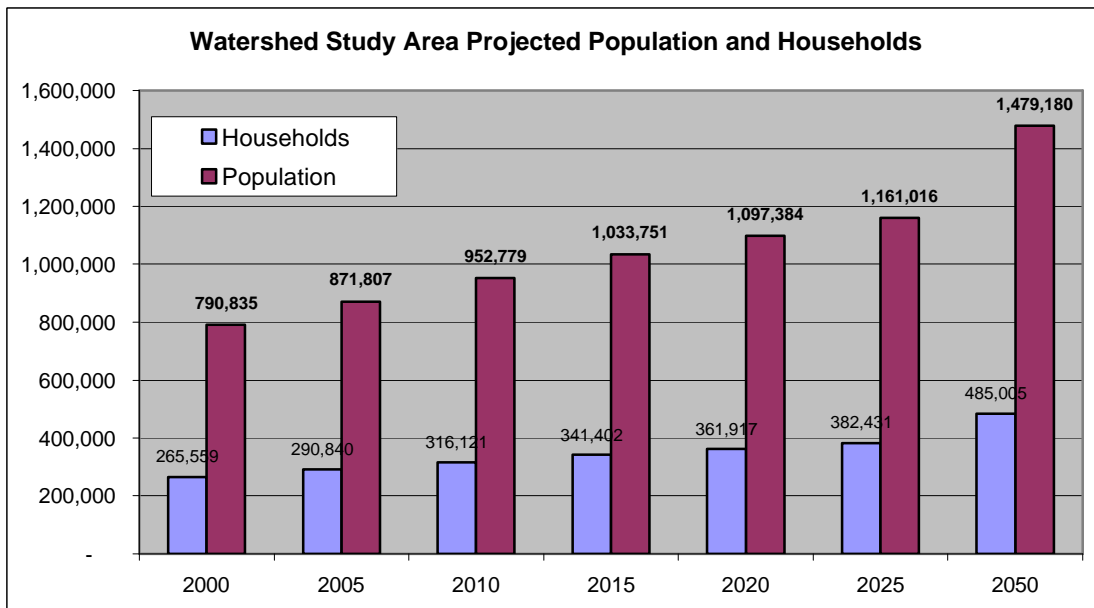


Figure 1 graphically depicts the population and household projections to the year 2025 in five-year increments and also shows the 2050 projection.

As shown in Table 4, the Watershed Study Area is expected to account for 39 percent of the countywide population in the year 2050.

**Table 4**  
**Comparison of Watershed Population Projections and**  
**Countywide Population Projections**

Year	Watershed Population	County Population	Watershed as a Percentage of the County Total
2000	790,835 *	2,253,485 **	35%
2025	1,161,016 *	3,019,785 **	38%
2050	1,479,180 *	3,810,635 ***	39%

Sources:

\* Keith and Schnars Team

\*\* Miami-Dade County EAR October 2003

\*\*\* Final Report – Municipal and Industrial Water Use Forecast, Initial CERP Update – Medium Population Projection

Because resource demands cut across jurisdictional boundaries, the population projections consider other "functional" populations for this sub-task. The functional population considers the peak seasonal population combined with the permanent resident population. South Miami-Dade County also supplies potable water to Monroe County.

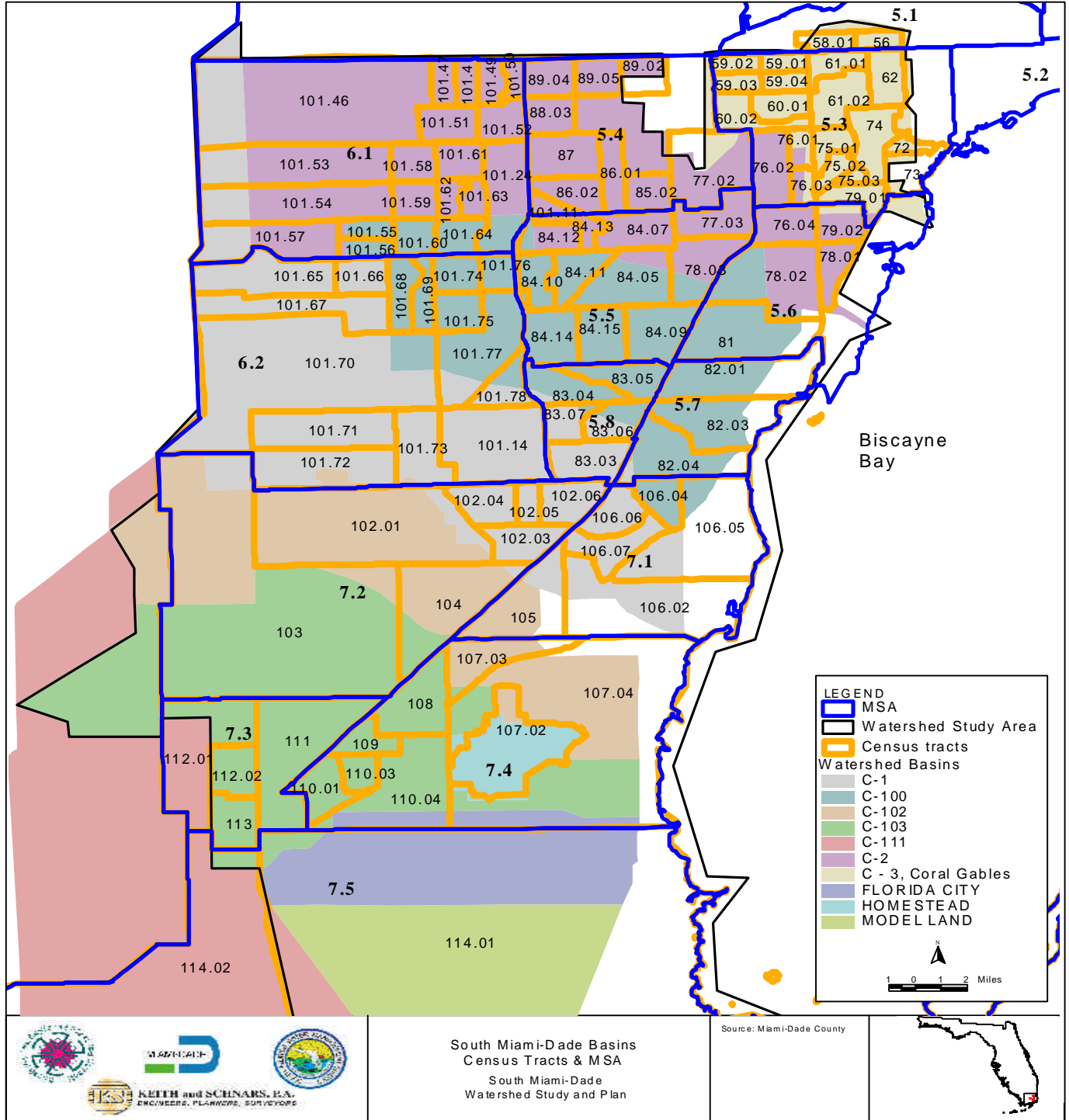
For this reason Monroe County was also included within the projected total functional population for the Watershed Study Area. In October 2002, the South Florida Water Management District (SFWMD) increased the Florida Keys Aqueduct Authority (FKAA) Water Use Permit (WUP) allocation. The WUP increases FKAA's potential withdrawals to an average of 19.93 million gallons per day (mgd) and a maximum of 23.79 mgd. The wellfield supplying water to Monroe County is located in a pineland preserve west of Florida City within the Watershed Study Area. The groundwater extracted from the wellfield is treated at the J. Robert Dean Water Treatment Facility in Florida City. After treatment, the water is pumped via a 130-mile long pipeline to the Florida Keys.

### **2.5.2 Projected Watershed Study Area Populations by Watershed Drainage Basins, Minor Statistical Areas (MSAs) and Census Tracts**

Figure 2 shows the Watershed Study Area's drainage basins. It is useful to group the population and household projections by basin to show where expected population growth will place development pressure on catchment areas. Households, as well as being receptors, are also stressors that place demands on the Watershed's water delivery and water quality processes.

The future living arrangements of households around both lower and upper catchment areas can be expected to influence water quality and delivery and environmental quality. Tables 5 and 7 portray the distribution of projected households and population by drainage basin. The picture or "story" suggested by the projected distribution of households by drainage basin is based on DP&Z's consideration of development capacities adopted under the current 2015 Land Use Plan and take into account densities expressed in residential dwelling units (DU) per acre. The land use scenario to be developed in future tasks will closely evaluate the range of issues (water resources, natural systems etc.) in distributing the projected populations within census tracts and drainage basins, based on integrated water management planning principles.

**Figure 2**  
**Watershed Drainage Basins and Census Tracts**



### 2.5.2.1 Projections by Drainage Basins

#### Population

Using currently adopted DP&Z methodologies, Table 5 shows the distribution of the projected population by drainage basin while Table 6 shows the projected number of households by basin. The population distribution may be similar to Scenario I required by Sub-task 2.2. Scenario I requires the distribution of land uses based on current approval processes and development trends. The most populous drainage basin, C-2 is located in the northern part of the Watershed, the upper catchment areas.

**Table 5**  
**Projected Watershed Area Population by Drainage Basin**

Year	C - 1	C - 100	C - 102	C - 103	C - 111	C - 2	C - 3	Homestead	Model Land	Watershed Total
2000	132,618	209,740	22,000	65,995	4,796	265,685	84,355	38	5,608	790,835
2005	152,481	221,232	28,557	79,640	6,491	288,581	85,608	67	9,150	871,807
2010	172,345	232,724	35,113	93,285	8,187	311,476	86,860	97	12,692	952,779
2015	192,208	244,216	41,670	106,930	9,882	334,372	88,113	126	16,234	1,033,751
2020	205,829	254,861	47,624	117,485	11,722	351,324	89,071	132	19,336	1,097,384
2025	219,450	265,505	53,578	128,040	13,563	368,277	90,028	137	22,438	1,161,016
2030	233,071	276,150	59,532	138,595	15,403	385,229	90,986	143	25,540	1,224,649
2035	246,692	286,795	65,486	149,150	17,243	402,181	91,944	149	28,642	1,288,282
2040	260,313	297,439	71,440	159,705	19,084	419,134	92,901	154	31,744	1,351,914
2045	273,934	308,084	77,394	170,260	20,924	436,086	93,859	160	34,846	1,415,547
2050	287,555	318,729	83,348	180,815	22,764	453,038	94,817	166	37,948	1,479,180
<b>Share of Watershed Total by Basin (%):</b>										
2000	16.8%	26.5%	2.8%	8.3%	0.6%	33.6%	10.7%	0.005%	0.7%	100.0%
2050	19.4%	21.5%	5.6%	12.2%	1.5%	30.6%	6.4%	0.011%	2.6%	100.0%

The reader is advised to examine Tables 5, 6 and 7 together with Figure 2. The last two rows of Table 5 show the share of the total Watershed population, both current and future for each basin. The projections show that basins C-1, C-102, C-103, C-111 and Model Land are expected to accommodate a larger share of the population by 2050. Combined, these basins will account for 41 percent of the Watershed's population by 2050, compared to 29 percent in 2000. Table 6 shows the 2050 distribution of the Watershed population by each basin's share of the total and the location. The future distribution takes into account the host community residential densities adopted under the Miami-Dade County Comprehensive Development Master Plan, May 2001, as amended through April 2001. This is one potential distribution of population and provides a starting point for developing land use scenarios.

**Table 6**  
**Distribution of Projected (2050) Watershed Population**  
**by Drainage Basin**

Basin	Location	Percent Share of Total Watershed Population 2050 by Basin	Change in Share of Watershed Population 2000 - 2050
C - 2	N	30.6%	-3.0%
C - 3	NE	6.4%	-4.3%
C - 1	N - to EW Central	19.4%	2.7%
C - 100	NE	21.5%	-5.0%
C - 102	Central	5.6%	2.9%
C - 103	S Central	12.2%	3.9%
C - 111	S W	1.5%	0.9%
Homestead	South	0.0%	0.0%
Model Land	S E	2.6%	1.9%
<b>Total:</b>		<b>100.0%</b>	

Table 6 shows that the drainage basins in the central and southern portions of the Watershed Study Area are expected to accommodate a larger fraction of the area population by 2050. This projected distribution represents the baseline expectation and the land use scenario assessment (Task 3) will more closely evaluate the locational implications of this distribution considering water quality, delivery and environmental quality objectives.

Households

Table 7 shows the projected number of households by drainage basin. Both the distribution of households and the future pattern of growth are the same as already described for Table 6.

**Table 7**  
**Projected Watershed Area Households by Drainage Basin**

Year	C - 1	C - 100	C - 102	C - 103	C - 111	C - 2	C - 3	Homestead	Model Land	Watershed Total
2000	42,393	69,204	6,909	21,533	1,498	91,284	30,753	10	1,975	265,559
2005	48,431	72,530	8,939	25,904	2,008	98,640	31,077	20	3,291	290,840
2010	54,469	75,857	10,969	30,275	2,518	105,996	31,400	30	4,607	316,121
2015	60,507	79,183	12,999	34,646	3,028	113,352	31,724	40	5,923	341,402
2020	64,754	82,623	14,889	38,064	3,591	118,872	32,053	42	7,029	361,917
2025	69,002	86,062	16,779	41,481	4,155	124,392	32,382	44	8,134	382,431
2030	73,249	89,502	18,669	44,899	4,718	129,912	32,711	46	9,240	402,946
2035	77,496	92,942	20,559	48,317	5,281	135,432	33,040	48	10,346	423,461
2040	81,744	96,381	22,449	51,734	5,845	140,952	33,369	50	11,451	443,975
2045	85,991	99,821	24,339	55,152	6,408	146,472	33,698	52	12,557	464,490
2050	90,238	103,261	26,229	58,570	6,971	151,992	34,027	54	13,663	485,005
<b>Share of Watershed Total by Basin (%):</b>										
2000	16.0%	26.1%	2.6%	8.1%	0.6%	34.4%	11.6%	0.004%	0.7%	100%
2050	18.6%	21.3%	5.4%	12.1%	1.4%	31.3%	7.0%	0.011%	2.8%	100%

### 2.5.2.2 Projections by MSA

#### Population

As shown in Table 8, projections were also grouped by MSAs and compared to groups already reported within the EAR and planning level tiers.

**Table 8**  
**Projected Population by Minor Statistical Area (MSA)**  
**for the Watershed Study Area**

MSA	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
5.1	9,278	9,411	9,545	9,678	9,772	9,866	9,960	10,054	10,148	10,242	10,336
5.3	86,659	88,098	89,537	90,976	92,154	93,333	94,511	95,689	96,868	98,046	99,224
5.4	80,813	82,118	83,423	84,728	85,738	86,747	87,757	88,767	89,776	90,786	91,796
5.5	87,973	94,205	100,437	106,669	112,765	118,861	124,957	131,053	137,149	143,245	149,341
5.6	35,592	36,609	37,625	38,642	39,459	40,276	41,093	41,910	42,727	43,544	44,361
5.7	25,578	27,266	28,955	30,643	32,459	34,274	36,090	37,906	39,721	41,537	43,353
5.8	32,988	33,986	34,984	35,982	36,785	37,588	38,391	39,194	39,997	40,800	41,603
6.1	145,902	163,253	180,605	197,956	209,742	221,529	233,315	245,101	256,888	268,674	280,460
6.2	124,015	137,992	151,970	165,947	177,971	189,994	202,018	214,042	226,065	238,089	250,113
7.1	42,429	51,551	60,672	69,794	73,890	77,987	82,083	86,179	90,276	94,372	98,468
7.2	36,175	42,740	49,305	55,870	62,265	68,660	75,055	81,450	87,845	94,240	100,635
7.3	32,109	34,719	37,329	39,939	43,028	46,118	49,207	52,296	55,386	58,475	61,564
7.4	45,716	60,708	75,701	90,693	102,019	113,346	124,672	135,998	147,325	158,651	169,977
7.5	5,608	9,150	12,692	16,234	19,336	22,438	25,540	28,642	31,744	34,846	37,948
Total:	790,835	871,807	952,779	1,033,751	1,097,384	1,161,016	1,224,649	1,288,282	1,351,914	1,415,547	1,479,180

By 2050, populations within MSAs 6.1 and 6.2 combined are expected to represent 36 percent of the Watershed's total population compared to 34 percent in 2000. The share of the total population is expected to rise to 11.5 percent in 2050, from 5.8 percent in 2000 in (MSA 7.4.) As mentioned, a host of other data and information from parallel tasks (land use, natural systems, water modeling etc.) will also be evaluated against the planning level expected baseline population projections shown in Tables 7 and 8, to arrive at sustainable land use plans for these areas.

#### Households

By the year 2010, the projections show that the number of households can be expected to rise by 19 percent to 316,121 from the 2000 level of 265,559, while the population is expected to rise to 952,779 by 2010, a 22 percent increase from 2000. By 2010 the projections imply a rise in the average household size consistent with demographic trends for the Watershed Study Area. Table 9 shows the distribution of the household projections by MSA out to the year 2050.

**Table 9**  
**Projected Number of Households by Minor Statistical Area (MSA)**  
**for the Watershed Study Area**

MSA	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
5.1	3,511	3,546	3,582	3,617	3,650	3,682	3,715	3,748	3,780	3,813	3,846
5.3	31,503	31,886	32,268	32,651	33,057	33,462	33,868	34,274	34,679	35,085	35,491
5.4	28,515	28,840	29,166	29,491	29,830	30,168	30,507	30,846	31,184	31,523	31,862
5.5	30,772	32,721	34,671	36,620	38,684	40,747	42,811	44,875	46,938	49,002	51,066
5.6	11,988	12,272	12,555	12,839	13,112	13,386	13,659	13,932	14,206	14,479	14,752
5.7	8,250	8,741	9,232	9,723	10,311	10,899	11,487	12,075	12,663	13,251	13,839
5.8	11,098	11,362	11,626	11,890	12,158	12,425	12,693	12,961	13,228	13,496	13,764
6.1	47,600	53,235	58,871	64,506	68,258	72,011	75,763	79,515	83,268	87,020	90,772
6.2	39,350	43,403	47,457	51,510	55,239	58,967	62,696	66,425	70,153	73,882	77,611
7.1	14,041	17,005	19,970	22,934	24,257	25,579	26,902	28,225	29,547	30,870	32,193
7.2	12,059	14,104	16,149	18,194	20,251	22,307	24,364	26,421	28,477	30,534	32,591
7.3	10,459	11,210	11,961	12,712	13,681	14,649	15,618	16,587	17,555	18,524	19,493
7.4	14,438	19,223	24,007	28,792	32,402	36,013	39,623	43,233	46,844	50,454	54,064
7.5	1,975	3,291	4,607	5,923	7,029	8,134	9,240	10,346	11,451	12,557	13,663
Total:	265,559	290,840	316,121	341,402	361,917	382,431	402,946	423,461	443,975	464,490	485,005

### 2.5.2.3 Projections by Census Tract

The projections by census tract are provided in Appendices C and D.

## 2.6 Seasonal/Transient Projections

### 2.6.1 Background, Relevant Data & Method

The following section describes the data and procedures that were used to project the Watershed Study Area seasonal population.

Data and research compiled by the DP&Z were assembled and manipulated.<sup>2</sup> The underlying dataset developed by the DP&Z relied on a study of sales tax data from the State of Florida. The DP&Z evaluated differences in the monthly level of taxable sales in excess of an established permanent resident baseline figure. Residual sales amounts beyond the baseline were then attributed to purchases made by temporary non-residents. The analysis was performed for the years 1980 to 1990, yielding a time series of 11 years. Estimates of these visitor expenditures were then used to translate the taxable sales figures into the number of visitors. The updated research by the DP&Z relied on survey data for the years 1990 to 1997.

The two datasets were spliced together and a time series analysis was performed. The data was evaluated for seasonality and statistical tests were performed around mean peak monthly values. The annual time series for the County was projected forward by first

<sup>2</sup> See Seasonal/Transient Population-Miami-Dade County, Florida-Research Section, Miami-Dade Department of Planning and Zoning, December 1999.

estimating a time trend equation with parameters using linear regression. The time trend was estimated with linear regression based on regressing a time series of peak month seasonal population values (1980 to 1997, 18 years) against time.

A constant share technique was then applied to the extended projections to estimate the Watershed Study Area's share of the transient population. The constant share was derived by examining the ratio of the sum of the relevant MSAs for the Watershed Study Area to the total County's seasonal population for the peak demand month.

It was decided not to make any adjustments for Hurricane Andrew's spike in seasonal relief workers and other catastrophic event personnel reflected in the historic data for 1992. This decision was based on the view that at some point this sort of weather event will recur. Therefore, treating the data points related to Hurricane Andrew as statistical outliers would be discounting the impact of weather events on the seasonal/transient's historic peak month time series trend line rate of growth.<sup>3</sup> This decision is responsive to comments made by the TRC to consider the impacts of wet and dry years and hurricanes on the population.

The following tables are based on historical data provided by the DP&Z and show a comparison of the total seasonal population (estimated for 1997) by the type of accommodation for both the County and the Watershed Study Area. The data displayed in Table 10 represents an average number of overnight visitors on any given day for the peak month. The peak month is referenced because resource requirement planning is based on peak demand. Table 10 demonstrates that the majority of seasonal visitors to the Watershed Study Area (on any given day of the peak month) would most likely stay in hotels and nonresident households, followed by family, friends and trailer parks/campgrounds. Campsites, marinas and trailer parks as well as private homes of friends are relatively more popular within the Watershed Study Area compared to the County as a whole, as types of accommodations.

**Table 10**  
**Miami-Dade County and Watershed Study Area's Share of Seasonal/Transient Population for Peak Month in 1997 - By Type of Accommodation**

	Type of Accommodation	Miami-Dade MSAs	% of Total MD	Watershed Area MSAs	% of Total WA	Watershed as a % of Miami-Dade Cty.
1	Hotels, Motels, & Rooming Houses	65,971	44.4%	11,579	33.8%	17.6%
2	With Family & Friends	19,761	13.3%	8,454	24.7%	42.8%
3	Trailer Park, Marinas & Campgrounds	8,321	5.6%	4,890	14.3%	58.8%
4	Nonresident Households	54,531	36.7%	9,304	27.2%	17.1%
5	Total Visitors	148,584	100.0%	34,227	100.0%	23.0%

Source: Miami-Dade County, "Seasonal/Transient Population", Dec. 1999  
 Note: Study Area relevant transient MSAs encompass MSAs 5.1 - 7.5

<sup>3</sup> An outlier is an unusually small or large data value.

Table 11 shows the distribution of seasonal visitors by MSA group ranges within the Watershed Study Area. The bulk of seasonal visitors to the Watershed Study Area come to the Northeast and Southern parts of the Watershed. It is acknowledged that the distribution portrayed in Table 11 is dated and does not reflect new developments or accommodations such as new hotels and housing stock. However the data is useful for reference and estimation purposes.

**Table 11**  
**1997 Distribution of Average Daily Overnight Visitors by Type of Accommodation**  
**within MSA for Watershed Study Area - (Based on 1997 Peak Month)**

		NE	North Central	NW	SE Central	Southern	
	<b>Type of Accommodation</b>	<b>5.1 - 5.3</b>	<b>5.4 - 5.8</b>	<b>6.1 - 6.2</b>	<b>7.1 - 7.2</b>	<b>7.3 - 7.5</b>	<b>Total:</b>
1	Hotels, Motels, & Rooming Houses	8,141	1,012		449	1,977	11,579
2	With Family & Friends	2,856	2,337	1,917	656	688	8,454
3	Trailer Park, Marinas & Campgrounds	139	210		1,872	2,669	4,890
4	Nonresident Households	3,678	1,374	910	256	3,086	9,304
5	Total Visitors	14,814	4,933	2,827	3,233	8,420	34,227

Source: Miami-Dade County, "Seasonal/Transient Population", Dec. 1999

Note: Study Area relevant transient MSAs encompass MSAs 5.1 - 7.5

Table 12 shows the projected annual seasonal populations for the Watershed Study Area out to the year 2050. Seasonal populations do not remain with the Watershed Study Area for the entire year. Seasonal population represents the number of seasonal residents and visitors to the Watershed Study Area on any given evening throughout the year on average, based on the peak month.

**Table 12**  
**Watershed Study Area MSAs**  
**Projected Annual Seasonal Population**  
**(Average Daily Overnight Visitors) for Peak Month**

Year	Average Daily Overnight Visitors for Peak Month
1997	34,227
2000	44,442
2005	46,218
2010	47,993
2015	49,769
2020	51,544
2025	53,320
2030	55,095
2035	56,871
2040	58,646
2045	60,422
2050	62,197

The projections shown in Table 12 demonstrate that on any given evening during a peak month, the number of seasonal visitors to the Watershed Study Area is expected to rise to 46,218 in 2005 and to 62,197 by 2050.

### **2.7 Monroe County Population Placing Resource Demands on the Watershed Study Area**

As mentioned above, South Miami-Dade County provides water resources to support Monroe County. In October 2002, the South Florida Water Management District increased the FCAA Water Use Permit (WUP) allocation. The WUP increases FCAA's potential withdrawals to an average of 19.93 million gallons per day (mgd) and a maximum of 23.79 mgd. The wellfield is located in a pineland preserve west of Florida City within the Watershed Study Area. The groundwater extracted from the wellfield is treated at the J. Robert Dean Water Treatment Facility in Florida City. After treatment, the water is pumped via a 130-mile long pipeline to the Florida Keys.<sup>4</sup>

Because of these resource demands that cut across jurisdictional boundaries, the population projections must consider other "functional" populations as part of the planning exercise. The functional population considers the peak seasonal population combined with the permanent resident population.

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<sup>4</sup> See 2003 *Monroe County Public Facilities Capacity Assessment*, p. 40.

### **2.7.1 Data, Method, and Results of Seasonal, Permanent and Functional Population Projections for Monroe County**

Water supply for Monroe County residents and visitors is provided by the same source as Miami-Dade utilities. Therefore, population projections for Monroe County are relevant to the SMDWSP. Data relevant to analyzing both the permanent and seasonal population for Monroe County was assembled. Monroe County's permanent and seasonal historic and projected data was obtained from 1990 to 2015 in five-year increments.<sup>5</sup> The historic data points were interpolated between years and an annual historic time series was created.

The Keith and Schnars Team also obtained data from the Monroe County Tourist Development Council on airline passenger deplanements in Key West and the number of cruise ship passengers. These time series were reviewed and it was found that the airline passenger data was very stable over time. However, the number of cruise ship passengers has been trending upwards since rebounding from September 11, 2001, above and beyond previous ranges. The historic time series for seasonal population was then plotted against the peak monthly data observations for both air and cruise ship passengers combined.

Figure 3 shows the linear relationship and equation that was ultimately used to project the peak seasonal population for Monroe County. The equation does not account for the relationship between peak seasonal population and auto visitors to Monroe County but was used because it reflected recent data on trends in cruise ship activity.<sup>6</sup>

To project seasonal population beyond the years provided by Monroe County, the equation in Figure 3 was used. Both airline deplanements to Key West and the number of cruise ship passengers were projected separately and then combined as one independent variable. Time trend equations were fitted to each separate time series using linear regression.

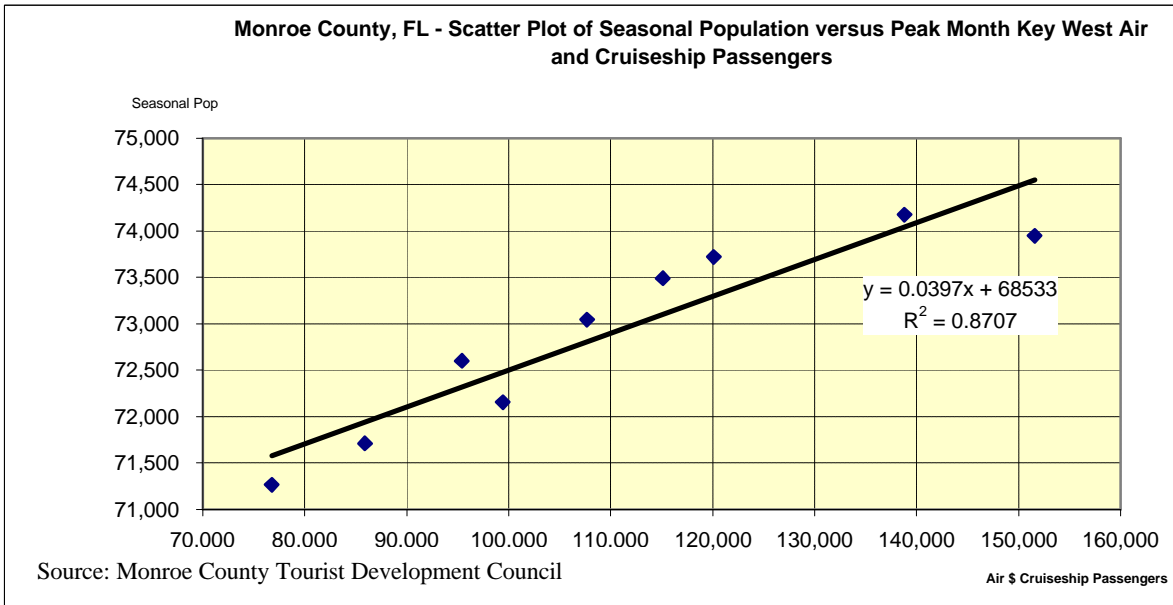
To project the resident permanent population beyond 2015, the last year projected by Monroe County, a time trend equation was fitted to the historic and projected time series using linear regression. The two projected times series, both seasonal and permanent, residents were then combined into one projection for the functional population out to the year 2050.

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<sup>5</sup> See *Ibid.*, p. 15.

<sup>6</sup> The data was available in monthly format from 1995 to through July of 2003. The year 2003 was then annualized and used in the regression.

**Figure 3**



Monroe County's assumptions and expectations for a leveling off or flattening in the permanent resident projected population in 2015 were incorporated into the extended projections. The 2015 population projection was extended to 2050 by estimating a trend line using the logarithmic functional form. Table 13 shows the results of the projections for peak seasonal, permanent resident and combined functional populations for Monroe County out to 2050.

**Table 13**  
**Monroe County, Florida**  
**Seasonal, Permanent and Functional Population Projections**

Year	Seasonal Projection	Permanent Projection	Functional Projection
1990	70,493	78,855	149,348
1995	71,266	82,990	154,256
2000	73,491	85,622	159,113
2005	74,800	88,305	163,105
2010	76,474	90,326	166,800
2015	78,148	90,654	168,802
2020	79,822	91,000	170,822
2025	81,497	91,649	173,146
2030	83,171	92,214	175,385
2035	84,845	92,714	177,559
2040	86,519	93,162	179,681
2045	88,193	93,568	181,761
2050	89,867	93,940	183,807

Source: Monroe County and consultant calculations. 2003 Monroe County Public Facilities Capacity Assessment, p. 15.

## 2.8 Homestead Air Reserve Base

In 1990, the Homestead Air Reserve Base (HARB) had a reported total military related population of 14,277 persons. This population was comprised of 6,534 military personnel (4,467 active duty military, 1,566 reservists, and 479 trainees), 5,506 dependents of active duty military personnel, and 2,187 civilian employees, including appropriated fund personnel, non-appropriated fund personnel, federal credit union employees and contractors.<sup>7</sup> In 1993, a year after Hurricane Andrew, the HARB was downsized and the population dropped dramatically.

The base is now home to the 482nd Fighter Wing, Air Force Reserve. The wing maintains and operates Homestead Air Reserve Station within the Homestead and Florida City vicinity of the Watershed Study Area. The 482nd Wing is a fully combat-ready unit capable of providing F-16C multi-purpose fighter aircraft, along with mission ready pilots and support personnel, for short-notice worldwide deployment. The Wing presently has more than 1,500 members, including approximately 1,200 reservists, of which 250 are full-time reservists, in addition to 300 full-time civilians.<sup>8</sup>

Over the course of the study period, the Keith and Schnars Team will monitor and report on developments at the HARB that could appreciably influence the Watershed Study Area's population. The Keith and Schnars Team will periodically check on any developments that could possibly impact the area population during the Study's tenure. The distribution of population on the HARB will be consistent with the current plan being implemented by the County Manager's Office.

## 3.0 CONCLUSION

Table 14 summarizes the data presented in this report and focuses on key years over the long-term planning horizon. The population projections task first reviewed additional demographic information for the Watershed that is necessary for appreciating how past trends could possibly influence the area's projected population and number of households. Projections were also developed out to the year 2050 for the Watershed Study Area population and number of households. Special seasonal/transient populations have also been projected including an extension of Monroe County's functional population because these populations influence resource demands.

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<sup>7</sup> Homestead AFB Disposal and Reuse FEIS, p. 3-4.

<sup>8</sup> <http://www.globalsecurity.org/military/agency/usaf/482fw.htm>

**Table 14  
Watershed Study Area Projections Summary**

	<b>2000</b>	<b>2005</b>	<b>2015</b>	<b>2025</b>	<b>2050</b>
<b>1) Population</b>	790,835	871,807	1,033,751	1,161,016	1,479,180
<b>2) Households</b>	265,559	290,840	341,402	382,431	485,005
<b>3) Average Household Size</b>	2.98	3.00	3.03	3.04	3.05
<b>4) Seasonal/Transient and Special Populations</b>					
Watershed Seasonal Population (Average Daily Overnight Visitors) for Peak Month	44,442	46,218	49,769	53,320	62,197
Monroe County Functional Projected Population	159,113	163,105	168,802	173,146	183,807
<b>5) Total Effective Population (1 + 4)</b>	<b>994,390</b>	<b>1,081,130</b>	<b>1,252,322</b>	<b>1,387,482</b>	<b>1,725,184</b>

Table 14 shows that by 2025 the Watershed will have 382,431 households, 1,161,016 persons and an average household size of 3.04 persons. Combining the seasonal populations who will frequent the Watershed Area and the Monroe County functional population will result in a projected effective population of 1,387,482 persons by 2015. By 2050, the Watershed will have 485,005 households, 1,479,180 persons and an average household size of 3.05 persons. The functional population will result in a projected effective population of 1,725,184 persons by 2050.

## 4.0 REFERENCES

DemProj Version 4 – A Computer Program for Making Population Projections, Spectrum System of Policy Models by John Stover (The Futures Group International) and Sharon Kirmeyer (Research Triangle Institute), December 1999.

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Miami-Dade County Department of Planning and Zoning Research Section, *Population Projections by Minor Statistical Area*, Miami, Florida, January 2002.

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Smith, Stanley K., Jeff Tayman and David A. Swanson, (2001), *State and Local Population Projections: Methodology and Analysis*, Kluwer Academic/Plenum Publishers, New York, NY, 10013

# **Appendix A**

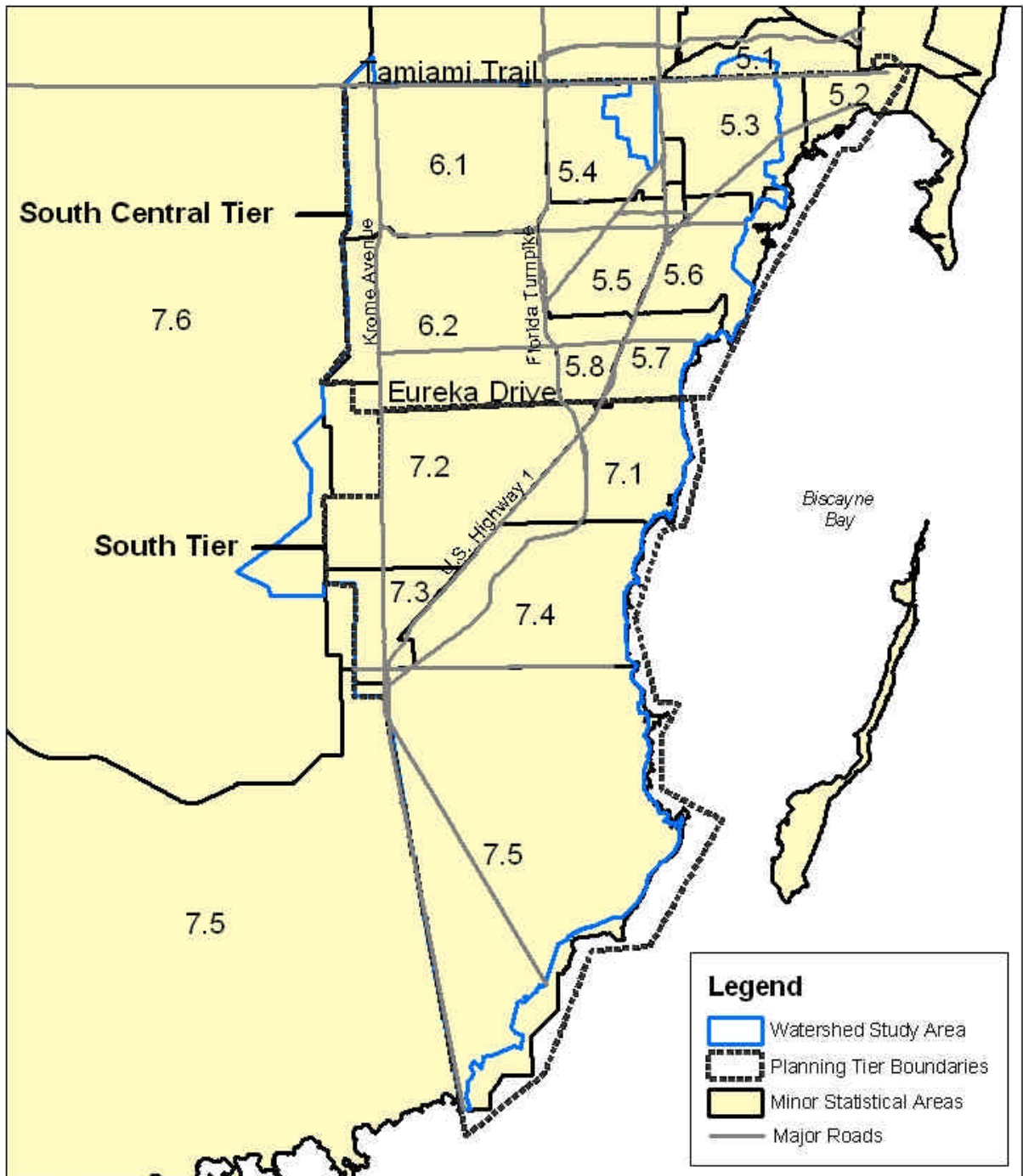
## **ADDITIONAL BACKGROUND DEMOGRAPHIC HISTORY**

## **ADDITIONAL BACKGROUND DEMOGRAPHIC HISTORY**

### **Population and Households by Minor Statistical Area (MSA)**

This section of the report provides additional information that will pertain to TRC comments relating to household size and composition. The Watershed is comprised of 119 census tracts that aggregate to 14 MSAs. The tract aggregations for MSAs 5.1, 5.3 and 5.4 only reflect portions (roughly eight percent, 74 percent and 64 percent) of the respective total populations of these MSAs because the MSAs are split by the Watershed Study Area.

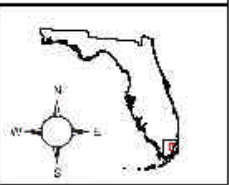
Some additional demographic background will be presented at the MSA summary level so that the reader is aware of which census tracts correspond to their respective MSAs and where the MSAs are located in relation to the Watershed Study Area. Figure 1 illustrates the location of the MSAs within the Watershed Study Area. The detailed appendices showing tract level information also show which census tracts correspond to their respective MSAs. In addition, summary tables and figures showing MSA data are presented with a location reference column next to the MSA code (i.e., N, S, W, etc.).



MIAMI-DADE  
 KEITH and SCHNARS, P.A.  
 ENGINEERS, PLANNERS, SURVEYORS

Figure A.1  
 Planning Analysis Tiers and  
 Minor Statistical Areas  
 South Miami-Dade  
 Watershed Study and Plan

Source:  
 Miami-Dade County



## Households and Average Household Size

Table A.1 provides a comparison of the number of households comprising the Watershed Study Area and the proportion of Hispanic households. The Census defines "household" to include all the people who occupy a housing unit as their usual place of residence. Household size is defined as the total number of people living in a housing unit. Hispanic households are defined as those that contain a householder who is Hispanic or Latino. Table A.1 demonstrates that the Watershed Study Area contains about one-third of all households in Miami-Dade County, the majority of who are Hispanic. The ratios are similar for the proportion of Hispanic households within the Watershed Study Area vis a vis the County's total number of Hispanic households. However, there are differences in average household size. The share of total Hispanic households is expected to rise over time in Miami-Dade County consistent with population trends.<sup>9</sup> Table A.1 shows that average household size is larger among Hispanic households within the Watershed Study Area.

**Table A.1**  
**Census 2000 Summary**  
**Household Characteristics in Miami-Dade and Watershed Study Area**

	<b>Watershed Census Tracts</b>	<b>Other Census Tracts (MD)</b>	<b>Miami-Dade County</b>
<b>Households (HH)</b>			
Total Households	263,515	513,259	776,774
Hispanic Households	151,027	286,484	437,511
Hispanic as % of Total	57.3%	55.8%	56.3%
<b>Average Household Size</b>			
All Households	3.04	2.83	2.90
Hispanic Households	3.29	2.96	3.07

Source: U.S. Census Bureau, Tables P15. Households, P15H. Hispanic or Latino Householder. P17. Average Household Size, P17H. Average Household Size (Hispanic or Latino Householder), H3 Occupancy Status Housing Units.

<sup>9</sup> The share of the County's Hispanic population is projected to rise to 64.3% by 2010 from 57.3% in 2000. See Table 1.1-3 Population Projections by Race & Hispanic Origin, Miami-Dade County, Florida: 1950-2010, p. 1-32, *Adopted 2003 Evaluation and Appraisal Report, Comprehensive Development Master Plan, Miami-Dade County, Florida*, October 2003.

## Watershed Study Area by Size (Square Miles), Population and Households by MSA

Table A.2 summarizes the distribution of the relevant area data and shows population by MSA and density. For some MSAs, the Watershed Study Area only contains a few of the constituent census tracts. These areas are noted in the table. Table A.2 also shows a geographic reference column necessary to orient the data to a particular area within the Watershed Study Area. The Watershed Study Area south of Eureka Drive was classified as South and the area between Tamiami Trail and Eureka Drive was classified as North. This description is slightly different than the terminology used by the County to describe planning level tiers that coincide with the Watershed Study Area (See Figure A.1).

The bulk of the Watershed Study Area population and households are concentrated in the Northwest within MSAs 6.1 and 6.2. About one-fifth of the population and households are concentrated in the southern portion of the Watershed Study Area below Eureka Drive that contains 79 percent of the area. Appendix B provides a breakdown of the square miles, population, households, average household size and housing units by census tract.

**Table A.2**  
**Watershed Study Area - Size, Population and Households - Census 2000**

MSA	Geo Ref	Square Miles	% of Sq. Miles	Population	% of Pop.	Population Density Pers/Sq.M	Total Households (HH)	% of HH
5.1 \a	NE	1.1	0.3%	10,273	1.3%	9,476	3,511	1.3%
5.3 \b	NE	14.6	4.0%	84,856	10.5%	5,803	31,503	12.0%
5.4 \c	NC	15.3	4.1%	88,384	11.0%	5,794	28,515	10.8%
5.5	NC	17.1	4.6%	80,111	10.0%	4,693	30,836	11.7%
5.6	NE	15.3	4.1%	32,484	4.0%	2,127	11,799	4.5%
5.7	NE	9.1	2.5%	25,346	3.1%	2,774	8,250	3.1%
5.8	NC	6.7	1.8%	35,040	4.4%	5,208	10,943	4.2%
6.1	NW	36.3	9.8%	156,625	19.5%	4,320	47,600	18.1%
6.2	NW	42.0	11.4%	125,812	15.6%	2,995	39,330	14.9%
7.1	SE	18.9	5.1%	41,644	5.2%	2,209	13,869	5.3%
7.2	SW	42.7	11.6%	39,273	4.9%	919	12,129	4.6%
7.3	SW	12.6	3.4%	32,367	4.0%	2,567	9,707	3.7%
7.4	SE	34.2	9.3%	48,265	6.0%	1,413	13,784	5.2%
7.5	S	102.5	27.8%	4,330	0.5%	42	1,739	0.7%
Total:		368	100%	804,810	100%	2,185	263,515	100.0%

Source: U.S. Census Bureau

Notes: \a Study Area population represents 8.4% of total MSA 2000 population (123,002)

\b Study Area population represents 71% of total MSA 2000 population (120,073)

\c Study Area population represents 86.5% of total MSA 2000 population (102,200)

## Key Household Differences

Table A.3 highlights some key household size and characteristic distinctions that can potentially influence the projected populations and the number of households within the Watershed Study Area.

**Table A.3**  
**Watershed Study Area Households and Average Household (HH) Size by MSA-  
Census 2000**

MSA	Loc	Total Households	% of Total HH	Hispanic HHs	% of Total Hispanic HHs	Hispanic HHs as a % Total HHs	All HHs Average Household Size	Average Hispanic Household Size
5.1	NE	3,511	1.3%	3,181	2.1%	90.6%	2.91	3.00
5.3	NE	31,503	12.0%	18,395	12.2%	58.4%	2.63	2.71
5.4	NC	28,515	10.8%	22,411	14.8%	78.6%	3.00	3.17
5.5	NC	30,836	11.7%	14,892	9.9%	48.3%	2.65	3.02
5.6	NE	11,799	4.5%	3,354	2.2%	28.4%	2.79	3.30
5.7	NE	8,250	3.1%	1,995	1.3%	24.2%	3.05	3.52
5.8	NC	10,943	4.2%	2,052	1.4%	18.8%	3.18	3.69
6.1	NW	47,600	18.1%	39,418	26.1%	82.8%	3.26	3.36
6.2	NW	39,330	14.9%	23,965	15.9%	60.9%	3.14	3.36
7.1	SE	13,869	5.3%	4,579	3.0%	33.0%	3.12	3.52
7.2	SW	12,129	4.6%	5,717	3.8%	47.1%	3.22	3.48
7.3	SW	9,707	3.7%	3,508	2.3%	36.1%	3.32	4.05
7.4	SE	13,784	5.2%	7,158	4.7%	51.9%	3.63	3.92
7.5	S	1,739	0.7%	402	0.3%	23.1%	2.43	3.17
Total:		263,515	100%	151,027	100%	57.3%		

Source: U.S. Census Bureau, Census 2000 Summary File 1 (SF 1) 100-Percent Data, Table P15. HOUSEHOLDS [1] - Universe: Households, Table P17. AVERAGE HOUSEHOLD SIZE [1] - Universe: Households, P17H. AVERAGE HOUSEHOLD SIZE (HISPANIC OR LATINO HOUSEHOLDER) [1] - Universe: Households with a householder who is Hispanic or Latino

On average, across the Watershed Study Area, households that are classified as having a Hispanic or Latino householder account for 57 percent of all households in the watershed. About 42 percent of the Hispanic households are concentrated in MSAs 6.1 and 6.2 in the Northwest. An additional 37 percent are concentrated in the Northeast and North Central MSAs of 5.3, 5.4, and 5.5.

This proportion of Hispanic out of total households (HH) varies by MSA as Table A.3 shows and ranges from 61 to 90 percent in the NW/NE (MSA 6.1, 6.2, 5.1) to under 30 percent for some MSAs adjacent to the Bay and in the North central part of the Watershed Study Area (5.6, 5.7, 5.8). If the population and number of households continue to shift in favor of Hispanic majorities, it can be expected that larger households will become a more common characteristic of the Watershed Study Area. This observation is stated with the caveat that this past trend may or may not persist over the very long-term.<sup>10</sup>

<sup>10</sup> Observers have noted that after September 11th immigration patterns have the potential to change as different immigration policies and security measures are implemented in the U.S. and as a greater number of South Americans choose Western Europe over North America as a relocation destination.

## **Net Migration Relevant Data and Information**

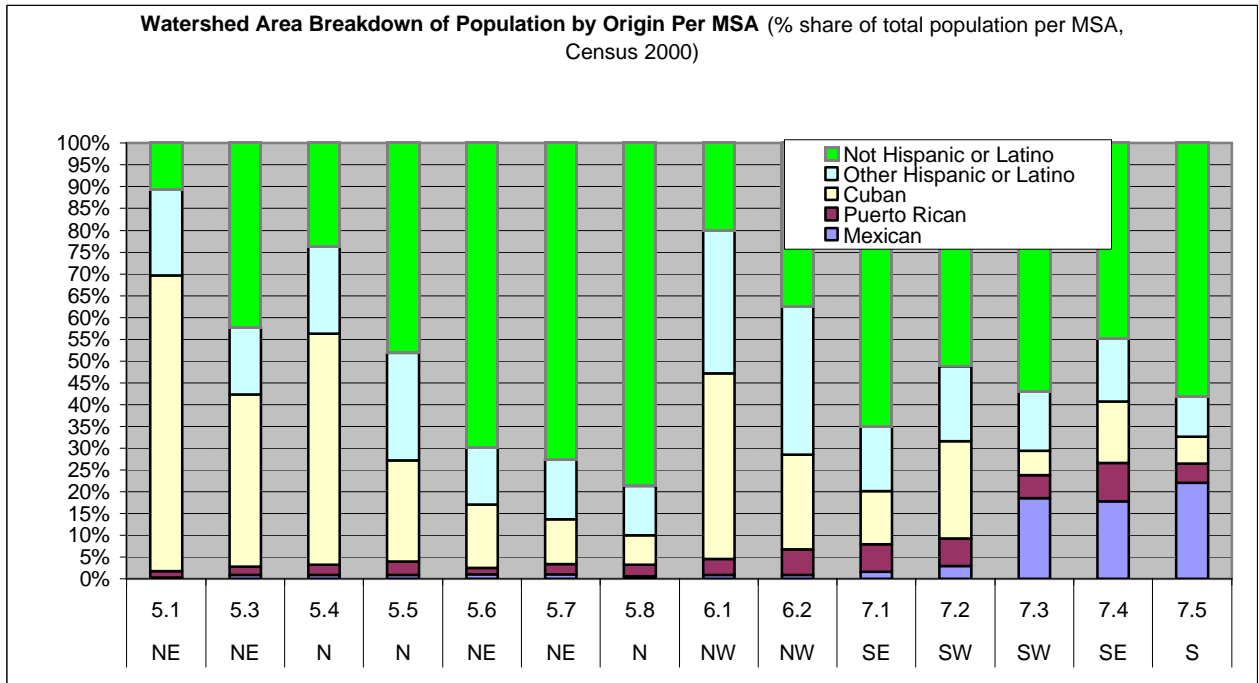
### **Distribution of Population by Hispanic Origins**

In order to gain more insights concerning the composition of households throughout the Watershed Study Area, the following section summarizes population origins across the Watershed Study Area by MSA. The following tables can be compared and cross-referenced to the average HH size data displayed in Table A.3 so that additional household composition characteristics can be placed in both a geographic and cultural context.

Figure A.2 highlights the diversity and rich cultural mix that is typical of the Watershed Watershed Study Area. Figure A.2 also compares the non-Hispanic and main Hispanic groups by MSA. In combination with other exhibits, Figure A.2 can be used to draw inferences about internal movements within the County as some households have moved to newer subdivisions from more traditional neighborhoods. For example, some relatively more established Cuban populations concentrated along SW 8th Street in MSAs 5.1 and 5.3 have migrated westward and south (to MSAs 6.1, 6.1, 7.2) to newer homes that have only recently been constructed in the last several years.

This type of western intra-Watershed Study Area migration among certain populations is also apparent in other exhibits that will be displayed below. Some relatively more recent subdivisions are also comprised of relatively more recent populations. Figure A.2 shows that the "Other Hispanic or Latino" share of total MSA population is comparatively larger in MSAs 6.1 and 6.2 compared to other MSAs. Other Hispanic groups are more evenly dispersed across the MSAs than is the Mexican origin population that is concentrated in the southern Watershed Study Areas. Figures A.2, A.3 and A.4 were developed to address TRC comments concerning the impact on household demand of internal movements within the County as well as household composition and tenure.

**Figure A.2**



Source: U.S. Census Bureau, QT-P9. Hispanic or Latino by Type: 2000, Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data

## Immigration

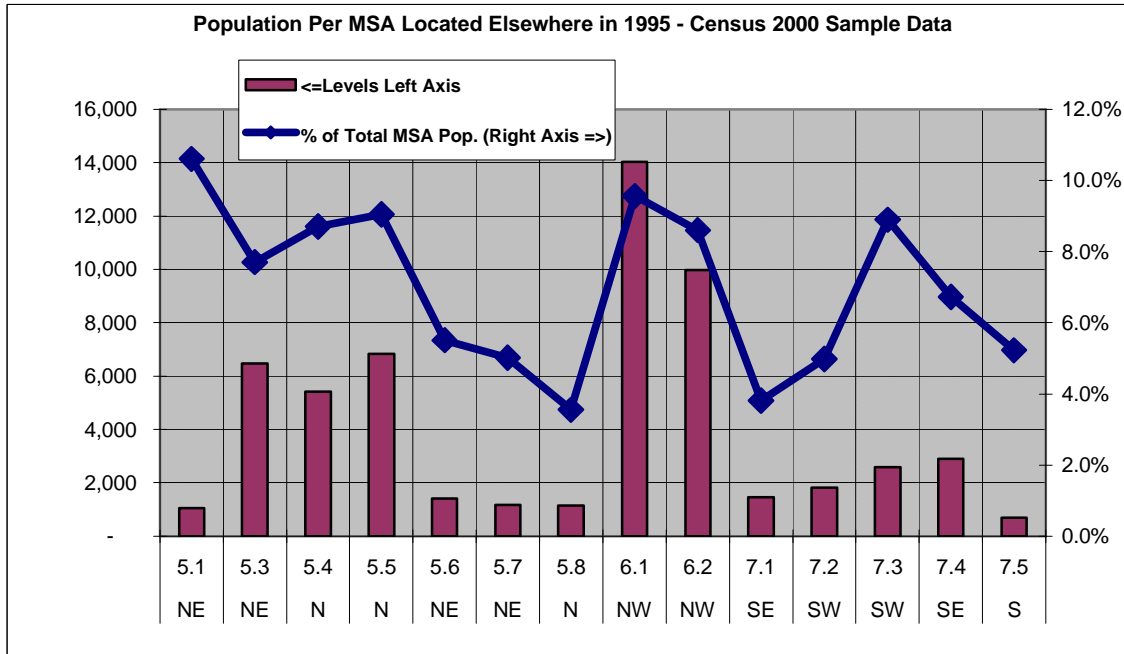
The first part of the population growth task historical review demonstrated that net migration is the most important and variable component of annual changes in population in the Watershed Study Area. In order to address TRC comments concerning both internal movements within the Watershed Study Area and immigration patterns and arrivals, special Census data was assembled. The following exhibits summarize information on residency in 1995 by MSA for the Watershed Study Area. The source of this data is the U.S. Census 2000 Summary File 4 (SF 4) Sample Data, Table PCT49, Residence in 1995 for the Population 5 Years and Over-State, County, and Place Level.

Figure A.3 plots the population per MSA on the left axis, located elsewhere in 1995. “Located elsewhere” means that these persons were abroad. Abroad includes those individuals whose previous residence was in a foreign country, at sea or on the U.S. Island Areas (Guam, U.S. Virgin Islands, American Samoa). For the Watershed Study Area, the overwhelming majority of these persons, 99 percent (56,748/56,996), were located in another country in 1995.

The right axis shows the proportion or percent of these "abroad" populations as a share of the total population for that particular MSA. On average, the percent of the population in the Watershed Study Area located abroad in 1995 was 7.7 percent, slightly less than 9.4 percent for Miami-Dade County and greater than Florida's ratio of 3.9 percent. Several MSAs had abroad populations in 1995 that exceeded 9 percent (5.1, 5.5, 6.1, 7.3). Only

two MSAs had ratios that were close to the state average (5.8 and 7.1). MSAs 5.8 and 7.1 are areas with non-Hispanic majority populations (Figure A.2).

**Figure A.3**



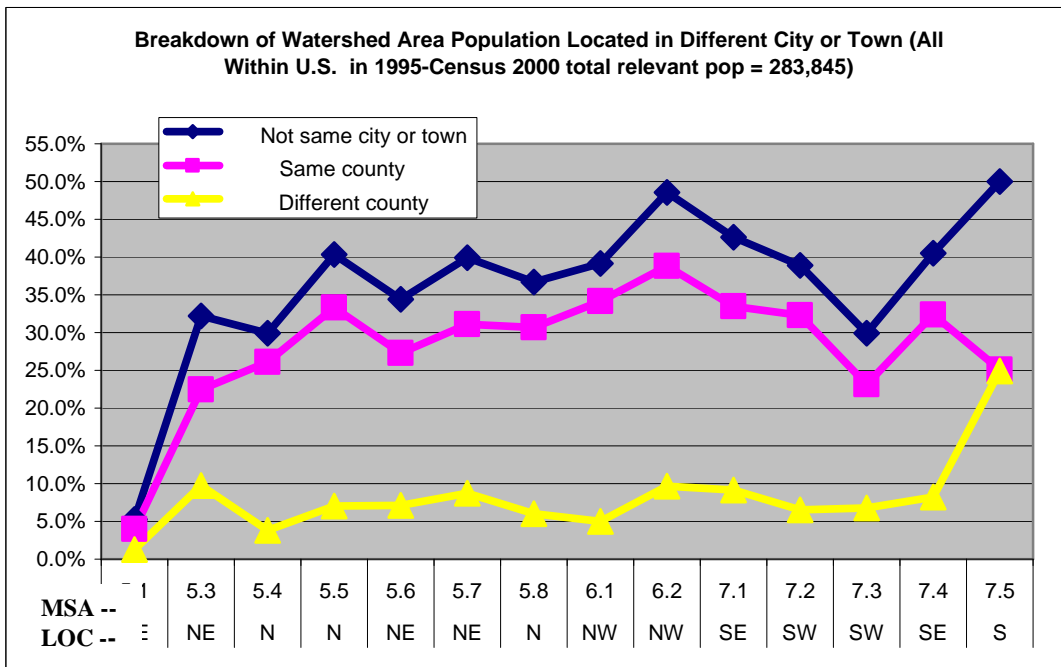
Source: U.S. Census Bureau  
 PCT49. RESIDENCE IN 1995 FOR THE POPULATION 5 YEARS AND OVER -- STATE, COUNTY, AND PLACE LEVEL [26] -  
 Universe: Population 5 years and over, Data Set: Census 2000 Summary File 4 (SF 4) - Sample Data

**Domestic Migration**

The comparison of residency location in 1995 can also be used to assess internal movements both to the Watershed Study Area from other parts of the County as well as from other states and regions across the United States. According to the Census 2000 Sample data, 51.2 percent of the Watershed Study Area’s population was located in the same house in 1995. This compares to ratios of 50 percent for Miami-Dade and 49 percent for Florida. Of the 48.8 percent of the Watershed Study Area population who were in a different residence in 1995, 31 percent were within the County while 7.5 percent were residents of a different county within the United States on average. By MSA, these ratios vary.

Figure A.4 shows that for the Watershed Study Area in the NW (MSA 6.2, including the Kendall West area and Tamiami relevant tracts) about half of this population were not residents of these particular areas in 1995 but mostly came from other areas within the County. About one quarter of the MSA 7.5 population in the South apparently came to the Watershed Study Area from outside the County between the years 1995 and 2000.

**Figure A.4**



## Households and Housing Units

### Housing Units

Because of the demands placed on land usage and the Watershed environment over time, background information on the number of Watershed Study Area households, housing units and select characteristics will be reviewed in this section. This section will also review the differences in living arrangements normalized to space or acres across the various census tracts comprising the Watershed in 2000.

Table 4 provides a breakdown of select characteristics of households and housing units within the Watershed Study Area compared to the entire County. Under the Census reporting, the number of households is equivalent to the number of occupied housing units. The table highlights the demands for housing that is apparent for the Watershed Study Area households. The Watershed Study Area has a relatively higher share of occupied units in relation to the County. Fewer housing units are available to accommodate the number of Watershed Study Area households compared to other areas.

**Table A.4**  
**Census 2000 Summary**  
**Housing Characteristics in Miami-Dade**  
**County and the Watershed Study Area**

	<b>Watershed Census Tracts</b>	<b>Other Census Tracts (MD)</b>	<b>Miami- Dade County</b>
<b>Housing Units</b>			
Total	276,077	576,201	852,278
Occupied	263,515	513,259	776,774
Occupied as % of Total:	95.4%	89.1%	91.1%
Vacant	12,562	62,942	75,504
Vacant as % of Total:	4.6%	10.9%	8.9%
Housing Units per HH	1.048	1.123	1.097

Source: U.S. Census Bureau, Tables P15. Households, H3 Occupancy Status Housing Units.

In terms of housing stock or units, Table A.4 shows that the Watershed Study Area accounts for 32 percent of all units in Miami-Dade County of which a lesser relative proportion (4.6 percent) are vacant. There are fewer available housing units per household within the Watershed Study Area. On average, across all of the census tracts that comprise the MSAs, owner occupied units account for 70 percent of total occupied housing units in the Watershed Study Area. There is not much variation in this ratio with the exception of MSA 7.3 where renter occupied units are in the majority (53 percent).

### **Population Density and Occupied Housing Units per Acre (Housing Density)**

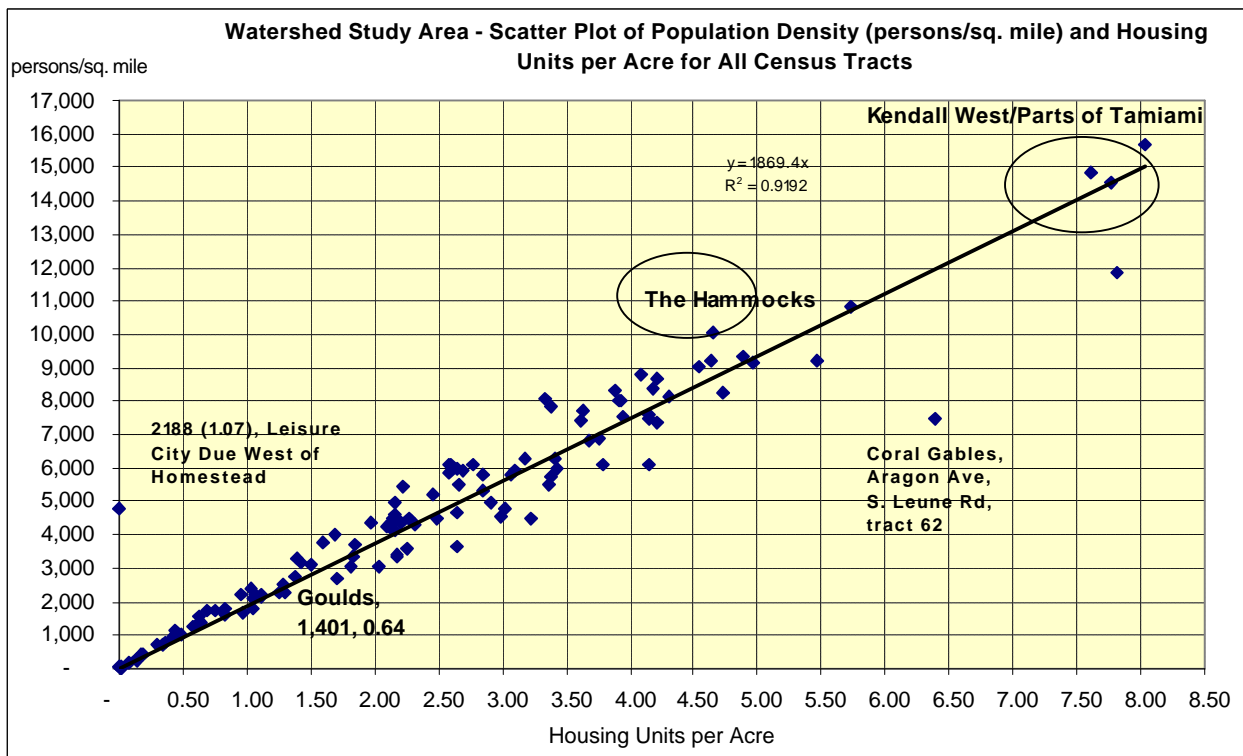
In order to compare population density across the various census tracts to the type of housing units available to accommodate this population (in 2000), the scatter plot contained in Figure A.5 was created. Figure A.5 organizes the population and housing unit density data in a way that highlights differences in housing arrangements and density across Census tracts within the Watershed Study Area. Population density rises with more intense forms of housing arrangements and development such as multi-family tract townhouses. Population density is lower per square mile within areas characterized by single-family detached units. Figure A.5 provides a way of grouping the data at the census tract level that can then be used to interpret average relationships across tracts.

Figure A.5 plots the population density (persons per square mile) on the Y or vertical axis against the number of Occupied Housing Units per Acre on the X or horizontal axis. Each point or dot on the chart represents values associated with a particular census tract. Square miles were converted to acres using the one-square mile equal to 640 acres conversion value. Labels for select places or neighborhoods within the Watershed Study

Area are also attached so that the reader can reference and envision the population and housing unit density for that particular area.

For example, the Goulds neighborhood has an average population density of 1,401 persons per square mile and 0.64 housing units per acre. Moving along the fitted line in a North Easterly direction are census tracts that are more densely populated and crowded in terms of the number of housing units per acre. In the Northwest border areas of the Watershed Study Area boundary, parts of Tamiami and Kendall West have between 14,000 - 16,000 persons per square mile living in housing characterized by 7.5 and 8.0 units per acre. These areas reflect multi-family row types of units and townhouses.

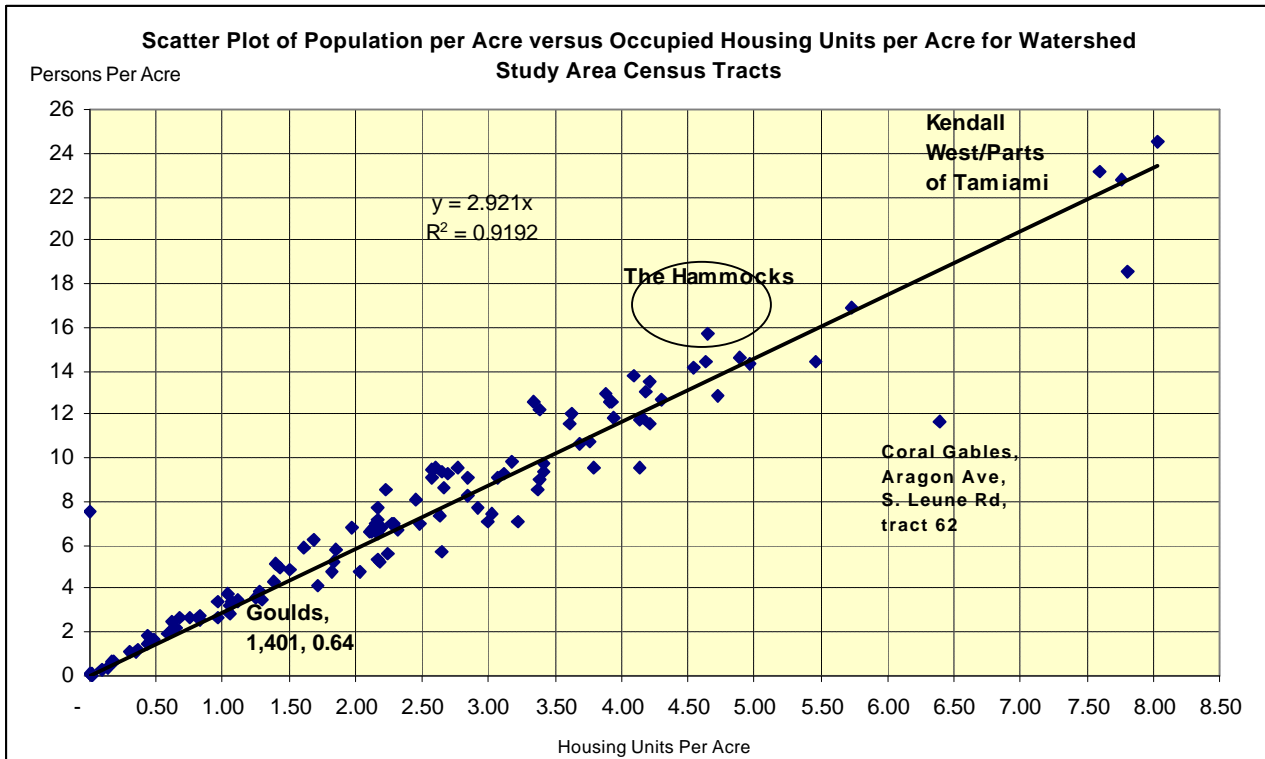
**Figure A.5**



Source: U.S. Census Bureau, Population and Occupied Housing Units Census Tract data for 2000

Figure A.6 examines the same data after converting square miles to acres and relating population per acre to units. Figure A.6 shows that across the Watershed Study Area Census tracts, adding one additional housing unit per acre at the margin, increases population density by three persons per acre on average. Figures A.5 and A.6 can be used to classify the type of housing units built since the last Census by understanding what sort of population density is most likely associated with these types of structures and living arrangements across the region.

**Figure A.6**



### Comment on Recent Construction Activity Since 2000

It should be noted that the Keith and Schnars Team are well aware of new housing units being put in place since the 2000 Census. For example, it has been reported that thousands of units have been built in the Homestead area in recent years and would not be captured by the exhibits in this section. While the data in this report may not reflect development activity occurring between 2000 and 2003, it nevertheless reveals the start of certain trends related to higher density living arrangements.

As new data becomes available, the baseline snapshot provided in this report can be used as a backdrop with which to group or categorize newer types of developments. Figure A.5 shows a concentration of tracts clustered between various group ranges around the regression line. For example, one cluster is visible for population densities of 4,000-6,000 persons/square mile and 2.3 occupied units per acre. This cluster corresponds to between six to ten persons per acre as Figure A.6 illustrates.

## Occupied Housing Units by Year Built

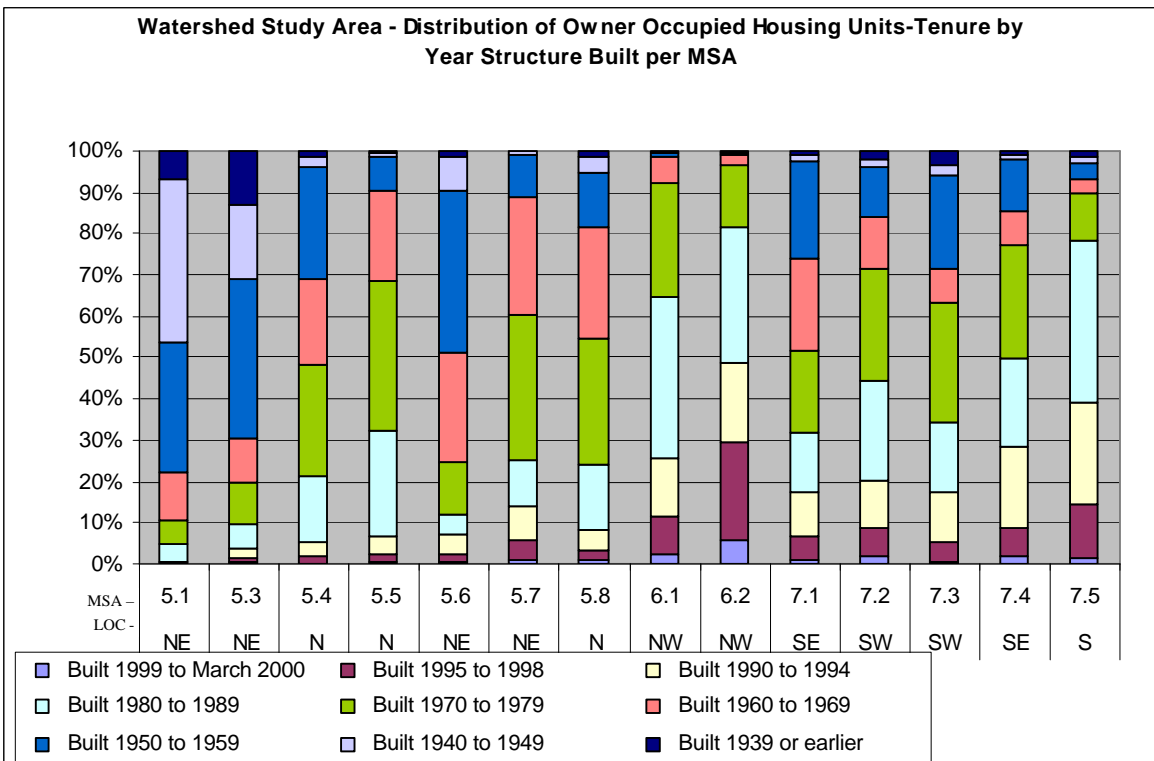
### Owner Occupied Units

The Census 2000 also reported information on the breakdown of the housing stock vintage or tenure of occupied units by year built. The data is parsed into decade intervals before the 1990s, while the 1990s are split up into narrower divisions.

Figure A.7 summarizes this information for the Watershed Study Area at the MSA level. This data is rolled up from the underlying census tract level detail. Although the comparison does not consider recent units built in the last few years, the chart does reveal the start of certain trends that were captured by the last Census.

Figure A.7 demonstrates that the North Eastern and Northern portion of the Watershed Study Area are comprised of predominantly older vintage housing. For example, almost 80 percent of the owner occupied housing units for the census tracts evaluated within MSA 5.1 were built between 1939 and 1959. The occupied housing unit stock in 2000 is relatively newer as one moves West and South within the Watershed Study Area. About one half of owner occupied units in MSA 6.2 were constructed in the 1990s, while about 40 percent of MSA 7.5's units were built during that period. The proportion of total owner occupied units built in the 1990's is represented by the sum of the violet, magenta and pale yellow sections of the MSA bars.

**Figure A.7**



**Appendix B**  
**Population, Households**  
**And Housing Units**

**Appendix B - Page 1**

**Watershed Study Area Square Miles, Population, Households and Housing Units by MSA and Tract**

No.	MSA	Census Tract	Square Miles	Population				Households			Household Size		Housing Units			Occ. Units per Acre
				Density (per/sq. mile)	Total Population	Hispanic Population	Hisp Pop./ Total Pop.	Total Households	Hispanic Households	Hisp HH/ Total HH	Average HH Size	Avg. Hispanic HH Size	Total	Occupied	Unoccupied	
1	5.1	56	0.50	8,426	4,245	3,711	87.4%	1,490	1,320	88.6%	2.83	2.92	1,534	1,490	44	4.62
2	5.1	58.01	0.58	10,387	6,028	5,459	90.6%	2,021	1,861	92.1%	2.98	3.07	2,066	2,021	45	5.44
3	5.3	59.01	0.51	8,352	4,221	3,560	84.3%	1,491	1,277	85.6%	2.77	2.87	1,529	1,491	38	4.61
4	5.3	59.02	0.52	8,262	4,260	3,734	87.7%	1,325	1,174	88.6%	3.09	3.19	1,349	1,325	24	4.02
5	5.3	59.03	0.54	9,630	5,232	4,525	86.5%	1,631	1,440	88.3%	3.17	3.28	1,656	1,631	25	4.69
6	5.3	59.04	0.55	8,423	4,604	3,865	83.9%	1,533	1,299	84.7%	3.00	3.14	1,570	1,533	37	4.38
7	5.3	60.01	0.93	6,971	6,518	4,994	76.6%	2,111	1,592	75.4%	3.01	3.25	2,185	2,111	74	3.53
8	5.3	60.02	1.12	4,848	5,417	4,269	78.8%	1,719	1,316	76.6%	3.03	3.29	1,782	1,719	63	2.40
9	5.3	61.01	0.83	6,109	5,048	3,218	63.7%	1,982	1,253	63.2%	2.52	2.68	2,077	1,982	95	3.75
10	5.3	61.02	1.55	3,696	5,728	2,747	48.0%	2,408	1,069	44.4%	2.37	2.67	2,658	2,408	250	2.43
11	5.3	62	1.15	8,312	9,580	6,406	66.9%	5,247	3,354	63.9%	1.83	1.94	5,578	5,247	331	7.11
12	5.3	72	0.35	8,221	2,908	162	5.6%	1,060	47	4.4%	2.74	3.11	1,207	1,060	147	4.68
13	5.3	74	1.54	4,047	6,244	2,863	45.9%	2,498	1,051	42.1%	2.50	2.79	2,603	2,498	105	2.53
14	5.3	75.01	0.76	3,553	2,686	1,350	50.3%	979	461	47.1%	2.64	2.98	1,032	979	53	2.02
15	5.3	75.02	0.51	5,425	2,754	330	12.0%	1	-	0.0%	2.00	0.00	1	1	-	0.00
16	5.3	75.03	0.21	6,421	1,380	427	30.9%	398	172	43.2%	2.14	2.30	418	398	20	2.89
17	5.3	76.01	0.54	4,989	2,670	1,508	56.5%	946	502	53.1%	2.81	3.14	974	946	28	2.76
18	5.3	76.02	1.60	5,408	8,676	4,349	50.1%	3,524	1,651	46.9%	2.46	2.71	3,643	3,524	119	3.43
19	5.3	76.03	0.49	6,964	3,426	633	18.5%	1,197	253	21.1%	2.84	2.46	1,249	1,197	52	3.80
20	5.3	79.01	0.92	3,797	3,504	1,405	40.1%	1,453	484	33.3%	2.41	3.00	1,518	1,453	65	2.46
21	5.4	77.02	2.83	2,154	6,091	3,868	63.5%	2,221	1,317	59.3%	2.73	3.12	2,300	2,221	79	1.23
22	5.4	85.01	1.06	6,222	6,593	4,877	74.0%	2,103	1,491	70.9%	3.11	3.41	2,134	2,103	31	3.10
23	5.4	85.02	0.96	5,013	4,830	3,401	70.4%	1,591	1,083	68.1%	3.02	3.29	1,612	1,591	21	2.58
24	5.4	86.01	1.07	4,849	5,181	4,145	80.0%	1,497	1,177	78.6%	3.45	3.70	1,530	1,497	33	2.19
25	5.4	86.02	1.14	5,764	6,543	4,902	74.9%	1,981	1,485	75.0%	3.27	3.46	2,026	1,981	45	2.73
26	5.4	87	1.72	6,968	12,005	9,164	76.3%	3,477	2,590	74.5%	3.41	3.70	3,524	3,477	47	3.15
27	5.4	88.01	0.99	9,072	9,006	7,982	88.6%	2,832	2,577	91.0%	3.13	3.19	2,883	2,832	51	4.46
28	5.4	88.03	1.05	6,471	6,790	5,987	88.2%	2,128	1,996	93.8%	3.17	3.19	2,172	2,128	44	3.17
29	5.4	88.04	0.99	7,635	7,578	6,707	88.5%	2,479	2,259	91.1%	3.04	3.10	2,521	2,479	42	3.90
30	5.4	89.02	0.98	7,593	7,441	6,363	85.5%	2,570	2,274	88.5%	2.88	2.93	2,603	2,570	33	4.10
31	5.4	89.04	1.08	1,677	1,813	487	26.9%	476	112	23.5%	2.21	2.21	690	476	214	0.69
32	5.4	89.05	0.97	10,609	10,295	8,764	85.1%	3,563	3,111	87.3%	2.88	2.94	3,664	3,563	101	5.74
33	5.4	101.11	0.41	10,256	4,218	2,681	63.6%	1,597	939	58.8%	2.64	2.97	1,671	1,597	74	6.07
34	5.5	77.03	1.70	5,011	8,525	4,795	56.2%	3,902	1,955	50.1%	2.18	2.54	4,114	3,902	212	3.58
35	5.5	78.03	2.00	5,089	10,201	4,981	48.8%	4,310	1,876	43.5%	2.35	2.73	4,554	4,310	244	3.36
36	5.5	84.05	2.53	2,546	6,436	3,004	46.7%	2,248	957	42.6%	2.85	3.26	2,310	2,248	62	1.39
37	5.5	84.07	1.59	4,877	7,749	4,596	59.3%	2,669	1,478	55.4%	2.89	3.24	2,757	2,669	88	2.62
38	5.5	84.09	2.06	2,512	5,184	1,885	36.4%	1,898	601	31.7%	2.72	3.23	1,976	1,898	78	1.44
39	5.5	84.1	1.01	6,376	6,419	3,361	52.4%	2,421	1,112	45.9%	2.65	3.11	2,492	2,421	71	3.76
40	5.5	84.11	1.27	6,814	8,632	5,269	61.0%	3,736	2,201	58.9%	2.31	2.47	3,889	3,736	153	4.61
41	5.5	84.12	1.01	6,657	6,752	4,155	61.5%	2,470	1,460	59.1%	2.50	2.84	2,655	2,470	185	3.81
42	5.5	84.13	0.57	13,188	7,515	4,696	62.5%	3,169	1,832	57.8%	2.36	2.65	3,297	3,169	128	8.69
43	5.5	84.14	1.78	4,130	7,341	3,124	42.6%	2,359	910	38.6%	3.11	3.48	2,399	2,359	40	2.07
44	5.5	84.15	1.55	3,457	5,357	1,720	32.1%	1,654	510	30.8%	3.24	3.64	1,671	1,654	17	1.67
45	5.6	76.04	1.38	4,079	5,619	2,175	38.7%	2,602	877	33.7%	2.13	2.44	2,678	2,602	76	2.95
46	5.6	78.01	0.92	956	876	163	18.6%	246	46	18.7%	3.35	3.91	253	246	7	0.42
47	5.6	78.02	3.77	2,309	8,704	2,660	30.6%	2,816	764	27.1%	3.09	3.58	2,897	2,816	81	1.17
48	5.6	79.02	1.06	2,969	3,157	996	31.5%	1,293	337	26.1%	2.43	3.01	1,367	1,293	74	1.90
49	5.6	80	4.57	1,154	5,275	2,109	40.0%	1,989	706	35.5%	2.65	3.18	2,130	1,989	141	0.68
50	5.6	81	3.58	2,476	8,853	2,170	24.5%	2,853	624	21.9%	3.09	3.65	2,912	2,853	59	1.25
51	5.7	82.01	3.30	2,526	8,337	2,292	27.5%	2,747	671	24.4%	3.03	3.50	2,796	2,747	49	1.30
52	5.7	82.03	3.00	2,763	8,291	2,118	25.5%	2,723	623	22.9%	3.04	3.43	2,777	2,723	54	1.42
53	5.7	82.04	2.84	3,074	8,718	2,568	29.5%	2,780	701	25.2%	3.07	3.62	2,858	2,780	78	1.53
54	5.8	83.03	1.73	4,967	8,600	1,401	16.3%	2,642	381	14.4%	3.25	3.71	2,814	2,642	172	2.38
55	5.8	83.04	1.57	4,719	7,397	387	5.2%	2,347	82	3.5%	3.11	3.91	2,458	2,347	111	2.34

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Watershed Study Area Square Miles, Population, Households and Housing Units by MSA and Tract

No.	MSA	Census Tract	Square Miles	Population			Households			Household Size		Housing Units			Occ. Units per Acre	
				Density (per/sq.mile)	Total Population	Hispanic Population	Hisp Pop./ Total Pop.	Total Households	Hispanic Households	Hisp HH/ Total HH	Average HH Size	Avg. Hispanic HH Size	Total	Occupied		Unoccupied
56	5.8	83.05	1.30	4,116	5,368	1,750	32.6%	1,900	549	28.9%	2.80	3.16	2,001	1,900	101	2.28
57	5.8	83.06	1.18	6,157	7,288	2,192	30.1%	2,254	593	26.3%	3.21	3.69	2,333	2,254	79	2.98
58	5.8	83.07	0.94	6,786	6,387	1,761	27.6%	1,800	447	24.8%	3.63	3.96	1,854	1,800	54	2.99
59	6.1	101.24	2.77	2,242	2,242	1,887	75.2%	581	448	77.1%	3.73	3.94	606	581	25	0.33
60	6.1	101.46	11.34	1,297	14,710	11,536	78.4%	3,558	3,353	94.2%	3.56	3.57	3,665	3,558	107	0.49
61	6.1	101.47	0.59	9,553	5,623	4,908	87.3%	1,697	1,573	92.7%	3.31	3.34	1,735	1,697	38	4.50
62	6.1	101.48	0.55	10,115	5,582	4,815	86.3%	1,782	1,529	85.8%	3.12	3.26	1,834	1,782	52	5.05
63	6.1	101.49	0.63	11,077	6,952	6,228	89.6%	2,237	2,090	93.4%	3.10	3.12	2,302	2,237	65	5.57
64	6.1	101.5	0.43	16,387	7,004	6,379	91.1%	2,392	2,287	95.6%	2.93	2.94	2,461	2,392	69	8.74
65	6.1	101.51	1.21	4,465	5,416	4,765	88.0%	1,461	1,375	94.1%	3.66	3.65	1,487	1,461	26	1.88
66	6.1	101.52	1.04	6,603	6,852	5,430	79.2%	1,934	1,569	81.1%	3.37	3.53	1,950	1,934	16	2.91
67	6.1	101.53	4.28	2,037	8,719	6,749	77.4%	2,603	2,079	79.9%	3.34	3.42	2,688	2,603	85	0.95
68	6.1	101.54	3.96	2,705	10,719	8,742	81.6%	2,954	2,538	85.9%	3.62	3.67	3,023	2,954	67	1.16
69	6.1	101.55	0.56	18,371	10,369	8,448	81.5%	3,401	2,801	82.4%	3.05	3.16	3,591	3,401	192	9.41
70	6.1	101.56	0.60	18,048	10,754	8,250	76.7%	3,523	2,660	75.5%	3.05	3.27	3,685	3,523	162	9.24
71	6.1	101.57	2.89	2,436	7,039	5,394	76.6%	1,978	1,565	79.1%	3.56	3.63	2,039	1,978	61	1.07
72	6.1	101.58	0.97	10,043	9,740	7,865	80.7%	2,902	2,451	84.5%	3.35	3.44	2,945	2,902	43	4.68
73	6.1	101.59	0.82	10,429	8,557	6,389	74.7%	2,899	2,056	70.9%	2.95	3.22	3,082	2,899	183	5.52
74	6.1	101.6	0.72	9,245	6,650	4,184	62.9%	2,332	1,410	60.5%	2.84	3.08	2,446	2,332	114	5.07
75	6.1	101.61	0.96	9,418	9,077	7,428	81.8%	2,718	2,334	85.9%	3.33	3.41	2,764	2,718	46	4.41
76	6.1	101.62	0.50	11,071	5,497	4,528	82.4%	1,767	1,510	85.5%	3.10	3.17	1,806	1,767	39	5.56
77	6.1	101.63	0.52	12,604	6,500	5,363	82.5%	2,202	1,865	84.7%	2.95	3.03	2,264	2,202	62	6.62
78	6.1	101.64	0.91	9,450	8,623	6,130	71.1%	2,679	1,925	71.9%	3.19	3.35	2,743	2,679	64	4.59
79	6.2	101.14	4.50	1,942	8,730	5,357	61.4%	2,203	1,393	63.2%	3.36	3.52	2,286	2,203	83	0.77
80	6.2	101.65	2.92	1,510	4,413	3,196	72.4%	1,294	972	75.1%	3.41	3.53	1,376	1,294	82	0.69
81	6.2	101.66	1.02	9,446	9,598	6,319	65.8%	3,003	1,947	64.8%	3.19	3.40	3,136	3,003	133	4.62
82	6.2	101.67	2.67	4,813	12,869	8,245	64.1%	4,285	2,602	60.7%	3.00	3.29	4,511	4,285	226	2.50
83	6.2	101.68	1.14	11,181	12,693	8,552	67.4%	3,756	2,525	67.2%	3.37	3.60	3,885	3,756	129	5.17
84	6.2	101.69	0.85	9,152	7,766	4,639	59.7%	2,853	1,641	57.5%	2.66	2.88	3,062	2,853	209	5.25
85	6.2	101.7	13.57	802	10,890	6,110	56.1%	3,293	1,808	54.9%	3.30	3.53	3,473	3,293	180	0.38
86	6.2	101.71	3.09	1,163	3,593	1,608	44.8%	1,064	465	43.7%	3.38	3.63	1,092	1,064	28	0.54
87	6.2	101.72	3.22	1,927	6,201	4,530	73.1%	1,733	1,298	74.9%	3.58	3.69	1,821	1,733	88	0.84
88	6.2	101.73	2.04	9,093	18,547	13,678	73.7%	5,119	3,799	74.2%	3.62	3.76	5,368	5,119	249	3.92
89	6.2	101.74	0.99	5,912	5,880	3,418	58.1%	2,012	1,153	57.3%	2.92	3.13	2,105	2,012	93	3.16
90	6.2	101.75	1.03	6,550	6,778	3,360	49.6%	2,299	1,032	44.9%	2.94	3.31	2,367	2,299	68	3.47
91	6.2	101.76	0.79	6,819	5,419	3,488	64.4%	2,141	1,332	62.2%	2.53	2.71	2,362	2,141	221	4.21
92	6.2	101.77	3.14	2,068	6,499	3,451	53.1%	2,134	1,071	50.2%	3.04	3.37	2,215	2,134	81	1.06
93	6.2	101.78	1.03	5,753	5,936	2,824	47.6%	2,141	927	43.3%	2.77	3.09	2,250	2,141	109	3.24
94	7.1	105	3.29	1,578	5,192	967	18.6%	1,500	267	17.8%	3.38	3.65	1,598	1,500	98	0.71
95	7.1	106.02	6.10	494	3,014	585	19.4%	804	145	18.0%	3.63	4.21	836	804	32	0.21
96	7.1	106.04	0.99	5,047	4,998	1,279	25.6%	1,653	353	21.4%	3.05	3.52	1,694	1,653	41	2.61
97	7.1	106.05	5.62	2,041	11,464	4,646	40.5%	4,293	1,713	39.9%	2.62	2.75	4,517	4,293	224	1.19
98	7.1	106.06	1.25	5,089	6,379	2,213	34.7%	2,068	590	28.5%	3.08	3.74	2,120	2,068	52	2.58
99	7.1	106.07	1.60	6,631	10,597	4,822	45.5%	3,551	1,511	42.6%	2.98	3.27	3,707	3,551	156	3.47
100	7.2	102.01	9.63	181	1,742	818	47.0%	570	248	43.5%	3.03	3.40	870	570	300	0.09
101	7.2	102.03	1.45	6,773	9,829	5,049	51.4%	2,668	1,367	51.2%	3.67	3.80	2,797	2,668	129	2.87
102	7.2	102.04	1.40	4,185	5,867	3,507	59.8%	1,598	911	57.0%	3.66	3.99	1,660	1,598	62	1.78
103	7.2	102.05	0.57	8,954	5,103	2,911	57.0%	1,352	766	56.7%	3.60	3.75	1,374	1,352	22	3.71
104	7.2	102.06	1.46	5,489	8,012	4,030	50.3%	3,029	1,582	52.2%	2.64	2.61	3,228	3,029	199	3.24
105	7.2	103	23.44	317	7,432	2,544	34.2%	2,455	734	29.9%	2.96	3.47	2,645	2,455	190	0.16
106	7.2	104	4.75	271	1,288	364	28.3%	457	109	23.9%	2.97	3.33	487	457	30	0.15
107	7.3	111	5.23	2,429	12,708	5,417	42.6%	3,969	1,526	38.4%	3.12	3.56	4,304	3,969	335	1.19
108	7.3	112.01	4.55	1,033	4,703	1,594	33.9%	1,390	379	27.3%	3.38	4.15	1,482	1,390	92	0.48
109	7.3	112.02	1.37	5,483	7,514	4,436	59.0%	2,110	1,005	47.6%	3.51	4.38	2,260	2,110	150	2.41
110	7.3	113	1.45	5,121	7,442	2,501	33.6%	2,238	598	26.7%	3.28	4.09	2,657	2,238	419	2.41
111	7.4	107.02	4.35	88	383	186	48.6%	9	9	100.0%	4.67	4.67	9	9	-	0.00
112	7.4	107.03	2.06	3,695	7,624	3,868	50.7%	2,046	1,017	49.7%	3.65	3.88	2,193	2,046	147	1.55
113	7.4	107.04	17.81	444	7,914	3,861	48.8%	2,174	977	44.9%	3.64	4.00	2,369	2,174	195	0.19
114	7.4	108	2.30	3,767	8,675	3,958	45.6%	2,485	1,010	40.6%	3.42	3.85	3,215	2,485	730	1.69
115	7.4	109	0.92	6,858	6,308	4,005	63.5%	1,832	1,034	56.4%	3.44	3.94	1,967	1,832	135	3.11
116	7.4	110.01	1.43	4,705	6,717	4,247	63.2%	2,171	1,344	61.9%	3.09	3.20	2,283	2,171	112	2.48
117	7.4	110.03	0.75	6,067	4,558	3,261	71.5%	1,187	861	72.5%	3.83	3.94	1,226	1,187	39	2.37
118	7.4	110.04	4.54	1,341	6,086	3,378	55.5%	1,880	906	48.2%	3.29	3.86	1,989	1,880	109	0.65
119	7.5	114.01	102.53	42	4,330	1,337	30.9%	1,739	402	23.1%	2.43	3.17	1,964	1,739	225	0.03
Total / Avg. (Sum of 119 tract			368.30		804,810	474,948	59.0%	263,515	151,027	57.3%	3.04	3.29	276,077	263,515	12,562	1.12

**Appendix C**  
**Projections of Watershed Populations**

Appendix C - Page 1														
Projected Watershed Populations by Census Tract (Sorted by MSA)														
	Basin	MSA	Tract	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
1	C - 3	5.1	58.01	5,343	5,442	5,542	5,641	5,716	5,791	5,866	5,941	6,016	6,091	6,166
2	C - 3	5.1	56	3,935	3,969	4,003	4,037	4,056	4,075	4,094	4,113	4,132	4,151	4,170
3	C - 3	5.3	74	7,031	7,181	7,331	7,481	7,597	7,712	7,828	7,944	8,059	8,175	8,291
4	C - 3	5.3	79.01	4,073	4,187	4,300	4,414	4,510	4,607	4,703	4,799	4,896	4,992	5,088
5	C - 2	5.3	76.03	3,355	3,671	3,986	4,302	4,639	4,975	5,312	5,649	5,985	6,322	6,659
6	C - 2	5.3	76.02	9,656	9,725	9,793	9,862	9,894	9,925	9,957	9,989	10,020	10,052	10,084
7	C - 3	5.3	76.01	2,725	2,747	2,770	2,792	2,801	2,811	2,820	2,829	2,839	2,848	2,857
8	C - 3	5.3	75.03	1,067	1,163	1,259	1,355	1,460	1,565	1,670	1,775	1,880	1,985	2,090
9	C - 3	5.3	75.01	2,754	2,776	2,798	2,820	2,832	2,844	2,856	2,868	2,880	2,892	2,904
10	C - 3	5.3	72	2,917	3,190	3,464	3,737	4,036	4,334	4,633	4,932	5,230	5,529	5,828
11	C - 3	5.3	59.04	4,282	4,314	4,345	4,377	4,390	4,404	4,417	4,430	4,444	4,457	4,470
12	C - 3	5.3	59.01	4,125	4,154	4,183	4,212	4,224	4,237	4,249	4,261	4,274	4,286	4,298
13	C - 3	5.3	75.02	5	4	3	2	3	5	6	7	9	10	11
14	C - 3	5.3	59.03	4,658	4,694	4,731	4,767	4,782	4,798	4,813	4,828	4,844	4,859	4,874
15	C - 3	5.3	62	13,481	13,567	13,654	13,740	13,787	13,833	13,880	13,927	13,973	14,020	14,067
16	C - 3	5.3	60.01	5,950	5,995	6,039	6,084	6,103	6,121	6,140	6,159	6,177	6,196	6,215
17	C - 2	5.3	60.02	4,812	4,847	4,882	4,917	4,932	4,948	4,963	4,978	4,994	5,009	5,024
18	C - 3	5.3	61.01	5,485	5,525	5,565	5,605	5,622	5,639	5,656	5,673	5,690	5,707	5,724
19	C - 3	5.3	61.02	6,571	6,619	6,666	6,714	6,735	6,755	6,776	6,797	6,817	6,838	6,859
20	C - 3	5.3	59.02	3,712	3,740	3,767	3,795	3,807	3,820	3,832	3,844	3,857	3,869	3,881
21	C - 2	5.4	88.01	7,925	8,003	8,082	8,160	8,203	8,247	8,290	8,333	8,377	8,420	8,463
22	C - 2	5.4	88.04	6,807	6,979	7,152	7,324	7,470	7,615	7,761	7,907	8,052	8,198	8,344
23	C - 2	5.4	101.11	4,694	4,764	4,833	4,903	4,948	4,993	5,038	5,083	5,128	5,173	5,218
24	C - 2	5.4	89.05	9,979	10,056	10,133	10,210	10,248	10,285	10,323	10,361	10,398	10,436	10,474
25	C - 2	5.4	89.02	7,167	7,248	7,329	7,410	7,458	7,507	7,555	7,603	7,652	7,700	7,748
26	C - 2	5.4	88.03	6,129	6,427	6,726	7,024	7,317	7,611	7,904	8,197	8,491	8,784	9,077
27	C - 2	5.4	86.02	5,856	5,972	6,089	6,205	6,295	6,386	6,476	6,566	6,657	6,747	6,837
28	C - 2	5.4	89.04	1,126	1,167	1,207	1,248	1,290	1,332	1,374	1,416	1,458	1,500	1,542
29	C - 2	5.4	86.01	4,291	4,379	4,467	4,555	4,638	4,722	4,805	4,888	4,972	5,055	5,138
30	C - 2	5.4	85.02	4,664	4,756	4,849	4,941	5,012	5,083	5,154	5,225	5,296	5,367	5,438
31	C - 2	5.4	85.01	5,926	5,972	6,019	6,065	6,086	6,107	6,128	6,149	6,170	6,191	6,212
32	C - 2	5.4	77.02	6,207	6,278	6,350	6,421	6,482	6,542	6,603	6,664	6,724	6,785	6,846
33	C - 2	5.4	87	10,042	10,115	10,189	10,262	10,290	10,318	10,346	10,374	10,402	10,430	10,458
34	C - 2	5.5	84.13	8,785	9,085	9,386	9,686	9,965	10,243	10,522	10,801	11,079	11,358	11,637
35	C - 100	5.5	84.14	7,635	7,934	8,233	8,532	8,803	9,073	9,344	9,615	9,885	10,156	10,427
36	C - 2	5.5	84.12	7,037	7,671	8,306	8,940	9,863	10,786	11,709	12,632	13,555	14,478	15,401
37	C - 100	5.5	84.11	9,047	9,366	9,685	10,004	10,323	10,642	10,961	11,280	11,599	11,918	12,237
38	C - 100	5.5	84.1	7,926	8,216	8,507	8,797	9,057	9,317	9,577	9,837	10,097	10,357	10,617
39	C - 2	5.5	84.07	7,783	7,950	8,117	8,284	8,406	8,528	8,650	8,772	8,894	9,016	9,138
40	C - 100	5.5	84.05	6,612	6,995	7,378	7,761	8,259	8,758	9,256	9,754	10,253	10,751	11,249
41	C - 2	5.5	78.03	11,976	14,362	16,749	19,135	20,828	22,522	24,215	25,908	27,602	29,295	30,988
42	C - 2	5.5	77.03	10,572	11,528	12,483	13,439	14,638	15,838	17,037	18,236	19,436	20,635	21,834
43	C - 100	5.5	84.15	5,209	5,268	5,327	5,386	5,413	5,440	5,467	5,494	5,521	5,548	5,575
44	C - 100	5.5	84.09	5,391	5,829	6,267	6,705	7,210	7,714	8,219	8,724	9,228	9,733	10,238
45	C - 2	5.6	79.02	3,690	3,749	3,807	3,866	3,906	3,945	3,985	4,025	4,064	4,104	4,144
46	C - 3	5.6	80	6,241	6,341	6,440	6,540	6,609	6,678	6,747	6,816	6,885	6,954	7,023
47	C - 100	5.6	78.02	8,842	9,067	9,293	9,518	9,686	9,854	10,022	10,190	10,358	10,526	10,694
48	C - 2	5.6	78.01	790	804	817	831	839	847	855	863	871	879	887
49	C - 2	5.6	76.04	7,116	7,576	8,035	8,495	8,921	9,348	9,774	10,200	10,627	11,053	11,479
50	C - 100	5.6	81	8,913	9,073	9,232	9,392	9,498	9,604	9,710	9,816	9,922	10,028	10,134
51	C - 100	5.7	82.01	8,503	8,834	9,165	9,496	9,790	10,085	10,379	10,673	10,968	11,262	11,556
52	C - 100	5.7	82.03	8,510	9,025	9,541	10,056	10,585	11,115	11,644	12,173	12,703	13,232	13,761
53	C - 100	5.7	82.04	8,565	9,407	10,249	11,091	12,083	13,075	14,067	15,059	16,051	17,043	18,035
54	C - 1	5.8	83.03	7,835	8,329	8,822	9,316	9,466	9,615	9,765	9,915	10,064	10,214	10,364
55	C - 100	5.8	83.04	6,800	7,046	7,292	7,538	7,751	7,965	8,178	8,391	8,605	8,818	9,031

Appendix C - Page 2														
Projected Watershed Populations by Census Tract (Sorted by MSA)														
	Basin	MSA	Tract	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
56	C - 100	5.8	83.05	5,799	5,867	5,935	6,003	6,035	6,066	6,098	6,130	6,161	6,193	6,225
57	C - 100	5.8	83.06	6,807	6,905	7,003	7,101	7,460	7,820	8,179	8,538	8,898	9,257	9,616
58	C - 1	5.8	83.07	5,747	5,839	5,932	6,024	6,073	6,122	6,171	6,220	6,269	6,318	6,367
59	C - 2	6.1	101.47	5,104	5,275	5,446	5,617	5,759	5,900	6,042	6,184	6,325	6,467	6,609
60	C - 2	6.1	101.58	9,071	9,533	9,995	10,457	10,877	11,296	11,716	12,136	12,555	12,975	13,395
61	C - 2	6.1	101.46	10,086	15,400	20,714	26,028	29,351	32,675	35,998	39,321	42,645	45,968	49,291
62	C - 2	6.1	101.24	1,808	2,221	2,634	3,047	3,578	4,108	4,639	5,170	5,700	6,231	6,762
63	C - 100	6.1	101.64	8,113	8,387	8,660	8,934	9,161	9,387	9,614	9,841	10,067	10,294	10,521
64	C - 2	6.1	101.63	6,633	6,693	6,753	6,813	6,839	6,864	6,890	6,916	6,941	6,967	6,993
65	C - 2	6.1	101.62	5,348	5,526	5,705	5,883	6,032	6,180	6,329	6,478	6,626	6,775	6,924
66	C - 2	6.1	101.61	8,153	8,440	8,728	9,015	9,258	9,500	9,743	9,986	10,228	10,471	10,714
67	C - 2	6.1	101.59	8,723	9,086	9,450	9,813	10,147	10,481	10,815	11,149	11,483	11,817	12,151
68	C - 2	6.1	101.57	6,449	7,603	8,756	9,910	11,702	13,495	15,287	17,079	18,872	20,664	22,456
69	C - 100	6.1	101.56	10,960	11,196	11,412	11,628	11,881	12,134	12,387	12,640	12,893	13,146	13,399
70	C - 2	6.1	101.5	7,060	7,068	7,076	7,084	7,064	7,045	7,025	7,005	6,986	6,966	6,946
71	C - 2	6.1	101.48	5,273	5,449	5,626	5,802	5,950	6,097	6,245	6,393	6,540	6,688	6,836
72	C - 100	6.1	101.6	6,909	7,146	7,383	7,620	7,821	8,023	8,224	8,425	8,626	8,828	9,029
73	C - 2	6.1	101.49	6,575	6,899	7,222	7,546	7,733	7,919	8,106	8,293	8,479	8,666	8,853
74	C - 100	6.1	101.55	10,600	11,029	11,458	11,887	12,124	12,360	12,597	12,834	13,070	13,307	13,544
75	C - 2	6.1	101.51	4,455	5,433	6,412	7,390	8,471	9,552	10,633	11,714	12,795	13,876	14,957
76	C - 2	6.1	101.52	5,636	5,841	6,047	6,252	6,429	6,605	6,782	6,959	7,135	7,312	7,489
77	C - 2	6.1	101.53	9,394	12,453	15,511	18,570	19,729	20,889	22,048	23,207	24,367	25,526	26,685
78	C - 2	6.1	101.54	9,532	12,575	15,617	18,660	19,838	21,017	22,195	23,373	24,552	25,730	26,908
79	C - 1	6.2	101.71	3,469	3,952	4,436	4,919	5,538	6,158	6,777	7,396	8,016	8,635	9,254
80	C - 100	6.2	101.74	5,985	6,575	7,164	7,754	8,750	9,746	10,742	11,738	12,734	13,730	14,726
81	C - 100	6.2	101.75	7,013	7,683	8,352	9,022	9,736	10,450	11,164	11,878	12,592	13,306	14,020
82	C - 100	6.2	101.78	6,266	6,714	7,163	7,611	7,843	8,074	8,306	8,538	8,769	9,001	9,233
83	C - 1	6.2	101.73	16,476	17,540	18,603	19,667	20,359	21,050	21,742	22,434	23,125	23,817	24,509
84	C - 1	6.2	101.72	5,809	6,938	8,067	9,196	9,914	10,632	11,350	12,068	12,786	13,504	14,222
85	C - 100	6.2	101.77	6,669	8,524	10,379	12,234	13,065	13,896	14,727	15,558	16,389	17,220	18,051
86	C - 100	6.2	101.69	9,503	9,995	10,486	10,978	11,367	11,757	12,146	12,535	12,925	13,314	13,703
87	C - 100	6.2	101.68	11,984	12,323	12,662	13,001	13,266	13,531	13,796	14,061	14,326	14,591	14,856
88	C - 1	6.2	101.67	13,537	13,983	14,429	14,875	16,036	17,198	18,359	19,520	20,682	21,843	23,004
89	C - 100	6.2	101.66	9,479	10,564	11,648	12,733	13,967	15,201	16,435	17,669	18,903	20,137	21,371
90	C - 1	6.2	101.65	4,290	6,891	9,492	12,093	14,258	16,423	18,588	20,753	22,918	25,083	27,248
91	C - 1	6.2	101.14	6,723	6,823	6,923	7,023	7,082	7,142	7,201	7,260	7,320	7,379	7,438
92	C - 100	6.2	101.76	6,200	6,741	7,283	7,824	8,308	8,791	9,275	9,759	10,242	10,726	11,210
93	C - 1	6.2	101.7	10,612	12,747	14,882	17,017	18,481	19,946	21,410	22,874	24,339	25,803	27,267
94	C - 102	7.1	105	4,573	5,316	6,060	6,803	7,581	8,360	9,138	9,916	10,695	11,473	12,251
95	C - 1	7.1	106.07	11,194	11,427	11,659	11,892	12,047	12,202	12,357	12,512	12,667	12,822	12,977
96	C - 1	7.1	106.06	6,104	6,296	6,487	6,679	6,847	7,014	7,182	7,350	7,517	7,685	7,853
97	C - 1	7.1	106.05	12,537	16,055	19,572	23,090	24,901	26,712	28,523	30,334	32,145	33,956	35,767
98	C - 100	7.1	106.04	5,480	5,523	5,567	5,610	5,619	5,627	5,636	5,645	5,653	5,662	5,671
99	C - 1	7.1	106.02	2,541	6,934	11,327	15,720	16,896	18,071	19,247	20,423	21,598	22,774	23,950
100	C - 103	7.2	103	7,111	7,691	8,271	8,851	9,470	10,088	10,707	11,326	11,944	12,563	13,182
101	C - 1	7.2	102.04	4,809	5,648	6,488	7,327	8,183	9,040	9,896	10,752	11,609	12,465	13,321
102	C - 102	7.2	104	1,309	3,647	5,985	8,323	10,271	12,219	14,167	16,115	18,063	20,011	21,959
103	C - 1	7.2	102.03	8,161	9,695	11,229	12,763	14,577	16,390	18,204	20,018	21,831	23,645	25,459
104	C - 102	7.2	102.01	2,011	2,674	3,336	3,999	4,593	5,188	5,782	6,376	6,971	7,565	8,159
105	C - 1	7.2	102.05	4,053	4,211	4,368	4,526	4,663	4,799	4,936	5,073	5,209	5,346	5,483
106	C - 1	7.2	102.06	8,721	9,174	9,628	10,081	10,508	10,936	11,363	11,790	12,218	12,645	13,072
107	C - 103	7.3	113	7,515	7,621	7,728	7,834	7,900	7,965	8,031	8,097	8,162	8,228	8,294
108	C - 103	7.3	111	12,850	13,551	14,253	14,954	16,081	17,207	18,334	19,461	20,587	21,714	22,841
109	C - 111	7.3	112.01	4,796	6,491	8,187	9,882	11,722	13,563	15,403	17,243	19,084	20,924	22,764
110	C - 103	7.3	112.02	6,948	7,055	7,162	7,269	7,326	7,382	7,439	7,496	7,552	7,609	7,666
111	C - 103	7.4	110.04	5,997	12,670	19,344	26,017	28,878	31,740	34,601	37,462	40,324	43,185	46,046
112	C - 103	7.4	110.03	3,953	4,001	4,050	4,098	4,110	4,123	4,135	4,147	4,160	4,172	4,184
113	C - 103	7.4	110.01	6,759	7,905	9,050	10,196	11,862	13,528	15,194	16,860	18,526	20,192	21,858
114	C - 103	7.4	109	6,352	6,428	6,504	6,580	6,692	6,803	6,915	7,027	7,138	7,250	7,362
115	C - 103	7.4	108	8,510	12,717	16,924	21,131	25,167	29,203	33,239	37,275	41,311	45,347	49,383
116	C - 102	7.4	107.04	7,542	8,843	10,144	11,445	12,788	14,132	15,475	16,818	18,162	19,505	20,848
117	Homestead	7.4	107.02	38	67	97	126	132	137	143	149	154	160	166
118	C - 102	7.4	107.03	6,565	8,077	9,588	11,100	12,390	13,680	14,970	16,260	17,550	18,840	20,130
119	Model Land	7.5	114.01	5,608	9,150	12,692	16,234	19,336	22,438	25,540	28,642	31,744	34,846	37,948
Total (Sum of 119 tracts)				790,835	871,807	952,779	1,033,751	1,097,384	1,161,016	1,224,649	1,288,282	1,351,914	1,415,547	1,479,180

**Appendix D**  
**Projections of Watershed Households**

Appendix D - Page 1														
Projected Watershed Households by Census Tract (Sorted by MSA)														
	Basin	MSA	Tract	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
1	C - 3	5.1	58.01	2,021	2,050	2,078	2,107	2,134	2,160	2,187	2,214	2,240	2,267	2,294
2	C - 3	5.1	56	1,490	1,497	1,503	1,510	1,516	1,522	1,528	1,534	1,540	1,546	1,552
3	C - 3	5.3	74	2,498	2,539	2,581	2,622	2,661	2,701	2,740	2,779	2,819	2,858	2,897
4	C - 3	5.3	79.01	1,453	1,489	1,524	1,560	1,596	1,631	1,667	1,703	1,738	1,774	1,810
5	C - 2	5.3	76.03	1,197	1,300	1,403	1,506	1,623	1,741	1,858	1,975	2,093	2,210	2,327
6	C - 2	5.3	76.02	3,524	3,535	3,545	3,556	3,566	3,576	3,586	3,596	3,606	3,616	3,626
7	C - 3	5.3	76.01	946	949	952	955	958	961	964	967	970	973	976
8	C - 3	5.3	75.03	397	431	465	499	537	576	614	652	691	729	767
9	C - 3	5.3	75.01	979	983	986	990	993	997	1,000	1,003	1,007	1,010	1,013
10	C - 3	5.3	72	1,060	1,152	1,245	1,337	1,442	1,548	1,653	1,758	1,864	1,969	2,074
11	C - 3	5.3	59.04	1,533	1,538	1,542	1,547	1,551	1,555	1,559	1,563	1,567	1,571	1,575
12	C - 3	5.3	59.01	1,491	1,495	1,500	1,504	1,508	1,511	1,515	1,519	1,522	1,526	1,530
13	C - 3	5.3	75.02	2	2	2	2	2	2	2	2	2	2	2
14	C - 3	5.3	59.03	1,631	1,636	1,641	1,646	1,651	1,655	1,660	1,665	1,669	1,674	1,679
15	C - 3	5.3	62	5,247	5,263	5,280	5,296	5,311	5,326	5,341	5,356	5,371	5,386	5,401
16	C - 3	5.3	60.01	2,111	2,117	2,124	2,130	2,136	2,141	2,147	2,153	2,158	2,164	2,170
17	C - 2	5.3	60.02	1,719	1,724	1,729	1,734	1,739	1,743	1,748	1,753	1,757	1,762	1,767
18	C - 3	5.3	61.01	1,982	1,988	1,994	2,000	2,005	2,011	2,016	2,021	2,027	2,032	2,037
19	C - 3	5.3	61.02	2,408	2,415	2,423	2,430	2,437	2,443	2,450	2,457	2,463	2,470	2,477
20	C - 3	5.3	59.02	1,325	1,329	1,333	1,337	1,341	1,344	1,348	1,352	1,355	1,359	1,363
21	C - 2	5.4	88.01	2,832	2,847	2,863	2,878	2,892	2,906	2,920	2,934	2,948	2,962	2,976
22	C - 2	5.4	88.04	2,479	2,531	2,582	2,634	2,685	2,735	2,786	2,837	2,887	2,938	2,989
23	C - 2	5.4	101.11	1,597	1,612	1,628	1,643	1,657	1,672	1,686	1,700	1,715	1,729	1,743
24	C - 2	5.4	89.05	3,563	3,575	3,587	3,599	3,611	3,622	3,634	3,646	3,657	3,669	3,681
25	C - 2	5.4	89.02	2,570	2,587	2,605	2,622	2,638	2,654	2,670	2,686	2,702	2,718	2,734
26	C - 2	5.4	88.03	2,128	2,220	2,313	2,405	2,505	2,604	2,704	2,804	2,903	3,003	3,103
27	C - 2	5.4	86.02	1,981	2,010	2,038	2,067	2,096	2,126	2,155	2,184	2,214	2,243	2,272
28	C - 2	5.4	89.04	476	492	509	525	542	560	577	594	612	629	646
29	C - 2	5.4	86.01	1,497	1,519	1,542	1,564	1,591	1,618	1,645	1,672	1,699	1,726	1,753
30	C - 2	5.4	85.02	1,591	1,614	1,636	1,659	1,682	1,705	1,728	1,751	1,774	1,797	1,820
31	C - 2	5.4	85.01	2,103	2,110	2,117	2,124	2,131	2,138	2,145	2,152	2,159	2,166	2,173
32	C - 2	5.4	77.02	2,221	2,237	2,252	2,268	2,289	2,309	2,330	2,351	2,371	2,392	2,413
33	C - 2	5.4	87	3,477	3,486	3,494	3,503	3,511	3,519	3,527	3,535	3,543	3,551	3,559
34	C - 2	5.5	84.13	3,169	3,263	3,358	3,452	3,551	3,649	3,748	3,847	3,945	4,044	4,143
35	C - 100	5.5	84.14	2,510	2,591	2,672	2,753	2,837	2,922	3,006	3,090	3,175	3,259	3,343
36	C - 2	5.5	84.12	2,470	2,677	2,883	3,090	3,409	3,728	4,047	4,366	4,685	5,004	5,323
37	C - 100	5.5	84.11	3,268	3,369	3,471	3,572	3,685	3,798	3,911	4,024	4,137	4,250	4,363
38	C - 100	5.5	84.1	2,738	2,824	2,909	2,995	3,082	3,168	3,255	3,342	3,428	3,515	3,602
39	C - 2	5.5	84.07	2,669	2,712	2,755	2,798	2,838	2,879	2,919	2,959	3,000	3,040	3,080
40	C - 100	5.5	84.05	2,248	2,375	2,503	2,630	2,814	2,999	3,183	3,367	3,552	3,736	3,920
41	C - 2	5.5	78.03	4,312	5,047	5,782	6,517	7,049	7,581	8,113	8,645	9,177	9,709	10,241
42	C - 2	5.5	77.03	3,902	4,233	4,565	4,896	5,328	5,760	6,192	6,624	7,056	7,488	7,920
43	C - 100	5.5	84.15	1,654	1,663	1,671	1,680	1,688	1,696	1,704	1,712	1,720	1,728	1,736
44	C - 100	5.5	84.09	1,832	1,967	2,102	2,237	2,402	2,568	2,733	2,898	3,064	3,229	3,394
45	C - 2	5.6	79.02	1,293	1,307	1,322	1,336	1,349	1,363	1,376	1,389	1,403	1,416	1,429
46	C - 3	5.6	80	2,179	2,203	2,228	2,252	2,275	2,297	2,320	2,343	2,365	2,388	2,411
47	C - 100	5.6	78.02	2,814	2,869	2,923	2,978	3,030	3,083	3,135	3,187	3,240	3,292	3,344
48	C - 2	5.6	78.01	246	249	251	254	256	259	261	263	266	268	270
49	C - 2	5.6	76.04	2,603	2,757	2,910	3,064	3,214	3,365	3,515	3,665	3,816	3,966	4,116
50	C - 100	5.6	81	2,853	2,887	2,921	2,955	2,987	3,020	3,052	3,084	3,117	3,149	3,181
51	C - 100	5.7	82.01	2,747	2,835	2,923	3,011	3,105	3,199	3,293	3,387	3,481	3,575	3,669
52	C - 100	5.7	82.03	2,723	2,871	3,020	3,168	3,341	3,513	3,686	3,859	4,031	4,204	4,377
53	C - 100	5.7	82.04	2,780	3,035	3,289	3,544	3,865	4,187	4,508	4,829	5,151	5,472	5,793
54	C - 1	5.8	83.03	2,642	2,789	2,935	3,082	3,131	3,179	3,228	3,277	3,325	3,374	3,423
55	C - 100	5.8	83.04	2,436	2,510	2,585	2,659	2,733	2,808	2,882	2,956	3,031	3,105	3,179

Appendix D - Page 2														
Projected Watershed Households by Census Tract (Sorted by MSA)														
	Basin	MSA	Tract	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
56	C - 100	5.8	83.05	1,966	1,976	1,986	1,996	2,005	2,014	2,023	2,032	2,041	2,050	2,059
57	C - 100	5.8	83.06	2,254	2,271	2,289	2,306	2,427	2,549	2,670	2,791	2,913	3,034	3,155
58	C - 1	5.8	83.07	1,800	1,816	1,831	1,847	1,861	1,876	1,890	1,904	1,919	1,933	1,947
59	C - 2	6.1	101.47	1,697	1,744	1,791	1,838	1,884	1,929	1,975	2,021	2,066	2,112	2,158
60	C - 2	6.1	101.58	2,902	3,030	3,158	3,286	3,417	3,547	3,678	3,809	3,939	4,070	4,201
61	C - 2	6.1	101.46	3,204	5,184	7,164	9,144	10,210	11,277	12,343	13,409	14,476	15,542	16,608
62	C - 2	6.1	101.24	581	712	843	974	1,147	1,321	1,494	1,667	1,841	2,014	2,187
63	C - 100	6.1	101.64	2,679	2,754	2,828	2,903	2,976	3,048	3,121	3,194	3,266	3,339	3,412
64	C - 2	6.1	101.63	2,202	2,210	2,217	2,225	2,233	2,240	2,248	2,256	2,263	2,271	2,279
65	C - 2	6.1	101.62	1,767	1,816	1,864	1,913	1,960	2,008	2,055	2,102	2,150	2,197	2,244
66	C - 2	6.1	101.61	2,718	2,798	2,878	2,958	3,036	3,115	3,193	3,271	3,350	3,428	3,506
67	C - 2	6.1	101.59	2,899	3,001	3,104	3,206	3,312	3,419	3,525	3,631	3,738	3,844	3,950
68	C - 2	6.1	101.57	1,978	2,319	2,661	3,002	3,569	4,135	4,702	5,269	5,835	6,402	6,969
69	C - 100	6.1	101.56	3,523	3,570	3,617	3,664	3,743	3,822	3,901	3,980	4,059	4,138	4,217
70	C - 2	6.1	101.5	2,392	2,383	2,373	2,364	2,357	2,350	2,343	2,336	2,329	2,322	2,315
71	C - 2	6.1	101.48	1,782	1,832	1,881	1,931	1,979	2,028	2,076	2,124	2,173	2,221	2,269
72	C - 100	6.1	101.6	2,332	2,399	2,467	2,534	2,600	2,665	2,731	2,797	2,862	2,928	2,994
73	C - 2	6.1	101.49	2,237	2,334	2,430	2,527	2,589	2,650	2,712	2,774	2,835	2,897	2,959
74	C - 100	6.1	101.55	3,401	3,516	3,632	3,747	3,821	3,894	3,968	4,042	4,115	4,189	4,263
75	C - 2	6.1	101.51	1,461	1,768	2,075	2,382	2,727	3,073	3,418	3,763	4,109	4,454	4,799
76	C - 2	6.1	101.52	1,934	1,993	2,053	2,112	2,171	2,229	2,288	2,347	2,405	2,464	2,523
77	C - 2	6.1	101.53	2,957	3,925	4,893	5,861	6,223	6,585	6,947	7,309	7,671	8,033	8,395
78	C - 2	6.1	101.54	2,954	3,948	4,941	5,935	6,305	6,675	7,045	7,415	7,785	8,155	8,525
79	C - 1	6.2	101.71	1,064	1,200	1,336	1,472	1,655	1,837	2,020	2,203	2,385	2,568	2,751
80	C - 100	6.2	101.74	1,974	2,154	2,333	2,513	2,830	3,146	3,463	3,780	4,096	4,413	4,730
81	C - 100	6.2	101.75	2,299	2,500	2,702	2,903	3,132	3,362	3,591	3,820	4,050	4,279	4,508
82	C - 100	6.2	101.78	2,052	2,183	2,313	2,444	2,517	2,591	2,664	2,737	2,811	2,884	2,957
83	C - 1	6.2	101.73	4,845	5,115	5,385	5,655	5,855	6,056	6,256	6,456	6,657	6,857	7,057
84	C - 1	6.2	101.72	1,733	2,047	2,360	2,674	2,880	3,086	3,292	3,498	3,704	3,910	4,116
85	C - 100	6.2	101.77	2,134	2,716	3,297	3,879	4,141	4,404	4,666	4,928	5,191	5,453	5,715
86	C - 100	6.2	101.69	3,234	3,373	3,511	3,650	3,772	3,895	4,017	4,139	4,262	4,384	4,506
87	C - 100	6.2	101.68	3,756	3,832	3,908	3,984	4,062	4,140	4,218	4,296	4,374	4,452	4,530
88	C - 1	6.2	101.67	4,351	4,457	4,563	4,669	5,039	5,408	5,778	6,148	6,517	6,887	7,257
89	C - 100	6.2	101.66	3,003	3,316	3,630	3,943	4,321	4,700	5,078	5,456	5,835	6,213	6,591
90	C - 1	6.2	101.65	1,294	2,051	2,807	3,564	4,256	4,947	5,639	6,331	7,022	7,714	8,406
91	C - 1	6.2	101.14	2,203	2,219	2,234	2,250	2,266	2,282	2,298	2,314	2,330	2,346	2,362
92	C - 100	6.2	101.76	2,213	2,391	2,570	2,748	2,915	3,082	3,249	3,416	3,583	3,750	3,917
93	C - 1	6.2	101.7	3,196	3,851	4,506	5,162	5,597	6,032	6,467	6,902	7,337	7,772	8,207
94	C - 102	7.1	105	1,464	1,694	1,923	2,153	2,403	2,652	2,902	3,152	3,401	3,651	3,901
95	C - 1	7.1	106.07	3,631	3,680	3,730	3,779	3,827	3,874	3,922	3,970	4,017	4,065	4,113
96	C - 1	7.1	106.06	2,068	2,119	2,171	2,222	2,278	2,333	2,389	2,445	2,500	2,556	2,612
97	C - 1	7.1	106.05	4,321	5,446	6,571	7,696	8,270	8,844	9,418	9,992	10,566	11,140	11,714
98	C - 100	7.1	106.04	1,781	1,783	1,785	1,787	1,789	1,792	1,794	1,796	1,799	1,801	1,803
99	C - 1	7.1	106.02	776	2,283	3,790	5,297	6,804	8,311	9,818	11,325	12,832	14,339	15,846
100	C - 103	7.2	103	2,455	2,639	2,824	3,008	3,218	3,429	3,639	3,849	4,060	4,270	4,480
101	C - 1	7.2	102.04	1,548	1,801	2,054	2,307	2,574	2,842	3,109	3,376	3,644	3,911	4,178
102	C - 102	7.2	104	472	1,241	2,009	2,778	3,426	4,075	4,723	5,371	6,020	6,668	7,316
103	C - 1	7.2	102.03	2,541	2,993	3,446	3,898	4,452	5,006	5,560	6,114	6,668	7,222	7,776
104	C - 102	7.2	102.01	662	865	1,067	1,270	1,456	1,641	1,827	2,013	2,198	2,384	2,570
105	C - 1	7.2	102.05	1,352	1,395	1,439	1,482	1,526	1,571	1,615	1,659	1,704	1,748	1,792
106	C - 1	7.2	102.06	3,029	3,170	3,310	3,451	3,598	3,744	3,891	4,038	4,184	4,331	4,478
107	C - 103	7.3	113	2,530	2,549	2,569	2,588	2,609	2,629	2,650	2,671	2,691	2,712	2,733
108	C - 103	7.3	111	4,159	4,360	4,561	4,762	5,128	5,495	5,861	6,227	6,594	6,960	7,326
109	C - 111	7.3	112.01	1,498	2,008	2,518	3,028	3,591	4,155	4,718	5,281	5,845	6,408	6,971
110	C - 103	7.3	112.02	2,272	2,293	2,313	2,334	2,352	2,371	2,389	2,407	2,426	2,444	2,462
111	C - 103	7.4	110.04	2,045	4,401	6,756	9,112	10,146	11,180	12,214	13,248	14,282	15,316	16,350
112	C - 103	7.4	110.03	1,279	1,286	1,293	1,300	1,303	1,307	1,310	1,313	1,317	1,320	1,323
113	C - 103	7.4	110.01	2,159	2,507	2,855	3,203	3,731	4,258	4,786	5,314	5,841	6,369	6,897
114	C - 103	7.4	109	1,973	1,982	1,991	2,000	2,033	2,067	2,100	2,133	2,167	2,200	2,233
115	C - 103	7.4	108	2,661	3,887	5,113	6,339	7,543	8,746	9,950	11,154	12,357	13,561	14,765
116	C - 102	7.4	107.04	2,298	2,697	3,095	3,494	3,921	4,348	4,775	5,202	5,629	6,056	6,483
117	Homestead	7.4	107.02	10	20	30	40	42	44	46	48	50	52	54
118	C - 102	7.4	107.03	2,013	2,443	2,874	3,304	3,683	4,063	4,442	4,821	5,201	5,580	5,959
119	Model Land	7.5	114.01	1,975	3,291	4,607	5,923	7,029	8,134	9,240	10,346	11,451	12,557	13,663
Total (Sum of 119 tracts)				265,559	290,840	316,121	341,402	361,917	382,431	402,946	423,461	443,975	464,490	485,005