RESIDENTIAL WATER USE, RATE, REVENUE AND NONPRICE CONSERVATION PROGRAM DATABASE

DATA DOCUMENT

July 10, 1997

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RESIDENTIAL WATER USE, RATE, REVENUE, AND NONPRICE CONSERVATION PROGRAM DATABASE

For the Research Project on:

Effectiveness of Residential Water Conservation Price and Nonprice Programs in Urban Areas in the Western U.S.

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FOREWORD

The AWWA Research Foundation is a nonprofit corporation dedicated to the implementation of a research effort to help utilities respond to regulatory requirements and traditional high-priority concerns of the industry. The research agenda is developed through a process of grass-roots consultation with members, utility subscribers, and working professionals. Under the umbrella of a Five-Year Plan, the Research Advisory Council prioritizes the suggested projects based upon current and future needs, applicability, and past work; the recommendations are forwarded to the Board of Trustees for final selection.

This publication is a result of one of those sponsored studies, and it is hoped that its findings will be applied in communities throughout the world. The following report serves not only as a means of communicating the results of the water industry's centralized research program but also as a tool to enlist the further support of the nonmember utilities and individuals.

Projects are managed closely from their inception to the final report by the foundation's staff and large cadre of volunteers who willingly contribute their time and expertise. The foundation serves a planning and management function and awards contracts to other institutions such as water utilities, universities, and engineering firms. The funding for this research effort comes primarily from the Subscription Program, through which water utilities subscribe to the research program and make an annual payment proportionate to the volume of water they deliver. The program offers a cost-effective and fair method for funding research in the public interest.

A broad spectrum of water supply issues is addressed by the foundation's research agenda: resources, treatment and operations, distribution and storage, water quality and analysis, toxicology, economics, management. The ultimate purpose of the coordinated efforts is to assist water supplies to provide the highest possible quality of water economically and reliably. The true benefits are realized when the results are implemented at the utility level. The foundation's trustees are pleased to offer this publication as a contribution toward that end.

ACKNOWLEDGMENTS

The research team first wishes to express our sincere appreciation to the seven utilities and staff that participated in the study: Denver Water, City of Broomfield, Los Angeles Department of Water and Power, San Diego Water Utilities Department, and the water departments in the Cities of Albuquerque, Las Cruces and Santa Fe. We are especially grateful for the outstanding efforts and assistance provided by John Loughry, Tom Clark and Liz Gardener at Denver Water; Diane Cooper at Broomfield Water Department, Richard West, Pacience Dungo, George Martin and Margaret Pollyea at Los Angeles Water and Power Department; Marsi Steirer with San Diego Water Utilities Department; Norman Gaume, Jean Witherspoon, Steve Falk with the City of Albuquerque; Bill McKinney, Ken Needham, Joyce Kinnear and Jim Davila with Las Cruces; Emily Haley and Joseph Gonzales with the City of Santa Fe. This research was made possible by their willing cooperation and participation.

A special note of appreciation to Doug Gegax, New Mexico State University, for his valuable contributions regarding statistical analysis and econometric modeling of public utility pricing. We also thank Betty Olson, University of California at Irvine and John Tschirhart, University of Wyoming, for their participation in the development of this research and helpful recommendations.

The Powell Consortium and in particular the Water Resources Research Institutes and directors -Steven Gloss, University of Wyoming, Tom Bahr, New Mexico State University, and Robert Ward,
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Finally, the researchers wish to thank the American Water Works Association Research Foundation for support of this research and express our sincere appreciation for guidance provided by project officers Kim Hout-Garrity, Kathryn Martin and Albert Ilges and the diligent review and valuable suggestions provided by each member of the AWWARF Project Advisory Committee, Clive Jones of Economic Data Resources, David LaFrance, Manager of Rate Administration, Denver Water, and William Maddaus of Maddaus Water Management.

EXECUTIVE SUMMARY

This report describes and contains the information and database developed for the research on "Modeling and Evaluation of the Effects of Residential Water Conservation Price and Nonprice Programs in Urban Areas in the Western U.S." The water demand, price and conservation program information documented in this report is the result of research and data collection efforts and utility cooperation initiated in 1991 by Dr. William Bruvold and continued by the researchers of this report through a consortium of universities. The study encompasses seven water utilities in three western states - California, Colorado and New Mexico. The information gathered, developed and refined for this study was digitized and a database created in spreadsheet format for analysis. Database structure, variable names, definitions, computational adjustments and study area characteristics are described in this report. The water demand modeling and analysis results of this research are presented in another publication of the American Water Works Association by Michelsen, McGuckin and Stumpf (1997) entitled "Effectiveness of Residential Water Conservation Price and Nonprice Programs."

STUDY AREAS, RECORD KEEPING AND DATABASE CONTENT

The water utilities in this study were selected because they provide an excellent cross-section of communities in the region, were willing to participate in this study and maintained the necessary water consumption and revenue records. The study area communities vary in their household water demand, climate, size and income, and importantly include some that have actively pursued price and nonprice conservation programs and some that have not, and some that have experienced drought conditions and others that have not. The study area cities are: Los Angeles and San Diego, California; Broomfield and Denver, Colorado; and Albuquerque, Las Cruces and Santa Fe, New Mexico.

Collecting, assembling and refining the data necessary for this study was a formidable task, in part because of the traditional accounting and reporting practices of most water utilities. Historically, water utilities have not maintained their records in electronic form (until recently) or maintained records in a format suitable for analysis of long-term water demand conditions and the effects of conservation programs. In addition, record keeping within individual utilities has changed

over time and varies among utilities. Many of the cities initially considered for inclusion in this study were subsequently screened out due to changes in reporting practices and a lack of required water demand information.

For each of the areas included in this study, information on residential water use, number of accounts, rate structure and price, utility revenue, nonprice conservation programs, climate and socioeconomic conditions was gathered covering, when available, the period from January 1980 through mid-1995. Utility records of residential water use, number of accounts and revenue on a billing period basis (monthly, bimonthly or as available) were obtained from a variety of utility sources: on computer printouts, in annual reports, on summary forms and sometimes electronically. Much of the data for this study was collected and transcribed by hand. Because of differences in individual utility billing and reporting periods and changes in data definitions over the period of study, time consuming and detailed efforts, with the cooperation and assistance of utility staff, were required to verify and reconcile these problems and develop consistent data series for each variable within and across study areas.

A database of the reported (unadjusted) information that was gathered from utilities and the information that was further developed and refined for this study was digitized and assembled in spreadsheet format. The database contains monthly observations for each variable. The residential water use, rate structure, revenue, nonprice conservation program, climate and socioeconomic database is included in Appendix C of this report. The database is also available in electronic form on diskette by request through the American Water Works Association (Denver, Colorado) and Water Resources Research Institutes of The Powell Consortium (contact: Wyoming Water Resource Center, University of Wyoming, Laramie, Wyoming; Colorado Water Resources Research Institute, Colorado State University; or New Mexico Water Resources Research Institute, New Mexico State University, Las Cruces, New Mexico).

NONPRICE CONSERVATION PROGRAM INFORMATION

A large number of residential nonprice conservation programs have been implemented by water utilities with the expectation that they will encourage either short-term and/or long-term reductions in residential water use. In order to evaluate, verify and quantify the effectiveness of individual nonprice programs, it is necessary to have accurate information about specific program activities,

levels of effort, scope and coverage, and the exact periods of implementation. This information was often difficult or impossible to obtain from existing utility records. For example, we found that similar programs were often aggregated and reported as one single or a joint set of programs without descriptions of individual programs, dates of implementation or measures of specific program efforts. Reports on conservation activities might simply state that several different education programs were implemented over a period of years. Aggregation of programs and lack of information about program duration were particularly common with education and public information activities. Until detailed information regarding individual conservation program implementation activities are recorded and maintained, the interaction between such programs and use patterns of consumers cannot be properly determined. This issue is critical to evaluating the effectiveness of conservation programs and is addressed in greater detail in the section on nonprice conservation program documentation in this report and in the recommendation section of this study's research analysis report, "Effectiveness of Residential Water Conservation Price and Nonprice Programs."

Although it is recognized that utility resources are limited and nonprice conservation program documentation can be a difficult and time consuming task, we strongly recommend that resources be dedicated to developing and maintaining detailed, consistent documentation regarding nonprice conservation programs and efforts. This will enable water utility managers in the future to better monitor, evaluate and document the effectiveness of their programs and to implement the programs that best suit their needs.

CHAPTER 1

INTRODUCTION

This report describes and contains the information and database developed for the research on "Modelling and Evaluation of the Effects of Residential Water Conservation Price and Nonprice Programs in Urban Areas in the Western U.S." The water demand, price and conservation program information documented in this report is the result of research and data collection efforts and utility cooperation initiated in 1991 by Dr. William Bruvold and continued by the researchers of this report through a consortium of universities. The study encompasses seven water utilities in three western states - two in California, two in Colorado and three in New Mexico. The information gathered, developed and refined for this study was digitized and a database created in spreadsheet format for use in this study and for future research. Database structure, variable names, definitions, computational adjustments and study area characteristics are described in this report.

RESEARCH STUDY AREAS

Collecting, assembling and refining the data necessary for this study was a formidable task, in part because of the traditional accounting and reporting practices of most water utilities. Historically, water utilities have not maintained their records in electronic form (until recently) or maintained records in a format suitable for analysis of long-term water demand conditions and the effects of conservation programs. In addition, record keeping within individual utilities has changed over time and varies among utilities. Many of the cities initially considered for inclusion in this study were subsequently screened out due to changes in reporting practices and a lack of required water demand information.

The water utilities in this study were selected because they provide an excellent cross-section of communities in the region, were willing to participate in this study and maintained the necessary water consumption, account and revenue records. The study area communities vary in their household water demand, climate, size and income, and importantly include some that have actively pursued price and nonprice conservation programs and some that have not, and some that have experienced drought conditions and others that have not. The study area cities are: Los Angeles and San Diego, California; Broomfield and Denver, Colorado; and Albuquerque, Las Cruces and Santa

Fe, New Mexico. Water use, socioeconomic and climatic characteristics of each study area are summarized in Chapter 3.

DATABASE DEVELOPMENT AND AVAILABILITY

For each of the study areas, information on residential water use, number of accounts, rate structure and price, utility revenue, nonprice conservation programs, climate and socioeconomic conditions was gathered. Data was collected covering the period of time from January 1980 through mid-1995. Chapter 2 presents: the types of information collected for this study and sources of information; the variable names and definitions; and the database structure. Because of differences in individual utility billing and reporting periods and changes in data definitions over the period of study, time consuming and detailed efforts, with the cooperation and assistance of utility staff, were required to verify and reconcile these problems and develop consistent data series for each variable within and across study areas. Data development and adjustments by study area are described in Chapter 4.

A large number of residential nonprice conservation programs have been implemented by water utilities with the expectation that they will encourage either short-term and/or long-term reductions in residential water use. Information about the residential nonprice conservation programs implemented by each of the study area utilities was gathered and reviewed. Programs that had been in effect during the study period were examined, categorized and accounted by type of effort. Nonprice conservation programs by study area are described and the number of programs summarized in Chapter 5. Chapter 6 provides recommendations and specific examples of information that would allow for improved evaluation of price and nonprice programs.

A database of the reported (unadjusted) information that was gathered from utilities and the information that was further developed and refined for this study was digitized and assembled in spreadsheet format. The spreadsheet database is included in Append C of this report and is also available in electronic form on diskette by request through the American Water Works Association (Denver, Colorado) and Water Resources Research Institutes of The Powell Consortium (contact: Wyoming Water Resource Center, University of Wyoming, Laramie, Wyoming; Colorado Water Resources Research Institute, Colorado State University; or New Mexico Water Resources Research Institute, New Mexico State University, Las Cruces, New Mexico).

The water demand modelling and analysis results of this research are presented in another publication of the American Water Works Association by Michelsen, McGuckin and Stumpf (1997) entitled "Effectiveness of Residential Water Conservation Price and Nonprice Programs."

CHAPTER 2

VARIABLE NAMES, DEFINITIONS AND DATABASE ORGANIZATION

This chapter describes the types and sources of information gathered by this study and the database variable names, definitions and organization. Because of differences in reporting periods and changes in data definitions over the study period, time consuming and detailed efforts were required to reconcile changes and develop the data into consistent series of information within and across study areas. The data development and adjustment methods are described in Chapter 4.

CATEGORIES AND SOURCES OF INFORMATION

The data collected by this study is divided into four major categories based on the type and source of information. The four categories are: (1) utility water use, rate and revenue data; (2) climatological data; (3) socioeconomic data; and, (4) nonprice conservation program information. The types of information collected and sources of information are described below by category. This is followed by a list of the variable definitions and names used in the database.

Utility Data: Water Use, Account, Rate Structure and Revenue

The following information on aggregate *single-family residential water use* was collected from each of the seven study area water providers for each billing period as available over the period of the study. The time periods of data coverage for each study area are reported in Chapter 3.

- 1. Water use per billing period
- 2. Number of accounts (connections) per billing period
- 3. Rate structure and information
- 4. Revenue per billing period

Utility records were maintained in a variety of formats: on computer printouts, in summary form, in annual reports, and sometimes electronically. Most data was collected and transcribed by hand from printed records. Also, because of differences in billing or reporting periods and changes in data

definitions over the study period, time consuming and detailed efforts were required to verify and reconcile reporting differences and changes and to develop the data for purposes of consistency within and across study areas. For example, many of the utilities operate on bimonthly billing cycles, reporting two months of water use and revenue for approximately half of the total number of residential accounts each month. Information reported on this basis had to be disaggregated into partial monthly quantities and then reaggregated into total monthly quantities.

Climatological Data

Weather conditions are an important factor in residential water use. Total monthly precipitation measured in inches and mean monthly temperatures measured in degrees Fahrenheit were collected for each study area. This information was obtained from the United States Department of Commerce, *National Oceanic and Atmospheric Administration, National Weather Service* periodical publications and reports for weather stations representative of each study area. The National Weather Service, weather station index number used for each study area is identified below.

- Los Angeles Los Angeles Civic Center, NWS station index no. 5115
- San Diego -El Cajon, NWS station index no. 2706
- Denver Denver WSFO Airport, NWS station index no. 2220
- Broomfield Wheatridge 2, NWS station index no. 8995
- Albuquerque Albuquerque WSFO Airport, NWS station index no. 0234
- Santa Fe Santa Fe 2, NWS station index no. 8085
- Las Cruces New Mexico State University, NWS station index no. 8535

Socioeconomic Data

Socioeconomic factors may influence residential water use. The socioeconomic data listed below was collected from the following sources: United States Department of Commerce, Bureau of Census: 1980 Census of Population--General Social and Economic Characteristics, 1990 Census of Population--Social and Economic Characteristics, and 1990 Census of Population and Housing--Population and Housing Unit Counts. This was supplemented by local government inter-census

information as available. Both median household income and population figures within the data set were linearly interpolated between 1980 and 1990 and extrapolated from 1990 to the present using the two decade rate of growth. Also gathered from these sources were:

- 1. Mean household size
- 2. Median household income
- 3. Mean number of households
- 4. Population
- 5. Population density per square mile

Nonprice Conservation Program Information

The following is a list of information about nonprice conservation programs that we attempted to gather and compile for each study area.

- 1. Name and detailed description of the program
- 2. Date(s) of program implementation
- 3. Program duration
- 4. Program intensity and coverage (cost, number of people contacted, type and number of devices distributed or installed, number of education materials distributed, etc.)
- 5. Other estimates of program effectiveness

Information about nonprice conservation programs was obtained by reviewing utility reports, memorandums and other internal and external documents and through personal communication with current and previous utility staff members. Typically, only information about current or proposed nonprice conservation programs is presented in utility staff and annual reports or long-term planning documents. Activities are usually reported on an annual basis, even though a program may have been active for only one or a few months of the year such as a single mailing of literature. None of the utilities maintained a single comprehensive or continuing set of records that consistently identifies and describes the scope, coverage and intensity (effort) and lists the periods of implementation (in more detail than an annual basis) of their specific nonprice conservation

programs, comparable over time. Because of the variability in reporting and lack of detail in records, the quality and consistency of information regarding the identification, description and duration of nonprice conservation programs is highly variable, both within and across study areas. Summary descriptions and duration of the nonprice conservation programs in each study area and the abbreviated variable names of the nonprice conservation programs as they appear in the database are provided in Chapter 5.

DATABASE ORGANIZATION

The residential water use, number of accounts, rate structures and prices, revenue, climatological and socioeconomic information described above was collected, compiled and entered in electronic form as data series in computer spreadsheets. The database for this study consists of separate spreadsheet files for each study area.

Two separate data sets or spreadsheets exist for all of the study areas. The first data set for each study area contains the raw or unadjusted data and is labeled as "Unconverted." Because of differences in water utility and other data reporting periods, definitions, data gaps, and differences in the units of measurement, substantial adjustments and development of data series were required to obtain consistent data series that are uniform within and across study areas. The second data set for each study area contains the developed and adjusted data series and is labeled as the "Converted" data series. Sometimes data transformations were not necessary because the information gathered from utilities was already in the desired format. For these study areas only a "Converted" data set will be provided.

Database Structure

The database, consisting of these separate sets of spreadsheet files for each study area, was created in Quattro Pro 6.0 for Windows. The database name and size of each study area's spreadsheet files are identified in Table 3.3. The Quattro Pro format (identified by the *.wb2 extension) can be read and/or converted into other database, spreadsheet and statistical programs or standardized file formats (e.g. ascii text, space, or tab-delimited files).

Data series in the database spreadsheets are organized by column. The variable names for the data series are listed in the column across the top of each spreadsheet. The data, (observation/value) for each variable is reported in chronological order by year and month by spreadsheet row. Thus the values in a spreadsheet column are a chronological (ascending order when moving down each row) data series for each variable. An abbreviated name of eight characters or less was assigned to the variables in the database. These variable names are identified and defined in the next section of this chapter.

Table 2.1 illustrates the row and column spreadsheet database structure and Table 2.2 is an actual example showing part of the Las Cruces, New Mexico database for 1990 and 1991.

VARIABLE NAMES AND DEFINITIONS

The following is the list of variable names and variable definitions that comprise the data sets developed for each study region, exclusive of the nonprice conservation programs and variables described in Chapter 5. The list is in the same order as the variables appear in the database (the number in front of the variable name is the column number); the abbreviated variable names used in the database are in parentheses. Price and revenue variables are in nominal (the actual billing period) dollars, unadjusted for inflation.

Column # / (Name) / Definition

- 1. Year. The year for which the data was collected.
- 2. Month. The month for which the data was collected.
- 3. USET. Total monthly water use by all single-family residential accounts (SFRA) for the entire utility service area measured in reported units (unconverted data set) and 1,000 gallon units (converted data set).
- 4. ACCT. The number of single-family residential accounts: per reporting period (unconverted data set); per month (converted data set).
- 5. TREV. Total SFRA revenue measured in nominal dollars: per reporting period (unconverted data set); per month (converted data set).

Table 2.1

Database format example

1	2	3	4	5	6	7	8	9	10	11-16	17	18	19	20
Year	Month	USET	ACCT	TREV	TVREV	TFC	SC	PI	Bl		PREC	ТЕМР	нн	NHH
1980	1													
1980	2													
1980	3													

- 6. TVREV. Total SFRA commodity revenue generated from the pricing structure measured in nominal dollars: per reporting period (unconverted data set); per month (converted data set).
- 7. TFC. Total SFRA fixed cost revenue generated from the fixed service fee measured in nominal dollars: per reporting period (unconverted data set); per month (converted data set).
- 8. SC. Service Charge: the billing period service (fixed) charge on SFRA, measured in nominal dollars.
- 9. P1. First block price: the price charged to SFRA per unit of water in the first block of a tiered rate structure, measured in nominal dollars.
- 10. B1. Upper limit of first block: the maximum number of units of water that can be purchased at the first block price; reported units (unconverted data set) and 1,000 gallon units (converted data set).
- 11. P2. Second block price: the price charged to SFRA per unit of water in the second block of a tiered rate structure, measured in nominal dollars.
- 12. B2. Upper limit of second block: the maximum number of units of water that can be purchased at the second block price; reported units (unconverted data set) and 1,000 gallon units (converted data set).
- 13. P3. Third block price: the price charged to SFRA per unit of water in the third block of a tiered rate structure, measured in nominal dollars.
- 14. B3. Upper limit of third block: the maximum number of units of water that can be purchased at the third block price; reported units (unconverted data set) and 1,000 gallon units (converted data set).
- 15. P4. Fourth block price: the price charged to SFRA per unit of water in the fourth block of a tiered rate structure, measured in nominal dollars.

Table 2.2

Database spreadsheet illustrative example: portion of the Las Cruces, New Mexico database for 1990 and 1991

								V											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
 EAR	MONTH	LCUSET	LCACCT	LCTREV	LCTVREV	LCTFC	LCSC	LCPI	LCB1	LCP2	LCB2	LCP3	LCB3	LCP4	LCB4	LCPREC	LCTEMP	LCHHI	LCNHH
1990	1	160,851	15,144	176,116	106,302	69,814	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.51	42.0	23,673	22,765
1990	2	139,802	15,108	160,202	90,554	69,648	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.04	45.4	23,757	22,820
1990	3	188,447	15,123	197,506	127,789	69,717	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.20	54.7	23,841	22,875
1990	4	237,099	15,153	245,602	175,747	69,855	4.61	0.44	5	0.49	10	0.89	50			0.88	64.3	23,925	22,930
1990	5	297,485	15,285	292,905	222,441	70,464	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.30	69.5	24,009	22,985
1990	6	432,594	15,233	423,406	353,182			0.44	5	0.49	10	0.89	50	1.26	> 50	0.02	83.9	24,093	•
1990	7	431,089	15,172	430,191	357,365	72,826	4.80	0.46	5	0.51	10	0.93	50		> 50	1.87	79.9	24,177	23,095
1990	8	283,209	15,227	285,082	211,992	73,090	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.22	76.3	24,261	23,150
1990	9	235,928	15,284	242,942	169,579	73,363	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.44	74.1	24,345	23,205
1990	10	214,823	15,333	223,879	150,281	-		0.46	5	0.51	10	0.93	50	1.31	> 50	1.02	62.0	24,429	23,260
1990	11	163,805	15,276	179,261	105,936	73,325			5		10		50			0.62	52.7	24,513	23,315
1990	12	130,399	15,309	153,105	79,622	73,483	4.80	0.46	5	0.51	10		50			0.41	43.3	24,597	23,370
1991	1	140,113	15,328		-	73,574					10		50					24,681	-
1991	2	136,867	15,328	162,629	89,055	73,574			5		10							24,765	•
1991	3	,	•	=	=	73,680					10							24,849	-
1991	4	235,830	15,449	•	-	74,155					10							24,933	-
1991	. 5	•	•	•	•	74,568												25,017	-
1991	6	,	•	•	•	74,242												25,101	•
1991	7	365,860	•		•	74,592					10		_					25,185	•
1991	8	•	•		•	74,664												25,269	-
1991	9	•	•		•	74,938												25,353	-
1991	10	•	•	•	•	75,144												25,437	-
1991	11	•		-	-	· · ·				0.0.								25,521	•
 1991	12	134,214	15,711	157,300	81,887	75,413	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.91	43.7	25,605	24,030

- 16. B4. Upper limit of the fourth block: the maximum number of units of water that can be purchased at the fourth block price; reported units (unconverted data set) and 1,000 gallon units (converted data set).
- 17. PREC. Precipitation: total precipitation for the month in inches.
- 18. TEMP. Temperature: average Fahrenheit temperature for the month.
- 19. HHI. Median household income: mean nominal household income for the study area.
- 20. NHH. Number of households: mean number of households in the study area.

Following these twenty variables are the nonprice conservation program variables. The nonprice programs are formatted the same as the other variables, with the name appearing at the top of the column and program implementation periods listed chronologically by year and month by spreadsheet row. The specific nonprice conservation program variable names and abbreviations are provided in Chapter 5 along with descriptions of the programs. Following the individually listed conservation programs are five columns that group the programs into one of five categories based on their area of concentration. The categories of nonprice programs and examples of programs grouped into each are described in detail in Chapter 5.

Database Availability

The residential water use database developed by researchers for this study is included as Appendix C of this report. The database is also available to other researchers in electronic form on diskette by request through the American Water Works Association (Denver, Colorado) and Water Resources Research Institutes of The Powell Consortium (contact: Wyoming Water Resource Center, University of Wyoming, Laramie, Wyoming; Colorado Water Resources Research Institute, Colorado State University; or New Mexico Water Resources Research Institute, New Mexico State University, Las Cruces, New Mexico). Any use of this data must include proper citation of the source and disclaimer.

CHAPTER 3

PROJECT STUDY AREAS AND CHARACTERISTICS

This database and study encompasses seven water utility districts in three southwestern states - California, Colorado and New Mexico. The utility districts for this study of single-family residential water demand and conservation program effectiveness were selected because: they are representative of other cities in the semi-arid southwestern United States; the study areas encompass several different rate structure and price levels; these utility districts have implemented a variety of conservation programs, from many to none; they vary in size from small to large and in growth from slow to rapid; and they include areas that have experienced drought and areas that have not. The cooperation and interest of the utility districts was also instrumental and the information for this research could not have been gathered without their enthusiastic cooperation and generous assistance. The study areas and utility districts included in this research are identified below.

Project Study Areas and Water Utility's by State

California

City of Los Angeles - Los Angeles Department of Water and Power (LADWP)

City of San Diego - San Diego Water Utilities Department (SDWUD)

Colorado

City and County of Denver - Denver Water (DW)

City of Broomfield - Broomfield Water Department

New Mexico

City of Albuquerque - Albuquerque Water Utility Division

City of Santa Fe - Sangre de Cristo Water Company of Santa Fe

City of Las Cruces - Las Cruces Water Resources Department

The next three sections provide a brief discussion and summary tables of the geographic and socioeconomic characteristics, recent water use statistics, time covered, existence of conservation

programs, and the database file name and size for each study area. The remainder of this chapter is devoted to more detailed descriptions of the geographic location, climate, demographics, water supply and water use characteristics, and demand-side management programs of each study area.

SUMMARY OF GEOGRAPHIC, SOCIOECONOMIC AND CLIMATE CONDITIONS

The seven urban water districts included in this study encompass a wide range of geographic, socioeconomic and climate conditions. Table 3.1 provides a summary of these conditions in each of the study areas. Although all of the study areas are in the southwestern United States, the distance between some is greater than 1,000 miles. There are large differences in the physical geography of the areas ranging from low elevation coastal regions (San Diego is 13 feet above sea level and Los Angeles is 267 feet above sea level), to high plains areas in and near the Rocky Mountains, (Santa Fe is 7,200 feet above sea level and Denver is 5, 280 feet above sea level).

The differences in physical geography are reflected in the variations in climate and seasons. The timing of precipitation can be very important in terms of outdoor residential water demand. The seasons of precipitation vary from summer (New Mexico) to winter (California) to year-round (Colorado). Temperatures are also crucial. The average summer high temperatures range from 75°F (San Diego) to 94°F (Las Cruces). Average winter high temperatures range from 41°F (Santa Fe) to 72°F (Los Angeles).

The populations served by water districts in the study ranges from 24,000 people in Broomfield to almost 3.5 million people in Los Angeles (1990) and the land area ranges from just 24 square miles (Broomfield), to more than 469 square miles (Los Angeles). These conditions are reflected in the density of population, with Broomfield and Los Angeles having 2,902 and 7,389 people per square mile, respectively. The number of people per household varied from 2.17 in Denver to 2.83 in Broomfield (1990). Median income per household was \$23,648 in Las Cruces and \$39,067 in Broomfield (1990). The average monthly water use per single-family household in 1994 varied from 7,060 gallons in Santa Fe to 15,660 gallons in Las Cruces. The next section provides a more detailed summary of water use.

Table 3.1 Summary of geographic, socioeconomic, climate and water use characteristics

	Califo	rnia	Col	orado		New Mex	ico
Char.\Study Area	Los Angeles	San Diego	Denver	Broomfield	Albuq.	Santa Fe	Las Cruces
Land Area (sq. miles)	469.3	324	154	23.97	132.2	36.6	37.5
Elevation (feet)	267	13	5,280	5,362	5,311	7,200	3,881
Population (1,000) •	3,485	1,110	467	24	384	55	62
Density (pop./mile) •	7,389	3,933	4,212	2,902	2,910	1,526	1,656
People/householdo	2.80	2.61	2.17	2.83	2.46	2.39	2.59
HH Income (median) •	30,925	33,686	25,106	39,067	27,555	30,023	23,648
Precipitation (inches)o	15	9.5	15.2	15.2	8.5	13.7	8.0
Temperature (summer)o	85-65°	75-65°	88-58 ⁰	88-59º	93-65º	84-57°	94-65°
Temperature (winter)	72-62°	65-45°	42-15°	44-19 ⁰	47-22°	41-19°	56-25°
Precipitation season	Winter	Winter	Annual	Annual	Summer	Summer	Summer
Avg. Monthly water per HH (1,000 gal.) □	12.68	9.66	12.60	12.03	14.76	7.06	15.66

Sources: U.S. Department of Commerce, Bureau of Census 1990 Census of Population, Social and Economic Characteristics and 1990 Census of Population and Housing, Population and Housing unit Counts, and Residential Water Use, Rate, Revenue and Nonprice Conservation Program Database (1997).

o Annual average; • 1990 data;

1994 data

SUMMARY OF ACCOUNTS, REVENUE AND WATER USE

The number of single-family residential accounts and total and per account water use varies widely from area to area and at different times of the year. Table 3.2 provides a summary of the number of accounts, average, minimum and maximum monthly single-family residential water use, seasonal and drought period water use (January 1991-March 1993) and monthly revenue per account for each study area over the two-year period from April 1993 through April 1995.

During this period, the Los Angeles Department of Water and Power served an average of 388,752 single-family residential accounts and the City of Broomfield served an average of 8,033 accounts. Total (single-family residential) annual average monthly water use ranged from a high of 4,829.5 million gallons in Los Angeles to a low of 91.4 million gallons for the City of Broomfield. The annual average monthly water use per account varied from 7,050 gallons in Santa Fe to a high of 15,440 gallons in Las Cruces.

Table 3.2 Summary of water use statistics for single-family residential accounts by study area for April 1993 through April 1995 (1,000 gallons - G)

	Number of Accounts Per Month	Total Monthly Use (G)	Monthly Use Per SF Res. Acct (G)	Monthly Summer Use (G) per Acct.	Monthly Winter Use (G) per Acct.	Total Monthly Revenue \$ (000)	Monthly Bill \$ Per Account
LOS ANGELES							
Minimum	382,819	3,166,749	8.26	14.92	8.25	8,054.1	21.00
Maximum	394,331	6,526,893	16.71	16.7	11.03	17,298.4	44.28
Average	388,752	4,829,456	12.41	15.72	9.48	11,949.7	30.71
Avg. Drought			11.18	13.96	9.17		
SAN DIEGO							
Minimum	193,836	1,167,204	5.98	10.70	6.62	2,068.8	10.49
Maximum	197,307	2,875,050	14.79	14.79	8.82	5,443.9	28.00
Average	195,732	1,832,807	9.36	12.56	7.68	3,689.7	18.85
Avg. Drought			8.00	10.51	6.99		
DENVER							
Minimum	119,429	664,360	5.74	16.46	6.10	960.9	7.99
Maximum	121,085	3,147,242	27.37	27.37	6.51	3,912.9	32.45
Average	120,284	1,407,319	11.93	21.51	6.28	1,736.7	14.44
BROOMFIELD							
Minimum	7,338	44,161	5.23	12.77	5.23	130.0	16.07
Maximum	8,542	181,373	21.28	21.27	6.77	396.7	46.56
Average	8,033	91,367	11.42	17.97	6.18	220.7	27.55
ALBUQUERQUE							
Minimum	104,207	785,980	7.31	19.99	7.31	1,159.3	10.81
Maximum	107,928	3,064,545	27.58	28.60	8.70	2,939.5	26.63
Average	106,270	1,581,529	14.91	24.03	7.95	1,756.7	16.64
SANTA FE							
Minimum	19,463	82,162	4.11	7.56	4.77	392.8	19.67
Maximum	20,586	245,697	12.17	12.16	5.79	960.1	47.53
Average	20,037	141,003	7.05	10.01	5.26	596.7	29.82
LAS CRUCES							
Minimum	16,227	126,012	7.50	19.46	7.50	167.4	10.10
Maximum	17,260	495,477	29.07	29.07	9.25	552.8	32.44
Average	16,798	258,892	15.44	23.46	8.37	293.6	17.49

Source: Residential Water Use, Rate, Revenue and Nonprice Conservation Program Database (1997).

Notes: Dollar values are in nominal terms. The period of drought as defined by the California water providers was January 1991 though March 1993.

Residential water use varies widely depending on the season. For the same period the average monthly summer use was greater than the average monthly winter use by a factor of 1.5 to 3.4. For example, during the winter, average monthly use per account in Denver was 6,280 gallons; during the summer the average monthly use per account increased to 21,510 gallons.

Differences in the quantities of water used and utility rates result in a wide range of revenue or cost per account. Annual average monthly bills per account in 1994 ranged from almost \$16.00 for residences in Denver to more than \$31.00 for residences in Los Angeles. For many areas, the average maximum monthly bill was more than three times greater than the average minimum monthly bill. The large variations in water use and potentially associated factors within and across study areas extend and enhance research on residential water demand and the evaluation of conservation program effectiveness.

STUDY AREA DATA COVERAGE AND DATABASE FILENAMES

The period covered by this database is, in general, from January 1980 through mid-to-late-1995, depending on the availability of utility data. Four of the seven utility districts report (bill) residential water use on a monthly basis (Broomfield switched from bimonthly to monthly), two report use on a bimonthly basis, and one utility (SDWUD) reports use on two, four week periods (13 periods per year). In terms of measurement units, three of the seven utilities report and set rates in terms of a hundred cubic feet (HCF; equivalent to 748 gallons), and the other four use units of 1,000 gallons. All but one utility have changed their rate structure one or more times over the period of study, from uniform or declining rates to inclining and/or uniform plus seasonal rates, that is, more conservation-oriented rates. Five of the seven study areas have implemented one or more nonprice conservation programs during the study period. Table 3.3 provides a summary of the period of data coverage, billing/reporting frequency, billing measurement units, rate structure, existence of nonprice conservation programs and database filename and approximate size by study area.

Table 3.3 Summary of water use information by study area

Study Area and Data Period	Billing Cycle	Units of Water	Rate Structure	Non-Price Conservation Programs	Filename and Size
California	<u> – </u>				
Los Angeles 01/80-06/95	bimonthly	HCF	01/80-11/92 SC + uniform 12/92-06/95 inclining & seasonal	multiple ongoing programs	LA_Data.wb2 168 KB
San Diego 01/84-04/95	13 periods per year & bimonthly	HCF	01/84-04/95 SC + inclining rate	multiple ongoing programs	SD_Data.wb2 115 KB
Colorado					
Denver 01/80-04/95	bimonthly	1,000 gallons	01/80-04/80 minimum charge + declining 05/80-02/90 SC + declining 03/90-04/95 SC + inclining	multiple ongoing programs	Den_Data.wb2 176 KB
Broomfield 01/80-04/95	bimonthly 01/80-12/89 monthly 1/90-present	HCF	01/80-04/95 SC + uniform	none	Brom_Dat.wb2 122 KB
New Mexico					
Albuquerque 01/80-10/95	monthly	HCF	01/80-08/82 SC + uniform & seasonal 09/82-08/88 SC + uniform & seasonal & seasonal reduction 09/88-06/93 SC + uniform & seasonal 07/93-10/95 SC + uniform & seas. & SCF	publicity campaign (began 06/94)	ABQ_Data.wb2 139 KB
Santa Fe 01/81-09/95	monthly	1,000 gallons	01/81-03/85 SC + declining & seasonal 04/85-09/93 SC + inclining 10/93-09/95 SC + inclining & SCF	several ongoing programs	SF_Data.wb2 89 KB
Las Cruces 11/82-09/95	monthly	1,000 gallons	11/82-04/93 SC + inclining 05/93-09/95 SC + inclining & SCF	none	LC_Data.wb2 77 KB

Source: Residential Water Use, Rate, Revenue and Nonprice Conservation Program Database (1997). Notes: SC denotes service charge. SCF denotes a state conservation fee, a monthly fee per unit of water for New Mexico utilities.

DETAILED STUDY AREA DESCRIPTION AND CHARACTERISTICS

Los Angeles, California

The City of Los Angeles is in southern California with a total land area of 469.3 square miles with an elevation of 267 feet. The downtown section, called Central Los Angeles, is approximately 15 miles from the Pacific Ocean. However, the city extends from the ocean to the west and San Pedro Bay in the south to the mountains in the northeast, east and southeast. The Greater Los Angeles Metropolitan Area is flanked by the San Gabriel Mountains to the northeast, the San

Bernardino and San Jacinto Mountains to the east, the Santa Ana Mountains to the southeast and the Pacific Ocean to the west. The portion of the City that lies in the San Fernando Valley experiences higher temperatures and drier conditions than the Central Los Angeles area. For perspective, surrounding communities include Glendale, Pasadena, Alhambra, Inglewood and Santa Monica.

Climate

Los Angeles has a Mediterranean climate. Year-round temperatures are mild; the breeze off the ocean cools the surrounding area and temperatures increase as you move further inland. The daytime temperature in the summer averages about 85° F with the nights about 20° F cooler. During the winter months, average daytime temperatures are in the low 70s with nights in the low 60s. The skies are frequently cloudless during the day.

A small amount of precipitation is associated with the Mediterranean climate. The rainy season is usually from December to March, with an average rainfall of about 15 inches per year. The lower elevations receive this precipitation as rain, but higher in the mountains the precipitation falls as snow. The higher elevations usually receive moderately higher amounts of yearly precipitation.

Demographics

The City of Los Angeles is in the Metropolitan Los Angeles area, a highly urban/suburban zone with a 1990 population density of 7,389 persons per square mile. Los Angeles' 1990 population was 3,485,398, which represents a 14.9 percent increase since 1980. The median household income was \$30,925 in 1990 with an average size of 2.80 persons per household. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population--General Social and Economic Characteristics, 1990 Census of Population--Social and Economic Characteristics, and 1990 Census of Population and Housing--Population and Housing Unit Counts.)

Water Supply

The Los Angeles Department of Water and Power (LADWP) is the city's purveyor of water. Most of LADWP's water supply is obtained from water imported from distant river basins found along the Sierra Nevada Mountains, Cascade Mountains and in the Rocky Mountains, several hundred or more miles from Los Angeles. The hydrologic conditions and institutional water right regulations in these distant river basins determine, in large part, LADWP's water supply situation.

The largest portion of LADWP's water, approximately 60 percent, is supplied by the Metropolitan Water District of Southern California (MWD), the primary wholesale water provider for much of southern California (source: LADWP). MWD supplies LADWP with water from two other distant sources: the State Water Project and the Colorado River Aqueduct. The State Water Project's main sources of water are Clair Engle Lake and Lake Shasta in northern California. Both artificial lakes are in the Cascade Mountain Range and are approximately 550 miles from Los Angeles. The State Water Project's third source of water is the Lake Oroville Dam on the Feather River in the Sierra Nevadas. Water from these sources is delivered to southern California via a series of large canals and pumping systems. The Colorado River Aqueduct draws water from Lake Havasu on the Colorado River. The Colorado River Aqueduct transports Colorado River water from Lake Havasu about 200 miles into the Los Angeles basin. LADWP receives approximately 35 percent of their water supply from the Los Angeles Aqueduct (source: LADWP). The City of Los Angeles owns and operates the Los Angeles Aqueduct that has as its source several streams feeding into Mono Lake in the Owens Valley. The Owens Valley is about 350 miles directly north of Los Angeles on the eastern side of Yosemite National Park and the Sierra Nevada Mountains. The water received from this source will significantly decrease in the future because of environmental restrictions placed on the diversion of water away from the ecologically sensitive Mono Lake. LADWP obtains approximately 5 percent of its total water supply from local groundwater sources (source: LADWP). Los Angeles maintains 103 local tanks and reservoirs with a storage capacity of approximately 353,000 acre-feet.

All of California experienced drought (below "normal" precipitation) beginning in 1988 and continuing into early 1993. This drought placed an especially severe strain on the LADWP and MWD's water resources beginning in March 1991 after several years of well below normal snowpack in both the Sierra Nevada and Cascade mountain ranges and continuing through January of 1993. During this period southern California also received far less precipitation than normal. This drought fits the historical pattern of recurrent drought for the region.

Water Use

The residential (including low-income and life-line accounts), multi-family, commercial, industrial and governmental sectors served by LADWP used a total of 179.0 billion gallons of water (approximately 549,473 acre-feet) in the 1994-95 fiscal year. By water use sector this is divided as follows: residential 36.4 percent, multi-family 31.97 percent, commercial 20.02 percent, industrial 4.11 percent and governmental 7.5 percent (source: LADWP).

Total use in 1994 by single-family residential accounts was 59.3 billion gallons (approximately 181,900 acre-feet; source: Database). The average number of single-family residential accounts was 389,352 in 1994, this translates to an average annual use of 152,218 gallons per account, or, an average monthly use per account of 12,684 gallons (source: Database). Figure 3.1 is a graph of LADWP residential water use over the study period (unadjusted; source: Database).

Typically, the high use months in Los Angeles are July, August and September and low use months are January, February and March. Monthly bills per single-family residential account in 1994 averaged \$31.85 (Source: Database).

Demand-Side Management Programs

Over the fifteen-year period from 1980 to 1995, LADWP has implemented many demand-side management programs to influence short-term (drought) and long-term residential water use. These demand-side management programs include both price (rate structure and price level) and nonprice conservation programs.

From January 1980 through November 1992, LADWP assessed a service (fixed) charge per account and a uniform (flat) rate per hundred cubic feet (748 gallons) of water used during each two-month billing period. There were frequent changes in the uniform rate reflecting changing water supply acquisition costs. It was not until January of 1991, following yet another year of much below normal precipitation, that the drought officially began for the water utility. At that time the LADWP imposed a price penalty under their Emergency Conservation Plan for single-family residential water use exceeding 1986 levels. Initially the utility demanded a 10 percent reduction from 1986 levels; later in May of 1991, the mandatory savings level increased to 15 percent. LADWP lifted all price penalties in April of 1992. In January 1993, LADWP implemented a two-block inclining rate

structure with a built-in seasonal component to encourage customers to keep their water use levels down and eliminated their bimonthly service charge. Table 3.4 identifies LADWP's single-family residential water structures, effective dates, service charges and use charges from 1980 through mid-1995.

One example of a nonprice measure is Los Angeles' ultra-low flow toilet rebate program, extended to both their single-family and multi-family residential customers. The financial incentive offered by the program has fostered the installation of more than 549,000 ultra low-flow toilets between May 1990 and August 1995 by both groups (source: LADWP). Other nonprice measures include water conservation public awareness campaigns and programs that specifically focus on the youth within their service area. These programs are described in more detail in the section on nonprice conservation programs in Chapter 5.

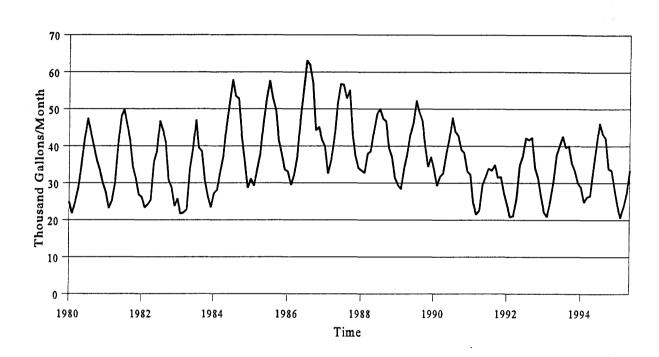


Figure 3.1 LADWP unadjusted residential water use per account

Table 3.4

Los Angeles water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month		1,000 Gallons (G) dollars)	Rate Structure
		Block 1	Block 2	
01/80	3.10	0.69	- -	Uniform
09/81	3.45	0.78	- -	Uniform
10/82	3.45	0.89	-	Uniform
12/84	1.56	0.89	-	Uniform
01/86	1.56	0.94	-	Uniform
04/86	1.56	1.04	-	Uniform
10/86	1.56	0.94	-	Uniform
04/87	1.56	1.09	-	Uniform
07/87	1.56	1.18	-	Uniform
10/87	1.56	1.04	-	Uniform
11/87	2.16	1.04	-	Uniform
04/88	2.16	1.15	•	Uniform
07/88	2.16	1.24	. •	Uniform
10/88	2.40	1.20	-	Uniform
01/89	2.40	1.19	-	Uniform
04/89	2.40	1.37	-	Uniform
07/89	2.40	1.47	-	Uniform
10/89	2.40	1.41	-	Uniform
01/90	2.40	1.47	-	Uniform
04/90	2.58	1.69	•	Uniform
07/90	2.58	1.77	-	Uniform
10/90	2.58	1.51	. •	Uniform
01/91	2.58	1.54	-	Uniform
04/91	2.58	1.87	-	Uniform
07/91	2.58	1.60	-	Uniform
10/91	2.58	1.06	-	Uniform
01/92	2.58	1.37	-	Uniform
04/92	2.58	1.95	-	Uniform
07/92	2.58	2.30	-	Uniform
10/92	2.58	2.06	•	Uniform

(continued)

Table 3.4 continued

Effective Date	Service Charge \$ per month	Price of Water per (current	1,000 Gallons (G) dollars)	Rate Structure			
12/92	0.00	2.06	-	Uniform			
		0 - 16.5 G Nov May 0 - 20.25 G June - Oct.	> 16.5 G Nov May > 20.25 G June - Oct.	Inclining & Seasonal			
01/93	0.00	2.31	3.11	Inclining & Seasonal			
04/93	0.00	2.23	3.11	Inclining & Seasonal			
06/93	0.00	2.23	3.98	Inclining & Seasonal			
07/93	0.00	2.06	3.98	Inclining & Seasonal			
10/93	0.00	2.11	3.98	Inclining & Seasonal			
11/93	0.00	2.11	3.11	Inclining & Seasonal			
01/94	0.00	2.20	3.11	Inclining & Seasonal			
04/94	0.00	2.41	3.11	Inclining & Seasonal			
07/94	0.00	2.54	3.11	Inclining & Seasonal			
10/94	0.00	2.35	3.11	Inclining & Seasonal			
01/95	0.00	2.50	3.11	Inclining & Seasonal			
04/95	0.00	2.38	3.11	Inclining & Seasonal			
06/95	0.00	2.37	3.98	Inclining & Seasonal			

Source: Los Angeles Department of Water and Power.

San Diego, California

The City of San Diego covers an area of 324 square miles on the coast of southern California adjoining the Mexican border. Although San Diego is a relatively hilly city, downtown San Diego is situated along the harbor resulting in an official elevation of only 13 feet above sea level. The City extends from the downtown area to the north, east and south. San Diego has no real "in land" areas and is almost all within 10 miles of the Pacific Ocean.

Climate

Because of San Diego's proximity to the ocean, its climate is cooler than that of Los Angeles. San Diego experiences fog many mornings and evenings, keeping the temperature cooler and reducing the rate of plant evapotranspiration and the need for outdoor watering. Summers are warm

and winters are mild. Summer daytime temperatures are in the mid 70s and drop about 10°F at night. Winter daytime temperatures are in the mid 60s and drop about 20°F at night.

Precipitation falls mainly in the winter months of December, January and February. San Diego averages 9.5 inches of rain a year. Because of the low elevation in San Diego, all the precipitation falls as rain.

Demographics

San Diego is within the Greater Metropolitan San Diego Area. The city is largely residential suburban with a population density of 3,933 persons per square mile. San Diego's 1990 population was 1,110,549, which represents an increase of 21.2 percent since 1980. The median household income was \$33,686 in 1990 with an average size of 2.61 persons per household. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population—General Social and Economic Characteristics, 1990 Census of Population—Social and Economic Characteristics and 1990 Census of Population and Housing—Population and Housing Unit Counts.)

Water Supply

Unlike Los Angeles, the City of San Diego Water Utilities Department (SDWUD) has neither groundwater supplies nor its own source of water from the Sierra Nevadas. The City of San Diego is entirely dependent on the wholesale purchase of imported water from the Metropolitan Water District (MWD) of southern California. The sources of MWD water supplied to San Diego are from either the State Water Project or the Colorado River Aqueduct. Both aqueducts terminate into the same reservoirs for San Diego as for Los Angeles (Lake Parris and Lake Mathews). From these reservoirs, two aqueducts transport the imported water to local treatment plants where SDWUD then distributes the water to its customers.

Over a five-year period, beginning in 1988 and continuing into early 1993, all of California experienced drought (below normal precipitation). In terms of water supplies, the drought was most severe from 1991 through early 1993. The drought affected San Diego's supplies, possibly more so than Los Angeles, because San Diego is solely dependent on imported surface water and there are no local ground water supplies from which to draw.

Water Use

The single-family residential, multi-family residential, commercial, industrial and irrigation sectors served by SDWUD used a total of 64.41 billion gallons of water (approximately 197,680 acre-feet) in the 1994-95 fiscal year. By water use sector this is divided as follows: single-family residential 33.8 percent, multi-family residential 23.5 percent, commercial 32.6 percent, industrial 3.8 percent and irrigation 6.3 percent (Source: SDWUD). The water use and revenue data reported by the San Diego Water Utilities Department is recorded in a completely different manner from any other water utility included in this study. SDWUD uses a thirteen period, four week (28 days), bimonthly billing rotation and thus has a reporting period that is out of synchronization with the other monthly or bimonthly reporting periods in this study. This reporting cycle resulted in significant difficulties in interpretation and adjustment of the water use and account data so that it would be meaningful and consistent with the information from the other study areas. Figures 3.2 (unadjusted) and 3.3 (adjusted) are graphs of the historical single-family residential water use in San Diego. Adjustments to the data are discussed in Chapter 4.

Total use in 1994 by single-family residential accounts in San Diego was 22.75 billion gallons of water (approximately 69,829 acre-feet; Source: Database). The number of single-family residential accounts averaged 196,160 in 1994. This translates to an average annual use of 115,992 gallons per account, or, an average monthly use of 9,666 gallons (source: Database). Similar to Los Angeles, the high use months in San Diego are July, August and September and low use months are January, February and March. Monthly bills per SFRA account in 1994 averaged \$19.83 (Source: Database).

Demand-Side Management Programs

Over the fifteen-year period from 1980 to 1995, SDWUD has implemented several demand-side management programs to influence short-term (drought) and long-term residential water use. These demand-side management programs include both price (rate structure and price level) and nonprice conservation programs. SDWUD currently has an inclining block rate structure. A service or fixed charge is assessed bimonthly per account and an increasing block rate water use charge is based on the use level. There are two price blocks, a low volume block and a high volume block. Water use

exceeding 10 HCF (7,480 gallons) per bimonthly billing period is charged at the high volume block price. The two-block inclining rate structure has been used by San Diego since March of 1983.

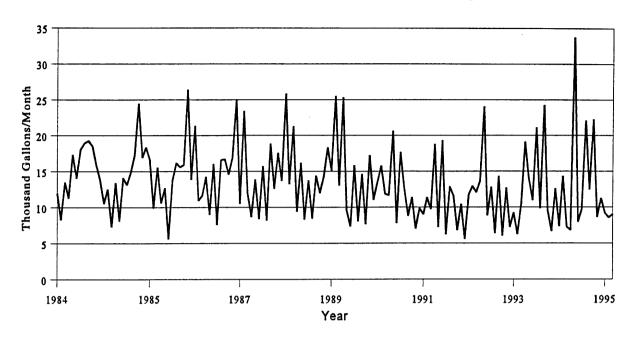


Figure 3.2 San Diego water use per residential account - unadjusted data

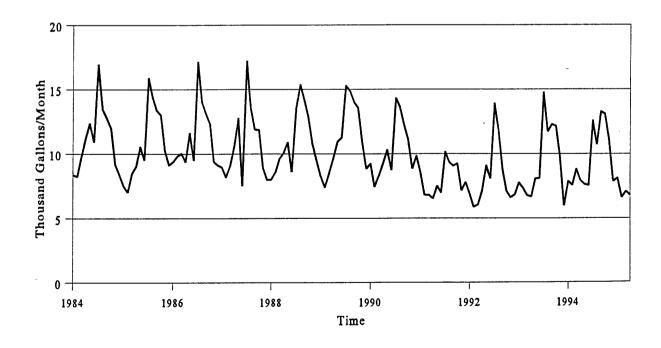


Figure 3.3 San Diego water use per residential account - adjusted data

Table 3.5
San Diego water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month	•	er 1,000 Gallons (G) nt dollars)	Rate Structure
		Block 1	Block 2	
		7.5 G	> 7.5 G	Inclining
01/84	2.44	0.89	1.03	Inclining
01/85	2.44	0.89	1.04	Inclining
07/86	2.76	1.01	1.17	Inclining
01/87	2.76	1.03	1.19	Inclining
07/87	3.12	1.16	1.34	Inclining
01/88	3.12	1.18	1.36	Inclining
01/89	3.12	1.21	1.39	Inclining
01/90	3.12	1.25	1.44	Inclining
11/91	3.12	1.44	1.62	Inclining
07/92	3.12	1.56	1.75	Inclining
01/93	3.12	1.72	1.90	Inclining
01/94	3.12	1.73	1.91	Inclining
04/95	3.12	1.73	1.91	Inclining

Source: San Diego Water Utilities Department.

SDWUD uses four-week, bimonthly (approximately) billing cycles, resulting in as many as 13 or 14 billing periods in any given year. Table 3.5 identifies SDWUD's single-family residential rate structures, effective dates, service charges and use charges from 1984 through early-1995.

Examples of SDWUD's nonprice programs include home water surveys, interior plumbing retrofits and ultra low-flow toilet rebates. During the droughts of 1976-77 and 1987-92, SDWUD stepped up its nonprice conservation program efforts further to promote water conservation. In contrast to Los Angeles, San Diego pursued programs with voluntary reductions in use rather than mandatory restrictions. San Diego's conservation efforts are described in more detail in the section on nonprice conservation programs in Chapter 5.

Denver, Colorado

The City and County of Denver occupy 154 square miles of land (111 miles without the addition of Denver International Airport) fifteen miles east of the foothills of the Rocky Mountains in north-

central Colorado. Elevation in the county ranges from 5,200 feet to about 5,500 feet, therefore the nickname "the mile high city."

Climate

Denver has a semi-arid climate with relatively warm summers and winters with chilly temperatures and moderate snowfall. There are many sunny days year-round, with low humidity and a growing season of 165 days. The mean temperature in January is 30°F and in July it is 73°F. Average annual precipitation is 15.2 inches of water, including an average annual snowfall of 63 inches. However, there are no "typical" years in Colorado, annual precipitation and monthly temperatures vary widely from year to year.

Demographics

In 1990, Denver had a population density of 4,212 persons per square mile and a population of 467,610. The 1995 population figures were estimated at 502,796 people, representing an increase of 6.0 percent from 1990. The median household income was \$25,106 in 1990 with an average size of 2.17 persons per households. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population--General Social and Economic Characteristics, 1990 Census of Population--Social and Economic Characteristics, 1990 Census of Population and Housing--Population and Housing Unit Counts, and Population Projections for Colorado Regions, 1993-2020 Denver, CO. 1994.)

Water Supply

Water utility services for the City of Denver are provided by Denver Water that has been publicly owned since 1918. The city has two primary water supply sources: the South Platte River; and transmountain diversions from the Colorado River Basin through the Moffat Tunnel Collection system, Williams Fork Collection system and Roberts Tunnel. The South Platte River, which originates along the east slope of the continental divide and flows through Denver from the southwest to the northeast, was the original supply source for the City. In the 1920's the concern for meeting Denver's

growing demand for water caused the utility's engineers to search for ways of obtaining additional water by importing Colorado River Basin water from the western slope of the Continental Divide. In the 1930's the first segment of the Moffat Tunnel collection system was built in the Winter Park area northwest of Denver. In 1946 water department crews began construction of another tunnel under the continental divide. Upon completion the Roberts Tunnel was 23.3 miles long and brought water from the Blue River on the western slope of the Rocky Mountains, more than 80 miles from Denver. Shortly afterwards, Dillon Reservoir (Blue River) was built on the western slope of Summit County, which almost doubled Denver's raw water storage. In all, several reservoirs were constructed for storage of water to be diverted and as compensation for transferring water previously available for Colorado River Basin users to the Denver metropolitan area. All of Denver Water's supply is from surface water. The total reservoir operating capacity of Denver Water is 545,471 acre-feet. There have been no drought periods during the time covered by this study.

Water Use

Total water use inside the City of Denver for 1994 was 38.82 billion gallons (approximately 119,132 acre-feet). Residential use (including duplexes) accounts for 47.6 percent of the total, commercial use accounts for 37.5 percent, industrial use accounts for 2.9 percent, and construction and public authorities accounts for 12.0 percent of the total (Denver Water 1994 Annual Report). Total use in 1994 by single-family metered residential accounts was 17.8 billion gallons or approximately 54,372 acre-feet (source: Database). The number of single-family metered residential accounts averaged 117,042 in 1994. This translates into an average annual use of 151,932 gallons per residential account, or, a monthly average of 12,661 gallons (source: Database). Typically, the high water demand months in Denver are July, August and September and low demand months are January and February. Monthly bills per single-family residential metered account in 1994 averaged \$15.63 (Source: Database).

Demand-Side Management Programs

Over the 19-year period from 1978 to 1995, Denver Water has implemented many demand-side management programs to promote conservation in residential water use. Examples of programs

offered by Denver Water include home water surveys, free retrofit devices, low-water intensive demonstration gardens, outdoor plants water application information and suggested watering schedules. Before 1993, not all Denver residences served by Denver Water were metered. In the early 1980's, approximately 24 percent of residential accounts were unmetered (Bishop and Weber 1995). The unmetered accounts were billed at a flat rate. Between 1987 and 1992, 87,381 single-family residences in Denver had water meters installed, completing the conversion of all homes to metered accounts.

As recently as February 1990 Denver Water's single-family residential bimonthly billings were based on a service charge and a declining block rate structure. After this time the utility implemented an inclining two-block rate structure for single-family residences, while maintaining the monthly service charge per account. Table 3.6 identifies Denver's single-family residential rate structures, effective dates, service charges and use charges from 1980 through mid-1995.

Table 3.6
Denver water rate structure and price per 1,000 gallons

Effective Date	e Service Charge \$ per month	Pr	Price of Water per 1,000 Gallons (G) (current dollars)								
		Block 1	Block 2	Block 3	Block 4						
		0-15 G	16-100 G	101-700 G	> 700 G	Declining					
05/80	2.35	0.68	0.58	0.46	0.42	Declining					
02/82	2.65	0.74	0.60	0.46	0.42	Declining					
05/86	2.85	0.79	0.64	0.49	0.45	Declining					
05/87	3.00	0.83	0.67	0.51	0.47	Declinin					
		0-15 G	> 15 G			Inclining					
03/90	3.00	0.71	0.89			Inclining					
07/92	3.00	0.76	0.95			Inclining					
		0-11 G	> 11 G			Inclining					
06/93	3.00	0.83	1.01			Inclining					
06/94	3.33	1.00	1.20			Inclining					
01/95	3.66	1.08	1.29			Inclining					
06/95	3.66	1.08	1.29			Inclining					

Source: Denver Water.

Broomfield, Colorado

The City of Broomfield is a suburban municipality 25 miles northwest of Denver occupying 23.97 square miles of land. The elevation at city hall is 5,362 feet above sea level.

Climate

Broomfield's semi-arid climate is essentially the same as Denver's with warm summers, cold winters and low humidity and precipitation.

Demographics

In 1990, Broomfield had a population density of 2,902 persons per square mile and a population of 24,638. Broomfield is growing rapidly along with the rest of the Front Range community and had an estimated population of 31,601 in 1995, an increase of 22.0 percent from 1990. The median household income was \$39,067 in 1990 with an average size of 2.83 persons per household. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population—General Social and Economic Characteristics, 1990 Census of Population—Social and Economic Characteristics, 1990 Census of Population and Housing Unit Counts, and Population Projections for Colorado Regions, 1993 -2020 Denver, CO. 1994.)

Water Supply

Residents are provided water by the City of Broomfield Water Department. Denver Water is a wholesale provider of water in the area and supplies Broomfield with approximately 40 percent of its total water supply (Source: Broomfield Water Department). Broomfield water supplies are obtained from only surface water sources; no groundwater is used. There have been no drought periods during the time covered by this study.

Water Use

The total water use in Broomfield in 1994 was 1.98 billion gallons (approximately 6,103 acrefeet; source: Broomfield Water Department). Of the total amount, residential water use accounts for 72 percent, commercial and industrial use accounts for 15 percent and irrigation (other than residential lawn watering) accounts for 13 percent of the total amount (source: Broomfield Water Department). Total use in 1994 by single-family residential accounts was 1.19 billion gallons (approximately 3,676 acre-feet; Source: Database). The number of single-family residential accounts averaged 8,234 in 1994. This translates to an average annual use of 145,462 gallons per account, or, an average monthly use of 12,122 gallons (Source: Database). Typically, the high use months in Broomfield are July, August and September and low use months are January and February. Monthly bills per single-family residential account in 1994 averaged \$28.81 (source: Database).

Demand-Side Management Programs

The City of Broomfield has not implemented any nonprice conservation programs from 1980 through 1995. The utility has a uniform rate structure; a service charge plus a fixed charge per 1,000 gallons of water. Table 3.7 identifies Broomfield's single-family residential rate structure, effective dates, service charges and use charges from 1980 through early-1995.

Albuquerque, New Mexico

The City of Albuquerque, covering 132.2 square miles, is both the geographic and economic center of New Mexico. The Manzano Mountains border the city on the southeast and the Sandia Mountains on the northeast. Elevation in Albuquerque is 5,311 feet.

Climate

Albuquerque has a semi-arid climate with hot summers and relatively cool, but sunny, winters. Most rainfall occurs during a monsoon season from July through September. Average annual precipitation is 8.5 inches, including an average annual snowfall of 11 inches. The average annual

Table 3.7
Broomfield water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month	Price of Water per 1,000 gallons (current dollars)	Rate Structure
01/80	1.50	0.85	Uniform
07/80	1.85	1.15	Uniform
02/82	1.85	1.40	Uniform
01/84	2.25	1.45	Uniform
01/86	2.38	1.52	Uniform
01/87	2.54	1.63	Uniform
01/90	5.08	1.63	Uniform
02/90	5.26	1.69	Uniform
02/91	5.47	1.76	Uniform
02/92	5.69	1.83	Uniform
02/93	5.86	1.88	Uniform
04/95	5.86	1.88	Uniform

Source: Broomfield Water Department.

temperature is 56°F, with summer temperatures averaging 93°F during the day and 65°F degrees at night, and winter temperatures averaging 47°F degrees during the day and 22°F degrees at night.

Demographics

In 1990, Albuquerque had a population density of 2,910 persons per square mile and a population of 384,736, representing a population increase of 13.8 percent since 1980. The median household income was \$27,555 in 1990 with an average size of 2.46 persons per household (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population--General Social and Economic Characteristics, 1990 Census of Population--Social and Economic Characteristics and 1990 Census of Population and Housing--Population and Housing Unit Counts).

Water Supply

The Albuquerque Water Utility Division obtains its water from wells that draw on deep aquifers. Although the Rio Grande River flows through Albuquerque from the north to the south, the City's

source of supply is not dependent on climatic conditions or flows of the Rio Grande. There have been no drought periods during the time covered by this study. Concern has been expressed over the adequacy of water supplies in meeting projected growth and long-term demand for the City of Albuquerque.

Water Use

Residential, commercial, industrial and institutional sectors in Albuquerque used a total of 32.57 billion gallons of water (approximately 99,982 acre-feet) in 1994 with the residential sector (including multi-family) using 57.8 percent, the commercial sector using 30.1 percent, the industrial sector using 2.7 percent and the institutional sector using 9.4 percent of the total amount. Total use in 1994 by single-family residential accounts was 18.93 billion gallons (approximately 58,105 acrefeet; Source: Database). The number of single-family residential accounts averaged 106,799 in 1994. This translates to an average annual use of 177,278 gallons per account, or, an average monthly use of 14,773 gallons (Source: Database). Typically, peak use months in Albuquerque are June, July and August and low use months are January and February. Monthly bills per single-family residential account in 1994 averaged \$16.50 (Source: Database).

Demand-Side Management

Albuquerque employs a uniform rate structure with a seasonal component. This rate structure was in effect for the entire period of this study, 1980 through late-1995. Between September 1982 and August 1988 a seasonal rate reduction component was also in effect. If use fell below a specified percentage of median winter use, a fixed amount per unit of water was credited toward a resident's monthly water bill. Beginning in July 1993, the Albuquerque Water Utility Division added the State Conservation Fee (SCF) to its rates. This \$0.0244 per unit of water charge remained constant since its implementation through October 1995. Table 3.8 identifies Albuquerque's Water Utility Division single-family residential rate structure, effective dates, service charges and use charges from 1980 through late-1995. Note, that the SCF is not reported separately, instead it is incorporated into the uniform rate structure since it is a set per unit charge.

In June of 1994 the Albuquerque Water Utility Division launched a water conservation publicity campaign. The campaign was targeted at residential water users with the primary goals of raising public awareness concerning water conservation and reversing the perception that the City of Albuquerque had access to an endless source of water. Details of the program are provided in Chapter 5.

Santa Fe, New Mexico

Santa Fe, the capital of New Mexico, is in the north-central section of the state, 61 miles north of Albuquerque, at the base of the Sangre de Cristo Mountains. The city covers 36.6 square miles and has an elevation of 7,200 feet.

Climate

Santa Fe has a semi-arid climate with cool summers and cold, but sunny, winters. Most precipitation occurs during the monsoon season, from July through September. Average

Table 3.8 Albuquerque water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month	Price of Water per 1,000 gallons (current dollars)	Rate Structure
01/80	2.50	U: 0.41; S: Use > 250% WM 0.27/unit	Uniform & Seasonal
02/81	3.25	U: 0.49; S: Use > 250% WM 0.27/unit	Uniform & Seasonal
07/81	3.25	U: 0.53; S: Use > 250% WM 0.27/unit	Uniform & Seasonal
09/82	4.00	U: 0.63; S: Use > 500% WM 0.28/unit	Uniform & Seasonal
09/88	5.19	U: 0.69; S: Use > 400% WM 0.28/unit	Uniform & Seasonal
07/90	4.67	U: 0.69; S: Use > 400% WM 0.28/unit	Uniform & Seasonal
07/91	4.67	U: 0.73: S: Use > 400% WM 0.28/unit	Uniform & Seasonal
07/93	4.84	U: 0.79: S: Use > 400% WM 0.28/unit	Uniform & Seasonal
04/94	4.84	U: 0.79; S: Use > 200% WM 0.28/unit	Uniform & Seasonal
01/95	4.84	U: 0.91; S: Use > 200% WM 0.28/unit	Uniform & Seasonal
10/95	4.84	U: 0.91; S: Use > 200% WM 0.28/unit	Uniform & Seasonal

Source: Albuquerque water Utility Division.

Notes: U denotes uniform rate. S denotes seasonal rate. WM denotes winter median. Between 01/80-03/94 winter median is defined as May through September and between 04/94-06/95 it is defined as April through October.

precipitation is 13.7 inches per year including an average annual snowfall of 32 inches. The average annual temperature is 50°F with summer temperatures averaging 84°F during the day and 57°F at night and winter temperatures averaging 41°F during the day and 19°F at night.

Demographics

In 1990, Santa Fe had a population density of 1,526 persons per square mile and a population of 55,859, representing a population increase of 12.3 percent since 1980. The median household income was \$30,023 in 1990 with an average size of 2.39 persons per household. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population--General Social and Economic Characteristics, 1990 Census of Population--Social and Economic Characteristics and 1990 Census of Population and Housing--Population and Housing Unit Counts.)

Water Supply

The water provider for Santa Fe is the Sangre de Cristo Water Company. The Water Company obtains its water from the Santa Fe River and deep wells. They also obtain some water from the San Juan-Chama Transmountain Diversion. There have been no drought periods during the time covered by this study.

Water Use

The total water use in the City of Santa Fe in 1994 was 17.93 billion gallons (approximately 55,050 acre-feet; Source: Public Service of New Mexico). Of the total, residential use accounts for 9.5 percent and commercial use accounts for 90.5 percent. Total use in 1994 by single-family residential accounts was 1.71 billion gallons (approximately 5,249 acre-feet: Source: Database). The number of single-family residential accounts averaged 20,174 in 1994. This translates to an average annual use of 84,781 gallons per account, or, an average monthly use of 7,065 gallons (Source: Database). Typically, the peak use months in Santa Fe are June and July and low use months are January and February. Monthly bills per single-family residential account in 1994 averaged \$29.95 (Source: Database).

Demand-Side Management Programs

Although Santa Fe employs several nonprice conservation measures, the primary demand-side management component is their pricing structure. Since 1985, Santa Fe has had a relatively steep two-block inclining rate structure. Before that time Santa Fe had a declining two-block rate structure combined with a seasonal winter (lower price) and summer (higher price) rate structure. Santa Fe's conservation efforts are described in detail in the section on nonprice conservation programs in Chapter 5.

Beginning in October 1993, the Sangre de Cristo Water Company imposed a State Conservation Fee (SCF). This per unit charge varied monthly between \$0.03 and \$0.04 per unit of water since its implementation and September 1995. Table 3.9 identifies Sangre de Cristo Water Company single-family residential rate structures, effective dates, service charges and use charges from 1980 through late-1995. Note, that the SCF is not listed separately, instead it is incorporated into the tiered rate structure.

Table 3.9
Santa Fe water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month	Price of Water J	per 1,000 gallons	Rate Structure				
	0/84 3.60 2.06/3.35 0-5 G	Block 2						
			>5 G winter/summer	Declining & Seasonal				
01/80	3.00	1.72/2.79	1.37/2.43	Declining & Seasonal				
10/84	3.60	2.06/3.35	1.64/2.92	Declining & Seasonal				
		0-5 G	> 5 G	Inclining				
04/85	6.20	2.56	2.92	Inclining				
10/85	7.20	3.08	3.60	Inclining				
02/88	6.94	2.97	3.47	Inclining				
10/93	6.94	3.00	3.50	Inclining				
10/95	6.94	3.00	3.50	Inclining				

Source: Public Service Company of New Mexico.

Las Cruces, New Mexico

The city of Las Cruces is in southern central New Mexico, 35 miles from Mexico, with the Organ Mountains bordering its eastern side. The city covers 37.5 square miles of land and has an elevation of 3,881 feet.

Climate

Las Cruces has an arid climate with hot summers and relatively mild, sunny winters. Most precipitation occurs during the monsoon season, from July through September. Average precipitation is eight inches per year including an average annual snowfall of three inches. The average annual temperature is 60°F with summer temperatures averaging 94°F during the day and 65°F at night and winter temperatures averaging 56°F during the day and 25°F at night.

Demographics

In 1990, Las Cruces had a population density of 1,656 persons per square mile and a population of 62,125, representing a population increase of 27.4 percent since 1980. The median household income was \$23,648 in 1990 with an average size of 2.59 persons per household. (Source: U.S. Department of Commerce, Bureau of the Census: 1980 Census of Population-General Social and Economic Characteristics, 1990 Census of Population-Social and Economic Characteristics and 1990 Census of Population and Housing-Population and Housing Unit Counts.)

Water Supply

The Water Resources Department of Las Cruces obtains its water from deep wells. These aquifers are not dependent on immediate local climatic conditions or flows of the Rio Grande. There have been no drought periods during the time covered by this study.

Water Use

Total water use for the City of Las Cruces in 1994 was 4.96 billion gallons. Of the total, residential use accounts for 75.0 percent and commercial use accounts for 25.0 percent (Source: Las Cruces Water Resources Department). Total use in 1994 by single-family residential accounts was 3.19 billion gallons (approximately 9,790 acre-feet; Source: Database). The number of single-family residential accounts averaged 16,930 in 1994. This translates to an average annual use of 188,435 gallons per account, or, an average monthly use of 15,703 gallons (Source: Database). Typically, the peak use months in Las Cruces are June, July and August, low use months are January and February. Monthly bills per single-family residential account in 1994 averaged \$17.95 (Source: Database).

Demand-Side Management Programs

The utility has not implemented nonprice conservation programs to influence residential use levels. However, Las Cruces does use a moderate four-block inclining rate structure to price its water. Beginning in May 1993, the Las Cruces Water Resources Department imposed a State Conservation Fee (SCF). This per unit charge remained constant at \$0.04 per unit of water since its implementation through September 1995.

Table 3.10 identifies Las Cruces' single-family residential rate structure, effective dates, service charges and use charges from late-1982 through late-1995. Note, that the SCF is not reported separately, instead it is incorporated into the tiered rate structure since it is a set per unit charge.

Table 3.10
Las Cruces water rate structure and price per 1,000 gallons

Effective Date	Service Charge \$ per month	Price	Price of Water per 1,000 Gallons (G) (current dollars)							
		Block 1	Block 2	Block 3	Block 4					
		0-25 G	26-50 G	> 50 G		Inclining				
11/82	4.00	0.46	0.58	0.69		Inclining				
		0-10 G	11-50 G	> 50 G		Inclining				
01/84	4.00	0.40	0.65	0.90		Inclining				
07/84	4.30	0.43	0.70	0.97		Inclining				
07/86	4.50	0.43	0.73	1.04		Inclining				
		0-5 G	6-10 G	11-50 G	> 50 G	Inclining				
07/87	4.50	0.43	0.48	0.82	1.17	Inclining				
07/88	4.50	0.43	0.48	0.87	1.23	Inclining				
08/89	4.61	0.44	0.49	0.89	1.26	Inclining				
07/90	4.80	0.46	0.51	0.93	1.31	Inclining				
05/93	4.80	0.50	0.55	0.97	1.35	Inclining				
07/93	5.04	0.57	0.62	1.06	1.46	Inclining				
07/94	5.14	0.58	0.63	1.08	1.49	Inclining				
07/95	5.40	0.61	0.66	1.13	1.56	Inclining				
09/95	5.40	0.61	0.66	1.13	1.56	Inclining				

Source: Las Cruces Water Resources Department.

CHAPTER 4

DATA DEVELOPMENT AND ADJUSTMENTS

Because of differences and changes in utility record keeping, billing and reporting frequency, and account definitions, time intensive and detailed efforts were required to reconcile the information reported by each utility to develop a consistent data series for each variable within and between study areas. For example, water use, number of accounts and revenue reported by each utility is based on their own individual billing cycle. Billing cycles vary from utility to utility and within an individual utility over time. Three of the utilities in this study bill and report information on a monthly basis; three of the utilities bill and report information on a bimonthly basis; one utility switched from a bimonthly to monthly basis; and one utility bills on a two-four week period, resulting in 13 and sometimes even 14 records of information for a single year. In three study areas, a bimonthly billing cycle rotation is used so that the number of accounts and use reported in each billing period is only a portion of the total number of accounts and use. The other areas bill all of their accounts on a monthly basis. Two of the most common data adjustments are discussed below. Other, more specific, adjustments and techniques applied to the reported information to develop consistent monthly use, number of accounts and revenue data series, are described below by study area.

Reporting Period Adjustments and Conversion of Measurement Units

Several of the study's water districts record and bill water use and account information on a bimonthly (two month) basis. This means that the reported water use, number of accounts and revenues reported for each month represent roughly only half of the total number of residential customers and water use for each period. The following procedure was used to calculate and allocate values reported on a bimonthly basis to total monthly values for each variable data series.

For example, consider bimonthly partial values reported in three periods (month 1, January; 2, February; and 12, December) that overlaps two years (1988 and 1989) as illustrated in the

Table 4.1

Example of adjustment procedure for converting bimonthly reported data to combined monthly total water use and revenue data

Time Period		Billing Cycle Set	Billing Cycle Set #2	Adjusted Combined		
		#1 Reported Data	Reported Data	Monthly Total		
Year	Month					
1988	12	A	Z	(.5*A+.5Z)		
1989	1	Α	В	(.5*A+.5B)		
1989	2	С	В	(.5*C+.5B)		
1989	3	С	D	(.5*C+.5D)		
1989	4	E	D	(.5*E+.5D)		

table below. Note that billing cycle "A" has one period in the previous year and one period in the current year; and billing cycles "B," "C," and "D" fall completely in the current year. Beginning with the period 1989/1, the combined total monthly water use is one half of the reported amount in billing cycle "A" (December and January), from billing cycle set #1, and one half from billing cycle "B" (January and February) from billing cycle set #2. This computation is shown in the last column of Table 4.1.

Using this procedure we can derive the total monthly use and revenue figures. The total number of accounts in each period (month) is calculated by simply adding the number of accounts for each overlapping billing cycle, since the figures reported in the bimonthly billing sets of A and B represents half (or a portion) of the total accounts for a single month. Although it is recognized that with any averaging procedure there is some loss of information, given the resolution of bimonthly observations, the trends in water use and seasonal variations, distinctions between study areas are, for the most part, maintained.

Different utilities use different units to measure water use and establish prices. Four of the study area utilities measure water use in thousand gallon (G) units, while the other three utilities measure use in units of hundred cubic feet (one HCF = 748 gallons). All use and price data values in the "Converted" spreadsheets of the database have been transformed from HCF to a per 1.000 gallon (G) standard unit of measurement for data comparability and consistency.

DATA DEVELOPMENT AND ADJUSTMENTS BY STUDY AREA

Los Angeles

The Los Angeles Department of Water and Power (LADWP) measures water use on a hundred cubic foot basis (HCF = 748 gallons). The standard unit of measure for this study is 1,000 gallons (G). LADWP's reported use and prices were first converted to a 1,000 gallon unit of measurement.

LADWP classifies domestic single-family residential water users into three specific groups: (1) domestic regular; (2) domestic lifeline; and, (3) domestic low-income. Only information for the first group, domestic regular, is reported by this study. The other two groups were excluded because subsidies received by these groups were viewed to affect their patterns and level of monthly use and because similar account classifications do not exist and/or is not included in the other study areas. Specifically, individuals qualifying for "lifeline" status receive a fixed subsidy credit per month. The credit is not allowed to exceed the customer's bill for water service. In 1995, the lifeline subsidy credit was \$10.00. Households qualifying for "low-income" status, may not have a total household income exceeding limits set by the Board of Water and Power Commissioners. Low-income customers receive a base subsidy per month, which increases by an incremental unit per each additional occupant of the residence. In 1995, the base subsidy was \$5.00 and increments to the subsidy were \$1.00 per additional occupant.

LADWP bills approximately half of it's domestic regular (residential) customers every other month (bimonthly). This means that the reported water use, number of accounts and revenues for each month represents roughly half of the residential customers and use within LADWP's service area. The procedure described in Table 4.1 was used to allocate variable values reported on a bimonthly basis to total monthly values for each of the variables.

San Diego

San Diego Water Utility Department (SDWUD) bills its single-family residential accounts on a modified bimonthly basis. Each individual cycle is based on two four-week (28 days) periods, thus there are 13 billing periods in a given year. To convert the modified bimonthly billing

periods to calendar month observations, each individual billing period within a year was adjusted separately. The conversion procedure requires portions of each period to be added to the preceding month, yielding observations with the correct number of days. For example, consider January, a month with 31 days. To obtain this monthly observation, the first 28-day cycle in a given year must be combined with a three-day portion of the following month. This is illustrated in the third column of Table 4.2. Cycle 1, January, must have 3 days, (3/28), of the next cycle added to its value yielding an observation with 31 days. This procedure is repeated for the entire SDWUD data set to develop a consistent series of bimonthly water use and revenue information. After the completion of this procedure, the bimonthly observations were then converted to monthly data via the method described above in Table 4.1. SDWUD was able to supply actual number of residential accounts on a monthly basis, therefore, no adjustments for the number of accounts was required. Since SDWUD measures their water use on a hundred cubic feet basis, both use and price data were converted to 1,000 gallon units.

Denver

Denver Water measures water use on a 1,000 gallon basis, so no unit conversion was required for use or price information.

Denver bills its single-family residences bimonthly in a manner similar to Los Angeles, with reported monthly water use representing two months of consumption for approximately half of the total number of single-family residential accounts. The procedure described above and illustrated in Table 4.1 was applied to the data reported bimonthly to derive total monthly water use, number of accounts and revenue.

Table 4.2 Example of San Diego water use and revenue data adjustments

4 Week Data	Number of Days in Month	Monthly Data					
Cycle 1: 28 days	January 31-days	Cycle 1 + 3 days (3/28) of cycle 2					
Cycle 2: 28 days February-28 days		Cycle 2 + 3 days (3/28) of cycle 3					
Cycle 3: 28 days	March-31 days	Cycle 3 + 6 (6/28) days of cycle 4					
Cycle 4: 28 days	April-30 days	Cycle 4 + 8(8/28) days of cycle 5					

Before January 1990 (January 1980 through December 1989), Denver divided its service area into five separate sections (called quads), of which four had residential customers receiving direct service by Denver Water. Two of these four quads were billed every other month. For example, quads 1 and 3 were billed in January for the previous two months and quads 2 and 4 were billed in February for the previous two months. To obtain monthly observations for this period, the two quads billed in the same month were first summed, yielding monthly use, number of accounts and revenue for approximately half of the single-family residential customers serviced by Denver. Following this aggregation, the same procedure described in Table 4.1 was applied to derive total monthly water use, revenue and number of accounts for the City of Denver service area.

Figure 4.1 is a graph of the number of *metered* single-family residential accounts in Denver. During this study period, the number of accounts reported increased dramatically. Rather than increases in population, the large increase in the number of accounts is directly attributed to the conversion of unmetered residences to metered accounts.

Figure 4.2 is a graph of Denver residential monthly water use. There are two periods when there are large fluctuations in the number of accounts and water use. These anomalies are attributed by staff at Denver Water to changes in accounting methods and periods. It was recommended that these anomalies be "trended through" to be more representative of actual conditions.

Broomfield

Before January 1990, the City of Broomfield Water Department billed its single-family residential accounts on a bimonthly basis. The procedure described in Table 4.1 was performed on data for January 1980 through December 1989 to derive total monthly water use, revenue and number of accounts for the Broomfield service area. Beginning in January 1990, Broomfield billed this rate class on a monthly basis, so no conversions were required for data after this point. Broomfield measures water use on a 1,000 gallon basis, so no unit conversion was required for use or price information.

Broomfield has experienced significant growth, reflected in the rapid increase in the number of accounts over the study period. However, the records show two unusual sharp drops in the number of accounts in 1987 and 1988 (refer to Figure 4.3). Although confirmed by utility records, these drops are attributed to changes in accounting practices, rather than an actual drop in accounts or use.

Staff at the City of Broomfield recommended that these anomalies be "trended through" to be more representative of actual conditions.

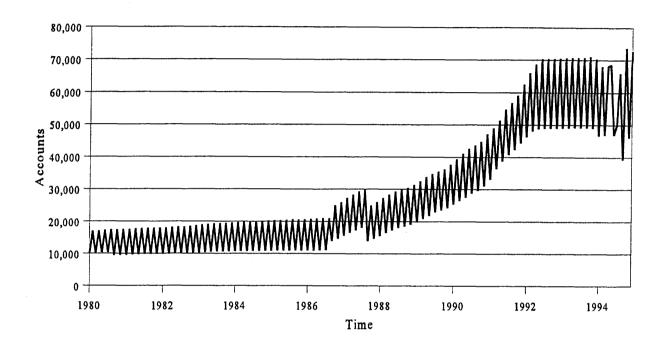


Figure 4.1 Denver Water single family residential metered accounts (unadjusted)

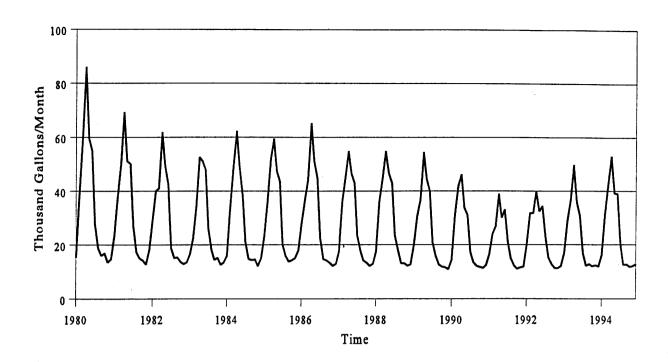


Figure 4.2 Denver Water single family residential monthly unadjusted water use

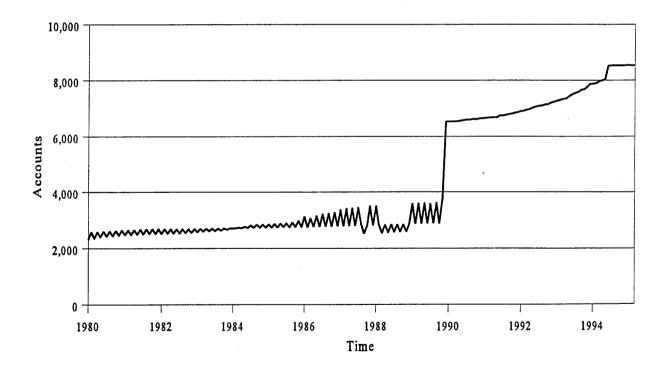


Figure 4.3 Broomfield single family residential accounts (unadjusted)

Albuquerque, Las Cruces and Santa Fe

The water utilities servicing Albuquerque, Santa Fe and Las Cruces each record water use, revenue and number of accounts on a monthly basis. Albuquerque measures water use on a hundred cubic foot (HCF) basis, requiring conversions to a thousand gallon units for water use and price data. Santa Fe and Las Cruces record water use on a 1,000 gallon basis, so further conversions were unnecessary.

CHAPTER 5

NONPRICE CONSERVATION PROGRAMS

This chapter provides descriptions, dates of implementation and duration of the individual nonprice conservation programs implemented by each of the seven utilities during the period of study. The number of conservation programs for an individual study area range from many to none. Information about nonprice conservation programs was developed and assembled by reviewing utility reports, memorandums and other documents and through personal communication with utility staff.

For each study area there is a summary table of the nonprice conservation programs implemented and their duration, followed by a chronological list and description of the individual programs, where information was available. We found that similar or many smaller programs were often aggregated and reported as a single or a joint set of programs without individual program descriptions or dates of implementation or measures of effort (e.g., reports would state that several different education programs were undertaken over a period of several years). This was particularly true with public information programs (e.g., public service announcements, brochures and media-based campaigns) and education programs (e.g., school presentations, handouts and materials). The most common sources of documentation were conservation program proposal/planning reports and annual reports. Because of program documentation occurring primarily in fiscal year planning and annual reports, the dates of program implementation and duration were usually reported on an annual basis only.

It cannot be overstated that the availability, level of detail, accuracy and consistency of information about nonprice conservation programs is highly variable. As a realistic, but fictitious example for purposes of illustration, the level of detail in documentation about individual programs varied from: several (an unknown number) of public service announcements were distributed sometime between 1984 and 1987; to another rarer extreme of documentation such as: 34,541 residences had low-flow shower devices installed in May and June of 1991, which were estimated to reduce water use from 5.0 gallons per minute to 2.5 gallons per minute in each appliance (but reduction was not documented or confirmed). Among the nonprice conservation programs, retrofit programs requiring significant utility expenditures for the distribution or installation of physical (easily countable) devices typically had the best documentation. However, in most cases, beyond

an initial engineering estimate of savings, no follow up was reported to have been conducted on the number of retrofit devices actually installed and/or replaced by the original less efficient device. There were virtually no instances or follow up surveys of other statistically valid methods used to assess the contact or information transfer effectiveness of nonprice conserve programs.

In summary, we strongly recommended that detailed, consistent documentation of conservation program efforts be maintained and that statistically valid follow up studies of actual implementation and consumer awareness and response be conducted. This will enable water utilities in the future to more effectively monitor, evaluate and document the effectiveness of their nonprice conservation programs.

IDENTIFICATION AND DESCRIPTION OF NONPRICE PROGRAMS

The conservation programs discussed below by study area are included in the database. A list of the individual programs and abbreviated database variable names follows the program descriptions. The "Converted"data series will include each conservation variable listed chronologically by year and month by spreadsheet row, beginning in column 21. Five columns will follow, representing the grouping of all conservation programs employed across the seven study areas into one of five categories. Category variable names and examples of programs represented by each are listed as follows:

- 1. (ED) Education programs for public schools
- 2. (PI) Public information programs (e.g., distribution of printed conservation materials and public service announcements)
- 3. (RET) Retrofit programs (distribution and installation of low-flow retrofit devices, i.e., low-flow showerheads)
- 4. (ORD) Water conservation ordinances (e.g., building codes)
- 5. (M) Mandatory but temporary restrictions on water use (e.g., emergency drought reduction measures)

Each row of the category will either have a one or zero representing the presence or absence of a single program characterized by that category for each month and year. The denotation of one or

zero does not allow for the documentation of multiple active programs for a particular month, rather it denotes the presence of at *least* one or the absence of any program to date.

Los Angeles Nonprice Conservation Programs

Table 5.1 is a summary of Los Angeles' nonprice conservation programs and program duration. Identification of the existence and descriptions of these nonprice conservation programs was compiled from information gathered from numerous reports, memorandums and personal communication with staff at the Los Angeles Department of Water and Power. Information about programs implemented after 1985 was obtained from Exhibit 5.0-1, Conservation Measures, from the Urban Water Conservation Management Plan for the City of Los Angeles (internal draft report pending final approval).

Table 5.1
Summary of Los Angeles nonprice conservation programs and duration

•		•	•					•								
PROGRAM/YEAR	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Ultra low-flow toilet rebate program											X	X	X	X	X	X
School education programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Emergency conservation plan-phase IA									X	X	X	X	X	X	X	X
Emergency conservation plan-phase IB									X	X	X	X				
Emergency conservation plan-phase II												X				
Emergency conservation plan-phase III										•		X	X			
Drought busters/Ordinances											X	X	X	X	X	X
Public Information																
Bill inserts			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Literature			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Speakers bureau			X	X	X	X	X	X	X	X	X	X	X	X	X	X
Conservation hotline						X	X	X	X	X	X	X	X	X	X	X
Home water surveys											X	X	X	X	X	X
Retrofit kits	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Landscaping (xeriscape demonstration)	X	х	X	X	X	X	X	X	X	X	Х	X	X	X	X	X

ULTRA LOW-FLOW TOILET REBATE: Rebates of \$100.00 are available to all single-family residents installing ultra low-flow toilets. Between May 1990 and August 1995, 240,748 ultra low-flow toilets were installed. LADWP recorded the number of ultra low-flow toilets installed monthly and estimated savings attributed to such installations for the period covering May 1990 through August 1995 (estimation technique unknown).

SCHOOL EDUCATION PROGRAMS: LADWP offers a wide array of educational information to the Los Angeles School District. Videos, printed materials and plays are some of the tools used to convey the message of wise water use to school children. LADWP also holds seminars on water and energy conservation for teachers. Recently elementary schools in Los Angeles have adopted a "Home Water Survey Practicum." The practicum gives students historical billing records for their home. This information, along with data gathered in the home (i.e., gallons used for specific tasks, such as showering, dish washing, clothes washing, etc.) are entered into a computer program in the classroom. Generated results suggest which conservation measures/retrofit devices would best aid in curbing current use patterns for each participating residence. The level of student participation and the quantity of materials provided between 1980 and 1995 were not documented and are unknown.

EMERGENCY CONSERVATION PLAN: Initiated in response to the California drought of 1988-93, phase IA of this program was implemented in July 1988. Phase IA specified restricted or prohibited activities such as serving drinking water at restaurants only upon request, allowable times for lawn watering and prohibiting excess water to flow down driveways, sidewalks and streets. Shortly afterwards phase IB began, where requests were made for single-family residences to reduce water use by 10 percent from 1986 water use levels. Both stages of phase I were completely voluntary, no price penalties were imposed to encourage water users to comply. Phase II, implemented in March of 1991, *demanded* a 10 percent reduction in water use from 1986 levels. Residences that did not comply were threatened with the penalty of having their water bills doubled. Phase III, employed in May of 1991, increased mandatory conservation levels to 15 percent, price penalties remained. By April of 1992 drought conditions were lessening and LADWP reverted to voluntary phase IB. See Appendix A for a copy of the phases of water conservation requirements. The number of penalties imposed during phases II and III is unknown.

DROUGHT BUSTERS/ORDINANCES: This program ran in conjunction with the Emergency Conservation Plan. Utility vehicles patrolled the LADWP service area looking for situations where prohibited uses (in Phases IA and IB) were being violated, i.e., water was running down the street (see Appendix A for prohibited uses). Warnings were initially given, later followed by fines. As the drought drew toward a close, the program was no longer active; however, prohibited uses were permanently incorporated into city ordinances. The number of warning, violations or fines imposed between 1990 and 1993 are unknown.

BILL INSERTS/LITERATURE: LADWP conveyed the importance of water conservation through bill inserts included in bimonthly bills and through literature made available at the utility. (Number, type and dates of information distributed between 1982 and 1995 were not documented and are unknown.)

SPEAKERS BUREAU: LADWP has 40 to 50 speakers versed in a variety of water conservation areas that are available upon request. Groups can contact the utility and request a speaker in a certain area to attend their function. The number of presentations given, individuals addressed and topics covered between 1982 and 1995 were not documented and are unknown.

CONSERVATION HOTLINE: This program's goal is addressing customers questions and concerns regarding water conservation during LADWP's regular business hours. Number of calls answered on a monthly or annual basis between 1985 and 1995 is unknown.

HOME WATER SURVEYS: Indoor/outdoor home water surveys are available for all single-family residents in search of water conservation information specific to their home. Retrofit devices such as low-flow shower heads, toilet dams and leak detection tablets are provided free of charge upon request. (The number and types of devices distributed and actually installed between 1990 and 1995 was not reported.)

RETROFIT KITS: In conjunction with the mandatory restrictions imposed at the height of the drought in 1991, retrofit kits were made available to all single-family homes in LADWP's service area. It was assumed that a large number of home owners installed each of the retrofit devices within the kit (low-flow shower heads, toilet dams and leak detection tablets). Actual participation was not documented. LADWP no longer provides kits by mail, instead customers must obtain them at the utility. Since March 1993, after the end of the drought, participation in the program was reported to have moderated. Between 1988 and 1991 LADWP distributed more than 1.6 million kits; however, information regarding the number of kits distributed on a monthly or annual basis, in particular, the number of retrofit devices actually installed between 1980 and 1995, was not documented.

LANDSCAPING (XERISCAPE DEMONSTRATION): LADWP established a xeriscape demonstration garden at the district headquarters in Los Angeles to provide an example of low-water intensive landscape options. Visitation or citizen awareness of this program between 1980 and 1995 is unknown.

The following is a list of the Los Angeles Department of Water and Power nonprice conservation programs and their abbreviated variable names as they appear in the Converted database starting with column number 21. Periods of program implementation are indicated by a value of one. Unless there is specific documentation indicating otherwise, programs with activity reported on an annual basis are assumed to be in effect for the entire year.

Column # / Program Name / (Database Variable Name)

- 21) Ultra low-flow toilet rebate program (LA-ULF-RET)
- 22) School education programs (LA-SCHE-ED)
- 23) Emergency conservation plan phase IA (LA-IA-ORD)
- 24) Emergency conservation plan phase IB (LA-IB-ORD)
- 25) Emergency conservation plan phase II (LA-ECP2-M)
- 26) Emergency conservation plan phase III (LA-ECP3-M)
- 27) Drought busters (LA-DRB-ORD)
- 28) Prohibited use ordinance (LA-USE-ORD)
- 29) Bill inserts (LA-BILL-PI)
- 30) Literature (LA-LIT-PI)
- 31) Speakers bureau (LA-SPK-PI)
- 32) Conservation hotline (LA-HOTL-PI)
- 33) Home water surveys (LA-AUD-PI)
- 34) Retrofit kits (LA-KIT-RET)
- 35) Demonstration gardens (LA-LS-PI)

San Diego Nonprice Conservation Programs

This list and description of San Diego's nonprice conservation programs were developed using information compiled and gathered from a variety of reports, memorandums and personal

communication provided by the San Diego Water Utility Department, the San Diego County Water Authority and the San Diego Association of Governments. Table 5.2 provides an annual summary of nonprice conservation program implementation followed by a list and description (to the extent available) of individual programs by date of initial implementation.

ULTRA LOW-FLOW TOILET REBATE PROGRAM: This program promotes the installation of ultra low-flow toilets (1.6 gallons of water per flush) by offering customers a financial incentive up to \$75.00 for each toilet installed. Participants are also given low-flow showerheads and faucet aerators. Between May 1991 and June 1995, more than 96,000 toilets were installed in the City of San Diego (monthly or annual installation estimates are not available) with approximately 61 percent, or 58,560, of this total being installed in single-family residences. SDWUD states that the ultra low-flow toilet program is their most popular conservation program. The utility estimates water saving attributable to the program to be 3.4 million gallons a day (estimation technique not documented and unknown).

Table 5.2
Summary of San Diego nonprice conservation programs and duration

PROGRAM/YEAR	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
ULF toilet rebate program					<u>, , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - , , - ,</u>							X	X	X	X	X
Low-income ULFT rebate prog.														·X	X	X
School showerhead program														X	X	X
Plumbing fixture ordinance											-	X	X	X	X	X
Public information and education																
Literature	X	X	X	x	X	X	X	X	X	X	X	х	X	X	X	X
Television publicity	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Radio announcements	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Public and school presentations	X	X	X	X	X	X	X	$^{T}\mathbf{X}$	X	X	X	X	X	X	X	X
Newspaper advertisements	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Water conservation hotline											X	X	X	X	X	X
Emergency water cons. ord.								X	X	X	X	X	X	\mathbf{X}^{\prime}	X	X
New homeowner outreach														X	X	X
Residential water surveys													X	X	X	X
Resid. interior plumb. retrofits												X	X	X	X	X
Demonstration gardens		X	x	x	Х	X	X	X	х	X	X	X	X	X	Х	X

COMMUNITY BASED TOILET REPLACEMENT PROGRAM: This program helps low-income single-family residents who wish to install ultra low-flow toilets, but lack the financial resources to do so. Toilets are awarded free of charge to all interested and qualifying single-family households, (i.e., families meeting the U.S. Department of Housing and Urban Developments's low-income criteria). Between June 1993 and June 1995 more than 10,800 toilets were installed through the program; however, monthly or annual estimates for these figures were not reported. The utility estimates water savings attributable to the program to be 501,000 gallons a day (estimation technique not documented and unknown).

SCHOOL SHOWERHEAD PROGRAM: This program, implemented during the 1993-94 school year, targeted grades K-6. The program focused on increasing children's awareness and understanding of water use and water conservation in the home. Children were encouraged to conduct home water audits with the assistance of their parents or guardians. The emphasis of the audit was placed on identifying potential water saving measures. The program also distributed low-flow showerheads and toilet displacement devices. The utility estimates water savings attributable to the program to be 48,500 gallons per day (estimation technique unknown). The number of school children completing the audit or the number of retrofit devices distributed or installed between 1993 and 1995 are unknown.

PLUMBING FIXTURE ORDINANCE: On May 1, 1991, the City Council adopted an ordinance (San Diego Municipal Code Section 93.0206) requiring single-family residences to install ultra low-flow toilets (1.6 gallons or less) in all newly construction homes. This ordinance was later expanded to include low-flow showerheads and faucets (2.5 and 2.2 gallons per minute or less, respectively) effective December 1, 1991. On November 25, 1991, the City Council adopted an ordinance (San Diego Municipal Code Section 93.0208) requiring the above specifications for toilets, low-flow showerheads and faucets be met upon change of property ownership or bathroom alteration within a home. The number of retrofit conversions was not reported.

PUBLIC INFORMATION AND EDUCATION: On-going since the California drought of 1976-77, a variety of educational methods were used by the SDWUD, including: literature promoting water-efficient landscape and drip irrigation systems; tip sheets for drought periods; indoor/outdoor water conservation guidelines; television and radio public service announcements; speakers from the County Water Authority available for presentations to local community groups and schools; publication of water use information in the weather section of San Diego Union Tribune; and,

interviews with County Water Authority officials on local radio stations. The quantities or types of materials distributed and the number or frequency of public service programs and the periods of specific program coverage between 1976 and 1995 are unknown.

WATER CONSERVATION HOTLINE: A conservation hotline was established to enable SDWUD to respond to requests for information and materials and to create a way for customers to report prohibited use violations. The hotline is managed by conservation staff during regular business hours and is automated during all other times. The number of calls answered on a monthly or annual basis between 1990 and 1995 is unknown.

EMERGENCY WATER CONSERVATION ORDINANCE: Originally adopted in 1987 and later revised in 1991, this conservation ordinance defines unreasonable uses of water (see Appendix B for unreasonable uses.) City management is authorized to activate the ordinance when a water shortage arises.

NEW HOMEOWNER OUTREACH PROGRAM: The focus of this program is to make low-water intensive landscape and irrigation information available to single-family residents shortly after occupancy of their new home. In addition to information, interested parties receive discount coupons for landscape products. The utility estimates a 25-39 percent participation level. The number of materials distributed and monthly or annual residences contacted during the 1993 and 1995 program were not documented and are unknown.

RESIDENTIAL WATER SURVEYS: This program, initiated in 1992, offers a complete home water use analysis. Services include on-site inspection and calculation of showerhead and sink faucet flow rates, leak inspection, installation of showerheads and toilet displacement devices and efficient landscape and irrigation recommendations. Participating residences are also given discount coupons for water-saving landscape products and literature concerning water conservation. Between 1992 and 1995 more than 8,000 single-family and multi-family residences participated in the program; however, the actual number of retrofit devices installed or recommendations followed between 1992 and 1995 are unknown.

RESIDENTIAL INTERIOR PLUMBING RETROFIT PROGRAM: This program distributes retrofit kits containing low-flow showerheads, toilet tank displacement devices and toilet leak detection tablets to single-family residential water users. More than 100,000 and 150,000 kits were distributed to single-family residences during 1991 and 1992, respectively; however, the number and

type of devices actually installed in appliances and monthly distribution of devices between 1991 and 1995 are unknown.

DEMONSTRATION GARDENS: SDWUD established and maintained water-efficient demonstration gardens illustrating low-water intensive landscaping alternatives and irrigation methods. This program has remained active since it was originally implemented in 1981. The number of gardens, sizes, dates of implementation and visitation between 1981 and 1995 are unknown.

The following is a list of the San Diego Water Utilities Department nonprice conservation programs and their abbreviated variable names as they appear in the Converted database starting with column number 21. Periods of program implementation are indicated by a value of one. Unless there is specific documentation indicating otherwise, programs with activity reported on an annual basis are assumed to be in effect for the entire year.

Column # / Program Name / (Database Variable Name)

- 21) Ultra low-flow toilet rebate program (SD-ULF-RET)
- 22) Low-income ultra low-flow toilet rebate program (SD-LLF-RET)
- 23) School showerhead program (SD-SCHS-ED)
- 24) Plumbing fixture ordinance (SD-PLB-ORD)
- 25) Literature (SD-LIT-PI)
- 26) Television publicity (SD-TV-PI)
- 27) Radio announcements (SD-RAD-PI)
- 28) Public and school presentations (SD-SPK-PI)
- 29) Newspaper advertisements (SD-NEWS-PI)
- 30) Water conservation hotline (SD-HOTL-PI)
- 31) Emergency conservation ordinance (SD-EMG-ORD)
- 32) New homeowner outreach (SD-NEWH-PI)
- 33) Residential water surveys (SD-AUD-RET)
- 34) Residential interior plumbing retrofits (SD-KIT-RET)
- 35) Demonstration gardens (SD-LS-PI)

Denver Nonprice Conservation Programs

The following list and descriptions of Denver's nonprice conservation programs were developed from information compiled and gathered from a variety of reports, memorandums and personal communication with Denver Water Conservation staff. Table 5.3 provides an annual summary of nonprice conservation program implementation followed by descriptions and duration of the individual programs.

ULTRA-LOW FLOW TOILET REBATE PROGRAM: This program was initiated by DW in 1990 and continued through 1993. Single-family residential customers within the service area who installed an approved 1.6 gallon toilet were eligible for an \$80.00 rebate from DW. Estimates (presumably engineering based) of water saved from installations were as high as 500 acre-feet a year (Chesnutt, 1992). Table 5.5 lists the number of rebates awarded annually (monthly estimates unavailable) for 1990 through 1992.

Table 5.3 Summary of Denver nonprice conservation programs and duration

PROGRAM/YEAR	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
ULF toilet rebate program											Х	Х	Х			
School visits	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
City & County ULV plumbing codes													X	X	X	X
PUBLIC INFORMATION																
Wastebusters	X								-	X	X	x	X	X		
Bill inserts										X	X	X	X	x	X	X
Newspaper articles and notices		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Radio											X	X	X	X	X	X
TV publicity															Х	X
Poster contest	X					X	X									
RTD bus boards											X	X	X	X	X	
Painted RTD bus																X
Conservation hotline												X	X	X	X	X
Circle/Diamond/Square	X	x	X	X	X	X	X	X	x	X	X	x	X	x	X	X
Residential audit/retrofit program								X	X	X	X	X	X	X	X	X
Evapotranspiration		X	x	x	X	X	X	X	x	X	X	X	X			
Xeriscape		x	X	x	х	x	X	X	X	х	X	X	X	X	X	x

Table 5.4
Denver ultra-low volume rebate program

Year	No. of Rebates Paid	Total Annual Cost*
1990	2,988	\$273,065
1991	4,723	\$438,685
1992	5,185	\$471,480
Total	12,896	\$1,183,230

^{*} Costs include rebates paid plus all administrative costs associated with the program.

SCHOOL VISITS: DW began this on going group of programs in 1977 to educate youth within their service area about the importance of water conservation. Presentations held by the utility have been given to elementary and secondary school students throughout the metropolitan area, reaching on average, 8,000 students per year. Workshops were also held for teachers, so they may continue to convey the message of water conservation in their classrooms and throughout the school. In conjunction with this program, the utility also conducted three water conservation poster contests for children. Participating students received awards from the utility and winning entries were printed in calendars and brochures distributed by DW. The utility has also focused on reaching students in higher grades by giving presentations to junior and senior high schools in the area between 1978 and 1993.

CITY AND COUNTY ULTRA LOW-VOLUME PLUMBING CODES: Beginning in 1992, this ordinance required newly constructed homes to install ultra low-volume toilets in all bathrooms throughout the residence. The number of toilets installed since activation of the ordinance is unknown.

WASTEBUSTERS: This program was active between 1977 and 1980, and again from 1989 and 1993. College students were hired to patrol DW's service area looking for situations where water was being used unwisely. Students would then provide tips to residents on water conservation practices. The number of residents receiving information during the program is unknown.

PUBLIC INFORMATION: Since 1974 DW has offered a variety of information materials ranging from educational films and videos, speeches, exhibits, open forum meetings, full color calendars and treatment plant tours to television and radio public service announcements and newsprint messages. To further convey the message of water conservation DW has held poster contests within schools in their service area. In addition, DW has worked with the regional

With the final phase completed in 1995, the utility's demonstration garden now covers nearly one acre. Since 1981, thousands of visitors are estimated to have visited xeriscape demonstration garden; however, estimates regarding participation levels for the program on a monthly or annual basis between 1981 and 1995 were not available.

The following is a list of the Denver Water nonprice conservation programs and their abbreviated variable names as they appear in the Converted database starting with column number 21. Periods of program implementation are indicated by the number one. Unless there is specific documentation indicating otherwise, programs with activity reported on an annual basis are assumed to be in effect for the entire year.

Column # / Program Name / (Database Variable Name)

- 21) ULF toilet rebate program (DEN-ULF-RET)
- 22) School visits (DEN-SCHV-ED)
- 23) City & county ultra low-volume plumbing codes (DEN-PLB-ORD)
- 24) Wastebusters (DEN-WB-ORD)
- 25) Bill inserts (DEN-BILL-PI)
- 26) Newspaper articles and notices (DEN-NEWS-PI)
- 27) Radio (DEN-RAD-PI)
- 28) TV publicity (DEN-TV-PI)
- 29) Poster contest (DEN-POST-PI)
- 30) RTD bus boards (DEN-BUSB-PI)
- 31) Painted RTD bus (DEN-BUS-PI)
- 32) Conservation hotline (DEN-HOTL-PI)
- 33) Circle/Diamond/Square (DEN-CDS-PI)
- 34) Residential audits and retrofit program (DEN-AUD-PI)
- 35) Evapotranspiration (DEN-ET-PI)
- 36) Xeriscape (DEN-XER-PI)

Broomfield Nonprice Conservation Programs

Broomfield reported that there had been no implementation of nonprice water conservation programs for their service area.

Albuquerque Nonprice Conservation Programs

This list and description of Albuquerque's nonprice conservation programs were developed using information compiled and gathered from a personal communication with the Albuquerque Water Utility Division conservation staff and with Cooney and Associates, the firm hired to conducted Albuquerque's water conservation publicity campaign.

Table 5.6 Summary of Albuquerque nonprice conservation programs and duration

PROGRAM/YEAR	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
Elementary school presentations															X	
PUBLIC INFORMATION																
Bill inserts															X	X
Television program															X	X
Radio & television PSA															X	X
Newspaper advertisements															X	X
Billboard campaign																X
Conservation hotline															X	X

ELEMENTARY SCHOOL PRESENTATIONS: During the Fall semester of the 1994 school year, each elementary school within the City was given a presentation regarding water conservation.

BILL INSERTS: During 1994 (September and November) and 1995 (February, April and July) more than 135,000 pieces of literature related to water conservation were included in monthly residential water bills.

TELEVISION PROGRAM: In June of 1994, the Albuquerque Water Utility conservation campaign broadcasted a television program entitled "Before the Well Runs Dry." This educational program discussed the importance of water conservation and the adoption of practices that could

reduce current use levels. The program initially aired statewide and was further distributed to major civic groups, area schools and to all public libraries in the City. The number of copies distributed, times screened and individuals that have viewed the film in total or on a monthly or annual basis between June 1994 and 1995 are unknown.

RADIO AND TELEVISION PUBLIC SERVICE ANNOUNCEMENTS (PSA): Beginning in June of 1994 television and radio public service announcements covering general water conservation information was aired on major networks. All messages were aimed at encouraging the public to adopt conservation-oriented water use patterns. The primary goal of these advertisements was to raise public awareness and to reverse the perception that the City of Albuquerque had access to an endless supply of water. The number of public service announcements aired in total or on a monthly or annual basis between June 1994 and 1995 are unknown.

NEWSPAPER ADVERTISEMENTS: Throughout 1994 and 1995 informational materials were inserted in the Albuquerque Journal regarding water conservation. One considered by the utility to be very popular was an eight-page brochure concerning water conservation distributed via the newspaper in July 1994. At this time more than 125,000 copies were distributed. Since July 1994 thousands more have been distributed by the utility. The number of brochures distributed on a monthly or annual basis between July 1994 and 1995 are unknown.

BILLBOARD CAMPAIGN: In June of 1995 the City began their water conservation billboard campaign portraying the City in an hour class, with the caption "It is About Time." The number of displayed billboards promoting the campaign are unknown.

CONSERVATION HOTLINE: Beginning in July 1994, the conservation hotline was established to provide answers to questions regarding water conservation. The number of calls answered on a monthly or annual basis between July 1994 and 1995 are unknown.

At the time of data collection new conservation reforms measures were being considered for adoption in Albuquerque. These include: (a) changes in monthly residential water bills to include the previous month and the same month from last year water use information; (b) residential low-flow toilet rebate program; (c) inside/outside residential water audits; d) residential retrofit program, offering low cost conversion and installation items; (e) conservation manual, offering a comprehensive "how to reduce indoor/outdoor water use instructional guide;" and (f) direct mail targeted at excessive water users (Source: Cooney and Associates).

The following is a list of Albuquerque nonprice conservation programs and their abbreviated variable names as they appear in the Converted database starting with column number 21. Periods of program implementation are indicated by the number one. Unless there is specific documentation indicating otherwise, programs with activity reported on an annual basis are assumed to be in effect for the entire year.

Column # / Program Name / (Database Variable Name)

- 21) Elementary school presentations (ABQ-SCHP-ED)
- 22) Bill inserts (ABQ-BILL-PI)
- 23) Television program (ABQ-TV-PI)
- 24) Radio and television PSA (ABQ-RAD-PI)
- 25) Newspaper advertisements (ABQ-NEWS-PI)
- 26) Billboard campaign (ABQ-BBRD-PI)
- 27) Conservation hotline (ABQ-HOTL-PI)

Santa Fe Nonprice Conservation Programs

The following list and description of Santa Fe's nonprice conservation programs were developed using information compiled and gathered from memorandums and personal communication provided by staff with the City of Santa Fe. Table 5.8 provides an annual summary of nonprice conservation program implementation followed by a list and description of individual programs by day of initial implementation.

Table 5.7
Summary of Santa Fe nonprice conservation programs and duration

PROGRAM/YEAR	88	89	90	91	92	93	94	95
PUBLIC INFORMATION								
Literature			X	X	X	X	X	X
Water conservation pilot program			X					
Retrofit kits			X	X	X	X	X	X
Demonstration gardens	Х	Х	X	X	Х	Х	Х	Х

LITERATURE: Since 1990 Sangre de Cristo has consistently offered water conservation literature at their local office. Brochures and tip sheets are available and customers are encouraged to take information home with them. The number of information materials distributed via the utility in total or on a monthly or annual basis between 1990 and 1995 are unknown.

WATER CONSERVATION PILOT PROGRAM: The Sangre de Cristo Water Company initiated a pilot water conservation program in November 1990, targeting their single-family residential water users. They asked that survey recipients forward a coupon to the utility expressing their interest in participating in an indoor water conservation program. There was a 19.9 percent response rate. Interested customers were sent a kit containing a low-flow shower head, a toilet dam and a packet of two leak detection tablets. No post-kit follow up was conducted, therefore, they were unable to estimate actual participation and savings attributable to installation of retrofit devices.

RETROFIT KITS: Since November of 1990, the utility has offered their conservation kit free of charge at the local utility. The number of kits distributed and the type and number of each retrofit devices installed in total or on a monthly or annual basis between 1990 and 1995 are unknown.

DEMONSTRATION GARDEN: Beginning in 1988, Sangre de Cristo Water Company has designated a plot of land to serve as an educational area. This demonstration garden allows visitors to examine low-water intensive landscape alternatives. Visitation information between 1988 and 1995 is unknown.

The following is a list of Sangre de Cristo Water Company nonprice conservation programs and their abbreviated variable names as they appear in the Converted database starting with column number 21. Periods of program implementation are indicated by the number one. Unless there is specific documentation indicating otherwise, programs with activity reported on an annual basis are assumed to be in effect for the entire year.

Column # / Program Name / (Database Variable Name)

- 21) Brochures (SF-LIT-PI)
- 22) Water conservation pilot program (SF-CPP-PI)
- 23) Retrofit kits (SF-KIT-PI)
- 24) Demonstration gardens (SF-LS-PI)

Las Cruces Nonprice Conservation Programs

Las Cruces reported that there was no implementation of nonprice water conservation programs for their service area.

CHAPTER 6

RECOMMENDATIONS

A large number of nonprice conservation programs have been implemented by water utilities in the seven study area cities with the expectation that they will encourage either short-term and/or long-term reductions in residential water use. Examples of nonprice residential conservation programs that have been implemented include: television and radio announcements on the importance of conserving water; newspaper articles and advertisements; bill inserts; public distribution of conservation literature; school visits; speakers bureaus; school poster contests; educational videotapes; widespread distribution of retrofit devices; selected installation of retrofit devices; residential audits; water efficient appliance rebates; xeriscape demonstration gardens; metering programs; lawn watering guidelines and regulations; revised plumbing codes; and emergency ordinances and regulations. In order to evaluate, verify and quantify the effectiveness of individual nonprice conservation programs, it is necessary to have accurate information about specific program activities, levels of effort, scope and coverage and the exact periods of program duration corresponding with activities and levels of effort. This information was often difficult or impossible to obtain from existing utility records. For example, we found that similar programs were often aggregated and were reported without descriptions of individual programs or dates of implementation and measures of specific program efforts. Reports might simply state that several different education programs were implemented over a period of years (and without further documentation it was assumed they were effective). Aggregation was particularly common in the reports of education and public information programs. Among the nonprice conservation programs, retrofit programs requiring significant utility expenditures for the distribution or installation of physical (easily countable) devices typically had the best documentation. The unavailability of information and variation in the level of detail, accuracy and consistency of information about nonprice conservation programs maintained by water and other utilities is a major hindrance in evaluating the effectiveness of these programs.

Programs targeted to influence a particular type of residential water demand are often conducted for periods of one month or less or for only a few months. However, the duration of activity of nonprice conservation programs were usually reported on an annual, rather than a monthly, basis.

Reporting these programs on an annual basis significantly diminishes the ability to correlate changes in water demand with a specific nonprice conservation program.

The nonprice conservation program information that is available is often reported in different terms or measures over time within a utility (because of changes in reporting methods, focus or personnel) and almost always with different descriptions and measures than are used by other utilities.

Recording and maintaining consistent records of the details of specific nonprice conservation programs is crucial to evaluate consumer response to such efforts. Information should be recorded on a similar basis as water bills (i.e., monthly, bimonthly, etc.) to determine if program efforts influence customer use levels from period to period. Essential information includes, but by no means is limited to descriptions explaining program focus, dates of implementation recorded on the same basis as water bills and duration of programs. Also necessary is the level of effort throughout the program. For instance: how many customers received bill inserts; when were inserts distributed; how many calls were answered on the conservation hotline; how many school presentations were given and what was the attendance at each; how many retrofit devices were distributed and actually installed. In some cases followup surveys should be used to provide information about program activities and implementation (e.g. how many retrofit devices were actually installed, how soon after distribution were they installed and did consumers keep them installed?). Improved documentation will greatly facilitate future evaluations and is necessary to evaluate the effectiveness of individual conservation programs. Furthermore, with improved information, combinations of programs, proven to be successful in reducing water use levels in one city, could be applied to cities with similar characteristics in different regions in the United States.

Also, in general, utilities do not record billing period data about the distribution of users within the block rate structure. This information is essential to more fully analyze the effects of increasing block rate price structures. Our recommendation is that utilities develop and maintain billing period records of the number of users and quantity of water consumed in each price block. This information would be relatively easy to obtain if gathered at the time of billing, but becomes almost impossible to recover from archived records.

Although it is recognized that utility resources are limited and nonprice conservation program documentation can be a difficult and time consuming task, we strongly recommend that resources be dedicated to developing and maintaining detailed, consistent documentation regarding nonprice

conservation programs and efforts. This will enable water utility managers in the future to better monitor, evaluate and document the effectiveness of their programs and to implement the programs that will best suit their needs.

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APPENDIX A

LOS ANGELES WATER CONSERVATION PLAN

SEC. 121.08. WATER CONSERVATION PHASES

A. PHASE IA. Prohibited Uses Applicable to All Customers:

There shall be no hose washing of any hard or paved surfaces including, but not limited to, sidewalks, walkways, driveways, and parking areas, except that, flammable or other dangerous substances may be, if otherwise permitted by law, disposed of by direct hose flushing e.g. the benefit of public health and safety.1. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes or similar structures used for aesthetic purposes unless such water is part of a recycling system.

- 1. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any person unless expressly requested.
- 2. No customer of the Department shall permit water to leak from any facility on the customer's premises; failure or refusal to effect a timely repair of any leak of which the customer knows or has reason to know shall subject said customer to all penalties provided herein for a prohibited use of water.
- 3. No lawn landscape, or other turf areas shall be watered or irrigated between the hours of 10:00 a.m. and 5:00 p.m. from April 1 to September 30, nor between the hours of 11:00 a.m. and 3:00 p.m. from October 1 to March 31; provided, however, that the provisions of this subsection may be suspended at such time as the Council, by resolution, determines that the provisions hereof are no longer necessary to assist the City in achieving the necessary level of water conservation, such resolution to be effective immediately upon publication thereof; provided further that commercial nurseries, drip irrigation systems and professional gardeners holding a current City Business Tax Registration Certificate and acting for or on behalf of a customer shall be exempt from the provisions of this subsection.
- 4. No customer shall water or irrigate any lawn, landscape, or other turf area in a manner that causes or allows excess water to flow or runoff onto an adjoining sidewalk, driveway, street, gutter or ditch.

5. The prohibited uses set forth in this subsection do not apply to "Grey Water." This provision shall not be construed to authorize the use of "Grey Water" if such use is otherwise prohibited by law.

B. PHASE IB

Prohibited Uses Applicable to All Customers. Phase IA of subsection 121.08 shall continue to remain in effect.

Customer Percentage Curtailment. No customer shall make, cause, use or permit the use of water from the Department for any purpose in an amount in excess of ninety percent (90%) of the amount used during the base period as defined in this Article.

C. PHASE II

Prohibited Uses Applicable To All Customers. Phase IA of subsection 121.08 shall continue to remain in effect.

Customer Percentage Curtailment. No customer shall make, cause, use or permit the use of water from the Department for any purpose in an amount in excess of ninety (90%) of the amount used during the base period as defined in this Article.

APPENDIX B SAN DIEGO WATER CONSERVATION ORDINANCE

APPENDIX C

RESIDENTIAL WATER CONSUMPTION, RATE, REVENUE AND CONSERVATION DATABASE

ADJUSTED DATA SETS

Los Angeles Department of Water and Power

San Diego Water Utilities Department

Denver Water

City of Broomfield

Albuquerque

Las Cruces

Santa Fe

Los Angeles Residential Water Data --- Unit: 1,000 gallons
Conversions made to TotUse, NumAcct and TotRev
Water rates have been converted to reflect the price of 1,000 gallons of water vs. 748 gallons.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR		_		-	LATVREV	LATFC I		LAP1	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4			LATEMP		
1980		5,238,896			2,860,824	820,703	3.10	0.69	None							7.36	0.0	1	0
1980		4,628,232	•		1,650,570	•	3.10	0.69	None							13.38	0.0	1	0
1980		4,605,913	•		1,673,717		3.10	0.69	None							4.71	0.0	1	0
1980	4	5,294,022	526,935	3,748,509	2,115,011	1,633,499	3.10	0.69	None							0.30	0.0	1	0
1980	5	6,326,006	525,368	4,317,446	2,688,805	1,628,641	3.10	0.69	None							0.12	0.0	1	0
1980	6	7,579,781	527,467	5,177,185	3,542,037	1,635,148	3.10	0.69	None							0.00	0.0	0	0
1980	7	8,742,685	527,470	6,091,421	4,456,264	1,635,157	3.10	0.69	None							0.00	0.0	0	0
1980	8	8,985,332	524,992	6,266,526	4,639,050	1,627,475	3.10	0.69	None							0.00	0.0	0	0
1980	9	8,277,105	525,698	5,781,256	4,151,592	1,629,664	3.10	0.69	None							0.00	0.0	1	0
1980	10	7,501,912	525,323	5,250,118	3,621,616	1,628,501	3.10	0.69	None							0.00	0.0	I	0
1980	11	6,831,826	524,775	4,794,020	3,167,218	1,626,803	3.10	0.69	None							0.00	0.0	1	o o
1980	12	6,214,413	523,211	4,376,556	2,754,602	1,621,954	3.10	0.69	None							0.82	0.0	1	. 0
1981	. 1	5,614,150	522,186	3,972,021	2,353,244	1,618,777	3.10	0.69	None							1.98	0.0	1	0
1981	2	4,932,851	521,886	3,521,991	1,904,144	1,617,847	3.10	0.69	None							1.61	0.0	1	0
1981	3	4,685,270	521,000	3,358,408	1,743,308	1,615,100	3.10	0.69	None							4.01	0.0	1	0
1981	4	5,305,420	518,769	3,785,755	2,177,571	1,608,184	3.10	0.69	None							0.55	0.0	1	0
1981	5	6,736,766	514,968	4,782,936	3,186,535	1,596,401	3.10	0.69	None							0.00	0.0	1	0
1981	6	8,460,718	513,748	5,988,071	4,395,452	1,592,619	3.10	0.69	None							0.00	0.0	0	0
1981	7	9,362,666	513,001	6,628,346	5,038,042	1,590,303	3.10	0.69	None							0.00	0.0	0	0
1981	8	9,056,975	512,144	6,450,373	4,862,727	1,587,646	3.10	0.69	None							0.00	0.0	0	0
1981	9	8,267,748	507,448	6,066,585	4,315,889	1,750,696	3.45	0.78	None							0.03	0.0	1	0
1981	10	7,204,857	505,707	5,557,803	3,813,113	1,744,689	3.45	0.78	None							0.49	0.0	1	0
1981	11	6,135,299	505,825	4,910,153	3,165,056	1,745,096	3.45	0.78	None							1.82	0.0	1	0
1981	12	5,437,873	500,646	4,411,017	2,683,788	1,727,229	3.45	0.78	None							0.46		1	0
1982	. 1	4,963,851	502,112	4,052,284	2,319,998	1,732,286	3.45	0.78	None							2.13		1	0
1982		4,611,649	501,197			1,729,130	3.45	0.78	None							0.76		1	0
1982		4,430,249	•			1,721,585	3.45	, 0.78	None							3.47		1	0
1982		4,640,732	•		2,067,762		3.45	0.78	None							1.40		1	0
1982	. 5	5,670,95	499,574	4,563,597	2,840,067	1,723,530	3.45	0.78	None							0.12	0.0	1	0

												_						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16 17	18	19	20
YEAR	MONTH	LAUSET	LAACCT	LATREV	LATVREV	LATFC 1	LASC	LAPI	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4	LAB4 LAPREC	LATEMP	LAHHI	LANHH
1982	6	6,908,325	498,411	5,514,108	3,794,590	1,719,518	3.45	0.78	None						0.00	0.0	0	0
1982	7	7,937,947	497,995	6,310,710	4,592,627	1,718,083	3.45	0.78	None						0.00	0.0	0	0
1982	8	8,457,137	498,402	6,696,532	4,977,045	1,719,487	3.45	0.78	None						0.00	0.0	0	0
1982	9	7,889,555	496,886	6,342,341	4,628,084	1,714,257	3.45	0.78	None						0.85	0.0	1	0
1982	10	6,611,992	494,657	5,594,912	3,888,345	1,706,567	3.45	0.89	None						0.18	0.0	1	0
1982	11	5,496,346	494,743	4,724,542	3,017,679	1,706,863	3.45	0.89	None						4.47	0.0	1	0
1982	12	4,821,026	494,322	4,228,881	2,523,470	1,705,411	3.45	0.89	None						1.03	0.0	1	0
1983	1	4,551,442	491,804	4,202,573	2,505,849	1,696,724	3.45	0.89	None						6.35	0.0	1	0
1983	2	4,371,283	491,744	4,066,879	2,370,362	1,696,517	3.45	0.89	None						4.74	0.0	1	0
1983	3	4,031,364	493,163	3,781,981	2,080,569	1,701,412	3.45	0.89	None						8.21	0.0	1	0
1983	4	4,118,576	493,631	3,983,395	2,280,368	1,703,027	3.45	0.89	None						5.23	0.0	1	0
1983	5	5,187,068	493,005	4,885,757	3,184,889	1,700,867	3.45	0.89	None						0.36	0.0	1	0
1983	6	6,756,134	492,615	6,098,712	4,399,190	1,699,522	3.45	0.89	None						0.00	0.0	0	0
1983	7	7,950,173	493,308	7,161,295	5,459,382	1,701,913	3.45	0.89	None						0.00	0.0	0	0
1983	8	7,898,588	492,796	7,123,925	5,423,778	1,700,146	3.45	0.89	None						0.76	0.0	0	0
1983	9	7,121,690	488,411	6,478,619	4,793,601	1,685,018	3.45	0.89	None						2.01	0.0	1	0.
1983	10	6,313,448	488,052	5,895,195	4,211,415	1,683,779	3.45	0.89	None						0.73	0.0	1	0
1983	11	5,217,638	488,568	5,062,787	3,377,227	1,685,560	3.45	0.89	None						2.55	0.0	1	. 0
1983	12	4,552,904	488,592	4,530,857	2,845,214	1,685,642	3.45	0.89	None						3.16	0.0	. 1	0
1984	1	4,627,782	488,767	4,597,886	2,911,639	1,686,246	3.45	0.89	None						0.15	0.0	1	0
1984	2	5,043,734	488,774	4,953,941	3,267,670	1,686,270	3.45	0.89	None						0.00	0.0	1	0
1984	3	5,527,051	488,172	5,367,388	3,683,195	1,684,193	3.45	0.89	None						0.23	0.0	1	0
1984	4	6,356,229	486,357	6,110,852	4,432,920	1,677,932	3.45	0.89	None						0.70	0.0	1	0
1984	5	7,078,448	486,091	6,972,294	5,295,280	1,677,014	3.45	0.89	None						0.00	0.0	1	0
1984	6	7,832,594	461,746	7,703,184	6,110,160	1,593,024	3.45	0.89	None						0.00	0.0	0	0
1984	7	8,683,377	430,901	8,355,529	6,868,920	1,486,608	3.45	0.89	None						0.00	0.0	0	0
1984	8	8,854,936	423,663	8,561,705	7,100,067	1,461,637	3.45	0.89	None						0.40	0.0	0	0
1984	9	8,453,163	425,340	8,220,495	6,753,072	1,467,423	3.45	0.89	None						0.24	0.0	1	0
1984	10	7,521,495	425,280	7,396,942	5,929,726	1,467,216	3.45	0.89	None						0.13	0.0	1	0
1984	. 11	6,184,134	420,291	6,235,520	4,785,516	1,450,004	3.45	0.89	None						1.40	0.0	1	0
1984	12	5,038,78	418,016	5,318,043	4,665,938	652,105	1.56	0.89	None						5.4	0.0	1	0
1985	1	4,608,331	7 416,487	5,082,003	4,432,283	649,720	1.56	0.89	None						0.7	0.0	1	0
1985	2	4,655,32	1 412,149	4,705,068	4,062,115	642,952	1.56	0.89	None						2.84	0.0	1	0
1985	3	4,880,09	7 412,456	4,918,959	4,275,527	643,431	1.56	0.89	None						1.29	0.0	1	0
1985	i 4	5,534,34	4 415,048	6,465,361	5,817,886	647,475	1.56	0.89	None						0.00	0.0	1	0

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	LAUSET	LAACCT	LATREV	LATVREV	LATFC	LASC	LAPI	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4	LAB4	LAPREC	LATEMP	LAHHI	LANHH
1985	5	6,487,737	414,271	7,265,888	6,619,625	646,263	1.56	0.89	None							0.23	0.0	1	0
1985	6	7,684,478	412,328	7,876,629	7,233,397	643,232	1.56	0.89	None							0.00	0.0	0	0
1985	7	8,529,889	411,369	8,766,968	8,125,232	641,736	1.56	0.89	None							0.00	0.0	0	0
1985	8	8,501,842	411,582	8,842,992	8,200,924	642,068	1.56	0.89	None							0.00	0.0	0	0
1985	9	7,929,688	411,792	8,355,812	7,713,416	642,396	1.56	0.89	None							0.19	0.0	1	0
1985	10	7,022,347	414,158	7,588,652	6,942,565	646,086	1.56	0.89	None							0.42	0.0	1	0
1985	11	6,098,024	411,796	6,760,278	6,117,876	642,402	1.56	0.89	None							2.91	0.0	1	0
1985	12	5,483,530	410,689	6,083,387	5,442,712	640,675	1.56	0.89	None							0.33	0.0	1	0
1986	1	5,121,933	410,972	5,688,609	5,047,493	641,116	1.56	0.94	None							2.19	0.0	1	0
1986	2	4,817,476	410,260	5,444,987	4,804,981	640,006	1.56	0.94	None							6.10	0.0	1	0
1986	3	4,757,237	411,700	5,488,114	4,845,862	642,252	1.56	0.94	None							5.27	0.0	1	0
1986	4	5,347,001	412,112	6,265,711	5,622,816	642,895	1.56	1.04	None							0.45	0.0	1	0
1986	5	6,544,303	412,792	7,678,089	7,034,133	643,956	1.56	1.04	None							0.00	0.0	1	0
1986	6	7,992,715	413,237	9,228,571	8,583,921	644,650	1.56	1.04	None							0.00	0.0	0	0
1986	7	9,148,521	413,959	10,360,371	9,714,594	645,776	1.56	1.04	None							0.18	0.0	0	0
1986	8	9,650,656	413,550	10,810,880	10,165,742	645,138	1.56	1.04	None							0.00	0.0	0	0
1986	9	9,205,656	412,738	10,263,319	9,619,448	643,871	1.56	1.04	None							1.97	0.0	1	0
1986	10	7,824,101	413,414	8,655,182	8,010,256	644,926	1.56	0.94	None							0.53	0.0	1	0
1986	11	6,899,602	2 413,561	7,513,032	6,867,876	645,155	1.56	0.94	None							0.94	0.0	1	0
1986	12	6,700,584	412,924	7,257,786	6,613,625	644,161	1.56	0.94	None							0.37	0.0	1	0
1987	1	6,300,50	5 413,227	6,892,401	6,247,767	644,634	1.56	0.94	None							1.39	0.0	1	0
1987	2	5,605,176	413,605	6,252,788	5,607,564	645,224	1.56	0.94	None							1.22	0.0	ì	0
1987	3	5,348,40	7 414,660	6,127,584	5,480,714	646,870	1.56	0.94	None							0.95	0.0	1	0
1987	4	6,102,11	7 415,681	7,187,399	6,538,936	648,462	1.56	1.09	None							0.06	0.0	1	0
1987	5	7,272,35	7 416,203	8,720,779	8,071,502	649,277	1.56	1.09	None							0.00	0.0	1	0
1987	6	8,447,60	9 415,979	10,187,983	9,539,055	648,927	1.56	1.09	None							0.05	0.0	0	0
1987	7	8,849,79	9 416,377	10,914,480	10,264,931	649,548	1.56	1.18	None							0.01	0.0	0	0
1987	8	8,546,46	6 417,422	10,869,892	10,218,714	651,178	1.56	1.18	None							0.00	0.0	0	0
1987	9	8,433,20	6 417,835	10,722,030	10,070,207	651,823	1.56	1.18	None							0.09	0.0	1	0
1987	10	7,688,51	9 417,443	9,542,674	8,891,462	651,211	1.56	1.04	None							2.37	0.0	1	0
1987	11	6,320,68	6 417,168	7,742,129	6,841,046	901,083	2.16	1.04	None							1.13	0.0	ì	0
1987	12	5,570,97	1 417,361	6,904,937	6,003,437	901,500	2.16	1.04	None							1.84	0.0	1	0
1988	3 1	5,264,18	7 417,450	6,575,735	5,674,043	901,692	2.16	1.04	None							1.65	0.0	1	0
1988	3 2	5,147,52	4 417,183	6,388,419	5,487,304	901,115	2.16	1.04	None							1.72	0.0	1	0
198	3 3	5,501,50	6 416,146	6,813,540	5,914,665	898,875	2.16	1.04	None							0.26	0.0	1	0

																			
1	2	3		5		7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	LAUSET	LAACCT		LATVREV	LATFC	LASC	LAPI	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4	LAB4		LATEMP	LAHHI	
1988		5,959,491	416,363	7,536,855	6,637,511	899,344	2.16	1.15	None							3.41	0.0	1	0
1988	5	6,432,017	415,979	8,309,682	7,411,167	898,515	2.16	1.15	None							0.00	0.0	1	0
1988	6	7,239,304	416,624	9,396,287	8,496,379	899,908	2.16	1.15	None							0.00	0.0	0	0
1988	7	7,719,403	417,736	10,200,916	9,298,606	902,310	2.16	1.24	None							0.00	0.0	0	1
1988	8	7,614,464	418,005	10,331,486	9,428,595	902,891	2.16	1.24	None		•					0.04	0.0	0	1
1988	9	7,335,719	417,643	10,059,880		902,109	2.16	1.24	None							0.05	0.0	1	1
1988	10	6,732,578	416,891	9,270,569	8,270,030	1,000,538	2.40	1.20	None							0.00	0.0	1	1
1988	11	5,997,949	417,662	8,327,151			2.40	1.20	None							0.70	0.0		1
1988	12	5,340,478	417,826	7,524,807		1,002,782	2.40	1.20	None							1.83	0.0		l ·
1989	1	4,757,985	417,531	6,828,415	5,826,340	1,002,074	2.40	1.19	None							0.73	0.0		1
1989	2	4,536,814	417,965	6,559,203	5,556,087	1,003,116	2.40	1.19	None							1.90			1
1989	3	4,870,810	419,210	7,075,271	6,069,167	1,006,104	2.40	1.19	None							0.81	0.0		1
1989	4	5,634,348	418,504	8,382,312	7,377,902	1,004,410	2.40	1.37	None							0.00			1
1989	5	6,352,061	419,545	9,678,498	8 8,671,590	1,006,908	2.40	1.37	None							0.05			1
1989	6	7,013,328	420,076	10,789,658	9,781,475	1,008,182	2.40	1.37	None							0.00			
1989	7	7,740,694	419,154	12,103,946	5 11,097,976	1,005,970	2.40	1.47	None							0.00			
1989	8	7,959,573	420,085	12,717,80	11,709,597	1,008,204	2.40	1.47	None							0.00			
1989	9	7,516,491	419,844	12,122,23	3 11,114,612	1,007,626	2.40	1.47	None							0.35			. 1
1989	10	6,716,835	419,114	11,274,470	10,268,596	1,005,874	2.40	1.41	None							0.43	0.0	1	1
1989	11	5,759,933	413,039	10,502,963	2 9,511,668	991,294	2.40	1.41	None							0.29	0.0	1	1
1989	12	5,602,317	412,988	9,800,82	2 8,809,650	991,171	2.40	1.41	None							0.00	0.0	1	1
1990	1	5,552,991	418,931	9,104,169	9 8,098,734	1,005,434	2.40	1.47	None							1.24	0.0	1	1
1990) 2	4,933,260	418,963	8,346,63	5 7,341,123	1,005,511	2.40	1.47	None							3.12	0.0	1	1
1990) 3	4,796,514	418,997	8,348,16	9 7,342,576	1,005,593	2.40	1.47	None							0.17	0.0	1	1
1990) 4	5,066,666	420,405	9,200,71	9 8,116,074	1,084,645	2.58	1.69	None							0.58	0.0	1	1
1990) 5	5,532,43	5 421,003	10,396,92	7 9,310,739	1,086,188	2.58	1.69	None							0.83	1.0	1	1
1990) 6	6,292,98	420,679	11,882,94	7 10,797,595	1,085,352	2.58	1.69	None							0.00	1.0	0	1
1990) 7	7,059,02	421,177	7 13,407,28	2 12,320,645	1,086,637	2.58	1.77	None							0.00	1.0	0	1
1990) 8	7,206,03	6 421,138	3 13,880,18	9 12,793,653	1,086,536	2.58	1.77	None							0.02	2 1.0	0	1
1990) 9	6,826,09	1 421,275	5 13,104,71	3 12,017,824	1,086,890	2.58	1.77	None							0.00	1.0) 1	. 1
1990) 10	6,425,71	9 421,361	11,833,51	6 10,746,404	1,087,111	2.58	1.77	None							0.00	1.0) 1	1
1990		6,046,73			5 9,521,730			1.77	None							0.19	1.0	1	1
1990) 12	5,522,92	9 418,843	3 9,515,76	4 8,435,149	1,080,615	2.58	1.77	None							0.00	1.0	1	1
199		1 5,011,42	0 414,443	3 8,561,77	0 7,492,507	1,069,263	2.58	1.54	None							1.17	1.0	1	1
199	1 :	2 4,302,66	9 410,04	7,426,95	6 6,369,034	1,057,921	2.58	1.54	None							3.77	1.0	1	1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16 17	18	19	20
YEAR	MONTH	LAUSET	LAACCT	LATREV	LATVREV	LATFC	LASC	LAPI	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4	LAB4 LAPREC	LATEMP	LAHHI	LANHH
1991	3	3,466,519	404,259	6,471,912	5,428,923	1,042,988	2.58	1.54	None						5.92	1.0	1	1
1991	4	3,274,220	400,969	6,773,270	5,738,769	1,034,500	2.58	1.87	None						0.03	1.0	1	1
1991	5	3,863,145	398,588	8,282,353	7,253,995	1,028,357	2.58	1.87	None						0.00	1.0	1	1
1991	6	4,582,755	398,852	9,563,739	8,534,700	1,029,038	2.58	1.87	None						0.01	1.0	0	1
1991	7	4,931,974	401,014	9,701,383	8,666,766	1,034,616	2.58	1.60	None						0.13	1.0	0	1
1991	8	5,055,859	401,729	9,434,071	8,397,610	1,036,461	2.58	1.60	None						0.00	1.0	0	1
1991	9	5,111,708	401,812	9,083,619	8,046,944	1,036,675	2.58	1.60	None						0.09	1.0	1	1
1991	10	4,967,725	400,938	7,976,110	6,941,690	1,034,420	2.58	1.06	None						0.37	1.0	1	1
1991	11	4,721,128			5,579,587	1,034,485	2.58	1.06	None						0.00	1.0	1	1
1991	12	4,405,004	400,625	5,977,633	4,944,020	1,033,613	2.58	1.06	None						3.22	1.0	1	1
1992		3,847,988	400,760	5,627,087	4,593,126	1,033,961	2.58	1.37	None						1.74	1.0	I	1
1992		3,358,703	•	5,407,165	4,374,130	1,033,035	2.58	1.37	None						7.96	1.0	1	1
1992		3,122,067	400,000	5,677,081	4,645,081	1,032,000	2.58	1.37	None						5.08	1.0	1	i
1992		3,498,263		7,187,760	6,158,033	1,029,727	2.58	1.95	None						0.18	1.0	i	1
1992		4,520,504	398,837	9,782,916	8,753,917	1,028,999	2.58	1.95	None						0.04	1.0	1	1
1992		5,390,671	-	11,942,824	10,911,779	1,031,045	2.58	1.95	None						0.00	1.0	0	1~
1992		5,932,625	•	13,823,238	12,791,508	1,031,729	2.58	2.30	None						0.08	1.0	0	1
1992		6,251,988		15,264,861	14,234,061	1,030,800	2.58	2.30	None						0.00	1.0	0	1
1992		6,245,344		15,366,102	14,336,122	1,029,980	2.58	2.30	None						0.00	1.0	1	1
1992		5,656,612	•		12,606,894		2.58	2.06	None						0.70	1.0	1	1
1992		4,865,100	•		10,427,018	1,021,358	2.58	2.06	None						0.00	1.0	1	1
1992	12	4,310,309	397,297	10,122,480	10,122,480	0	0.00	2.06	None						4.68	1.0	1	1
1993	1	3,614,687	7 399,392	8,631,990	8,631,990	0	0.00	2.31	16.5	3.11	> 16.5				8.85	1.0	1	1
1993	2	3,169,006	397,367	7,628,568	7,628,568	0	0.00	2.31	16.5	3.11	> 16.5				6.61	1.0	1	1
1993	3	3,373,795	394,120	8,087,304	8,087,304	0	0.00	2.31	16.5	3.11	> 16.5				2.74	1.0	1	1
1993	4	4,054,829	390,465	9,699,243	9,699,243	0	0.00	2.23	16.5	3.11	> 16.5				0.00	1.0	1	1
1993	5	4,957,771	387,432	12,070,065	12,070,065	, 0	0.00	2.23	16.5	3.11	> 16.5				0.02	1.0	1	1
1993	6	5,743,532	2 389,187	14,196,222	14,196,222	0	0.00	2.23	20.25	3.98	> 20.25				0.76	1.0	0	1
1993	7	6,086,582	2 394,331	15,078,134	15,078,134	0	0.00	2.06	20.25	3.98	> 20.25				0.00	1.0	0	1
1993	8	6,002,842	392,950	14,572,958	14,572,958	0	0.00	2.06	20.25	3.98	> 20.25				0.00	1.0	0	1
1993	9	5,823,601	1 390,177	13,946,810	13,946,810	0	0.00	2.06	20.25	3.98	> 20.25				0.00	1.0	1	1
1993		5,479,578	391,233	13,216,768	13,216,768	0	0.00	2.11	20.25	3.98	> 20.25				0.16	1.0	1	1
1993	3 11	4,971,710	389,584	11,778,392	11,778,392	0	0.00	2.11	16.5	3.11	> 16.5				0.93	1.0	1	1
1993	12	4,608,11	-		10,653,331	0	0.00	2.11	16.5	3.11	> 16.5				0.78	1.0	1	1
1994	1	4,314,123	3 390,785	9,948,188	9,948,188	0	0.00	2.20	16.5	3.11	> 16.5	-w-1			0.33	1.0	i	1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	LAUSET	LAACCT	LATREV	LATVREV	LATFC	LASC	LAPI	LAB1	LAP2	LAB2	LAP3	LAB3	LAP4	LAB4	LAPREC	LATEMP	LAHHI	LANHH
1994	2	3,904,029	392,678	9,042,860	9,042,860	0	0.00	2.20	16.5	3.11	> 16.5					3.21	1.0	i	1
1994	3	3,711,466	389,299	8,694,480	8,694,480	0	0.00	2.20	16.5	3.11	> 16.5					1.86	1.0	1	1
1994	4	3,833,365	389,047	9,265,325	9,265,325	0	0.00	2.41	16.5	3.11	> 16.5					1.20	1.0	1	1
1994	5	4,362,851	389,082	10,895,706	10,895,706	0	0.00	2.41	16.5	3.11	> 16.5					0.28	1.0	1	1
1994	6	5,361,173	388,768	13,650,933	13,650,933	0	0.00	2.41	20.25	3.11	> 20.25					0.00	1.0	0	1
1994	7	6,278,750	390,460	16,358,592	16,358,592	0	0.00	2.54	20.25	3.11	> 20.25					0.00	1.0	0	1
1994	8	6,526,893	390,695	17,298,415	17,298,415	0	0.00	2.54	20.25	3.11	> 20.25					0.00	1.0	0	1
1994	9	6,193,325	390,005	16,356,409	16,356,409	0	0.00	2.54	20.25	3.11	> 20.25					0.00	1.0	1	1
1994	10	5,491,324	387,400	14,128,140	14,128,140	0	0.00	2.35	20.25	3.11	> 20.25					0.19	1.0	1	1
1994	11	4,858,958	387,185	12,148,844	12,148,844	0	0.00	2.35	16.5	3.11	> 16.5					0.61	1.0	1	1
1994	12	4,430,286	386,816	11,039,482	11,039,482	0	0.00	2.35	16.5	3.11	> 16.5					0.32	1.0	1	1
1995	1	3,747,793	383,718	9,400,702	9,400,702	0	0.00	2.50	16.5	3.11	> 16.5					12.56	1.0	1	1
1995	2	3,187,684	382,819	8,085,488	8,085,488	0	0.00	2.50	16.5	3.11	> 16.5					1.30	1.0	1	1
1995	3	3,166,749	383,476	8,054,133	8,054,133	0	0.00	2.50	16.5	3.11	> 16.5					6.98	1.0	1	1
1995	4	3,639,078	382,848	9,164,068	9,164,068	0	0.00	2.38	16.5	3.11	> 16.5					0.58	1.0	1	1
1995	5	4,349,461	382,445	10,949,113	10,949,113	0	0.00	2.38	16.5	3.11	> 16.5					0.18	1.0	1	1
1995	6	2,385,755	384,269	6,043,255	6,043,255	0	0.00	2.37	20.25	3.98	> 16.5					0.60	1.0	0	1

1	2	21	l 22	23	24	25	26	27	28	29	30	31	32	33	34	35	CONS	. CA	TEGO	DRIE	s
YEAR	MONTH	LAULFRET	LASCHEED I	AlaORD	LAIBORD	LAECP2M	LAECP3M	LADRBORD	LAUSEORD		LALITPI	LASPKPI			LAKITPI I	LALSPI			RET O		
1980	1	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	2	0	0	0	0	0	0	0	0	0	0	1	1	0	1	i	1	1	0	0	0
1980	3	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	4	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	5	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	6	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0
1980	7	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0
1980	8	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0
1980	9	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	10	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	11	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1980	12	0	0	0	0	0	0	0	0	0	0	1	1	0	1	i	1	1	0	0	0
1981	1	0	0	0	0	0	0	0	. 0	0	0	1	1	0	1	1	1	1	0	0	0
1981	2	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1981	3	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1981	4	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0-
1981	5	0	0	0	0	0	0	0	0	0	0	1	1	0	, i	1	1	1	0	0	0
1981	6	0	0	0	0	0	0	0	0	0	0	1	1	0	1	l	0	1	0	0	0
1981	7	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0
1981	8	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	0
1981	9	0	0	0	0	0	0	0	0	0	0 -	1	1	0	1	1	1	1	0	0	0
1981	10	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1981	11	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1981	12	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0
1982	1	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1982	2	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1982	3	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1982	4	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1982		0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0		0
1982		0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0
1982		0	0	0	0	0	1	1	· 1	0	0	1	1	0	1	1	0	1	0	0	0
1982		0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	0		0
1982		0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0		0
1982		0	0	0	. 0	0	1	1	1	0	0	1	1	0	1	1	1	1	0		0
1982	11	0	0	0	0	0	1	1	11	00	0	11	1	0	11	1	1	1	0	0	0

1	2		21 22		24	25		27		29	30	31	32	33	34	35	CONS				
	MONTH		ET LASCHEED				LAECP3M L	ADRBORD	LAUSEORD			LASPKPI	LAHOTLPI		LAKITPI L			PI_	RET (
1982	12	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0		0
1983	1	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0		_
1983	2	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1983	3	0	0	0	0	0	1	1	I	0	0	1	1	0	1	1	1	1	0	0	0
1983	4	0	0	0	0	0	1	1	1	0	0	1	1	0 .	1	1	1	1	0	0	0
1983	5	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1983	6	0	0	0	0	0	1	1	1	0	0	1	1 .	0	1	1	0	i	0	0	0
1983	7	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0
1983	8	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0
1983	9	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1983	10	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1983	11	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1983	12	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	ì	0	0	0
1984	1	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	2	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	3	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	4	0	0	0	0	0	1	1	1	0	0	1	1	0	. 1	i	1	1	0	0	0
1984	5	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0.	0	0
1984	6	0	0	0	0	0	1	1	1	0	0	1	1	0	1	i	0	1	0	0	0
1984	7	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	ì	0	0	0
1984	8	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0
1984	9	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	10	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	11	0	0	0	0	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0
1984	12	0	0	0	0	0	1	1	1	0	0	1	i	0	1	1	1	1	0	0	0
1985	1	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1985	2	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1985	3	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1985	4	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	
1985		0	0	0	0	0	1	1	1	1	0	1	1	0	1	i	1	1	0	0	
1985		0	0	0	0	0	1	1	- 1	1	0	1	1	0	1	1	0	ı	0	0	
1985		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	
1985	-	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	
1985		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0		C
1985		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0		C

1	2	21	22	23	24	25	26	27	7 28	29	30	31	32	33	34	35	CONS	. CA	TEGO	RIE	<u> </u>
YEAR	MONTH		LASCHEED 1						LAUSEORD										RET O		
1985	11	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1985	12	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	1	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	2	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	3	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	4	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	i	1	0	0	0
1986	5	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	6	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0
1986	7	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0
1986	8	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0
1986	9	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	10	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1986	11	0	0	0	0	0	1	1	- 1	1	0	1	1	0	1	1	1	1	0	0	0
1986	12	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1987	1	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1987		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	٥٠
1987		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1987		0	0	0	0	0	1	1	1	1	0	1	1	0	1	l	1	1	0	0	0
1987	-	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	ì	0	0	0
1987		0	0	0	0	0	1	1	1	1	0	1	. 1	0	1	1	0	i	0	0	0
1987	7	0	0	0	0	0	1	1	1	1	0	1	1	0	1	ı	0	1	0	0	0
1987	8	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0
1987	9	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1987	10	0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1987	11	0	0	0	0	0	1	1	1	1	0	1	1	0	i	1	1	1	0	0	0
1987		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1988		0	0	0	0	0 .	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	l	1	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	i	1	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	0	0
1988		0	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	1	0
1988		1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	1	0
1988	9	11	0	00	00	00	1	1	1	1	0	1	1	0	1	11	1	_1_	0	1	0

1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	CONS	S. CA	TEG	ORIF	S
YEAR	MONTH	LAULFRET	LASCHEED I	LAIAORD	LAIBORD	LAECP2M	LAECP3M I	LADRBORD	LAUSEORD	LABILLPI	LALITPI	LASPKPI			LAKITPI L	ALSPI			RET C		
1988	10	1	0	0	0	0	1	1	1	1	0	l	1	0	1	1	1	1	0	1	0
1988	11	1	0	0	0	0	1	1	1	1	0	ı	1	0	1	1	i	1	0	1	0
1988	12	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1.	1	i	0	1	0
1989	1	1	0	0	0	0	1	1	1	1	0	1 .	1	0	1	1	1	i	0	1	0
1989	2	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	ì	0	1	0
1989	3	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	0
1989	4	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	0
1989	5	1	0	0	0	0	1	i	1	1	0	1	1	0	1	1	i	1	0	i	0
1989	6	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	1	0
1989	7	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	0	1	0	1	0
1989	8	1	0	0	0	0	1	1	1	ì	0	1	1	0	1	1	0	1	0	1	0
1989	9	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	0
1989	10	1 .	0	0	0	0	1	1	1	1	0	1	1	0	i	1	1	1	0	1	0
1989	11	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	i	1	0	i	0
1989	12	1	0	0	0	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	0
1990	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1990	2	i	0	0	1	0	1	1	1	1	1	1	1	1	. 1	1	1	1	1	1	0
1990	3	1	0	0	1	0	1	1	• 1	1	1	1	1	1	1	1	1	1	1	1	0
1990		1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1990	5	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1990	6	1	0	0	1	0	1	1	1	1	1	1	1	ı	1	1	0	1	1	1	0
1990		i	0	0	1	0	1	1	1	1	1	1	1	i	1	1	0	1	1	1	0
1990		1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1990	9	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	I	1	1	0
1990		1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1990		1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1990		1	0	0	1	0	. 1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1991	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1991	2	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1991		1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1991		0	1	0	1	0	1	1	1	1	1	1	1	1	1	i	1	1	1	1	1
1991		0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1991		0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	ı	1	I
1991		0	0	1	i	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
1991	8	00	00	1	11	0	1	11	1	1	1	11	11	11	1	1	0	1	1	1	1

1	2	21		23	24		26	27		29	30	31	32	33	34	35	CONS	. CA	TEGO	RIES
YEAR	MONTH	LAULFRET	LASCHEED	LAIAORD	LAIBORD	LAECP2M I	LAECP3M	LADRBORD	LAUSEORD	LABILLPI	LALITPI	LASPKPI	LAHOTLPI	LAAUDPI	LAKITPI 1	LALSPI	ED	PI I	RET O	RD M
1991	9	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1
1991	10	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1
1991	11	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1
1991	12	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	ı	1	1 1
1992	1	0	0	1	1	0	I	1	1	1	1	i	1	1	1	1	1	1	1	1 1
1992	2	0	0	1	1	0	1	1	1	1	1	1	1	l	1	1	1	1	1	1 1
1992	3	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1
1992	4	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1992	5	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1992	6	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	l	1	1 0
1992	7	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	l	1	1 0
1992	8	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1 0
1992	9	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1992	10	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1992	11	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1992	12	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993	1	1	0	0	1	0	1	1	1	1	1	1	1	1	. 1	1	1	1	1	1 0
1993	2	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993	3	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993		1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993		1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993	6	1	0	0	0	I	1	1	1	1	1	1	1	1	1	1	0	1	1	1 0
1993	7	1	0	0	0	1	1	1	1	1	1	1	1	1	1	l	0	1	1	1 0
1993		1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1 0
1993	9	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993	10	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	i	1	1 0
1993	11	1	0	0	0	1 .	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1993	12	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1994	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1994	2	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	i	1	1 0
1994	. 3	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1994	4	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1994	5	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 0
1994		1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1 0
1994	7	1	0	0	0	1	11	1	11	1	11	1	1	11	1	1	0	1	1	1 0

1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	CON	S. CA	TEG	ORII	ES
YEAR	MONTH	LAULFRET	LASCHEED	LAIAORD	LAIBORD	LAECP2M	LAECP3M	LADRBORD	LAUSEORD	LABILLPI	LALITPI	LASPKPI	LAHOTLPI	LAAUDPI	LAKITPI	LALSPI	ED	PI	RET (ORD	M
1994	8	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1994	9	1 -	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	10	1	0	0	0	1	1	1	1	1	1	1	1	1	1	. 1	1	1	1	1	0
1994	11	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	ı	1	1	0
1994	12	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	2	1	0	0	0	l	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	3	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	4	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	5	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	6	1	0	0	0	1	1	1	1	1	1	l	1	1	1	1	0	1	1	1	0

San Diego Residential Water --- Unit: 1,000 gallons
Conversion made to TotUse & TotRev (NumAcct received from the utility, no conversions were necessary.)
Water rates have been converted to reflect the price of 1,000 gallons of water vs. 748 gallons.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SDUSET	SDACCT	SDTREV	SDTVREV	SDTFC	SDSC	SDP1	SDB1	SDP2	SDB2	SDP3	SDB3	SDP4	SDB4	SDPREC	SDTEMP	SDHHI	SDNHH
1984	1	1,372,743	163,948	1,548,718	1,146,197	402,521	2.44	0.89	7.5	1.03	> 7.5					0.45	61.2	23,320	355,044
1984	2	1,349,598	163,565	1,634,644	1,318,134	316,510	2.44	0.89	7.5	1.03	> 7.5					0.09	60.1	23,464	355,752
1984	3	1,601,056	164,238	1,844,681	1,504,080	340,602	2.44	0.89	7.5	1.03	> 7.5					0.03	63.6	23,608	356,460
1984	4	1,841,413	164,477	2,158,671	1,745,969	412,702	2.44	0.89	7.5	1.03	> 7.5					0.63	64.3	23,752	357,168
1984	5	2,040,771	164,906	2,375,794	1,952,434	423,360	2.44	0.89	7.5	1.03	> 7.5					0.00	68.1	23,896	357,876
1984	6	1,800,594	165,111	2,100,087	1,739,417	360,670	2.44	0.89	7.5	1.03	> 7.5					0.03	69.9	24,040	358,584
1984	7	2,805,814	165,261	3,191,506	2,704,008	487,498	2.44	0.89	7.5	1.03	> 7.5					0.18	77.2	24,184	359,292
1984	8	2,224,610	165,627	2,524,505	2,144,907	379,597	2.44	0.89	7.5	1.03	> 7.5					0.06	76.5	24,328	360,000
1984	9	2,113,835	165,764	2,420,571	2,035,660	384,911	2.44	0.89	7.5	1.03	> 7.5					0.00	78.9	24,472	360,708
1984	10	1,992,331	166,652	2,322,488	1,908,846	413,642	2.44	0.89	7.5	1.03	> 7.5					0.27	68.5	24,616	361,416
1984	11	1,530,563	166,880	1,834,151	1,446,470	387,681	2.44	0.89	7.5	1.03	> 7.5					2.37	61.4	24,760	362,124
1984	12	1,398,873	166,925	1,699,735	1,307,502	392,233	2.44	0.89	7.5	1.03	> 7.5					4.41	56.7	24,904	362,832
1985	1	1,259,001	167,310	1,582,814	1,167,893	414,921	2.44	0.89	7.5	1.04	> 7.5					0.52	57.0	25,048	363,540
1985	2	1,177,535	167,513	1,472,578	1,093,873	378,706	2.44	0.89	7.5	1.04	> 7.5					0.52	57.0	25,192	364,248
1985	-3	1,416,061	167,737	1,759,548	1,318,281	441,267	2.44	0.89	7.5	1.04	> 7.5					0.77	57.2	25,336	364,956
1985	4	1,513,980	168,116	1,839,035	1,403,482	435,553	2.44	0.89	7.5	1.04	> 7.5					0.58	58.9	25,480	365,664
1985	5	1,778,755	168,605	2,084,193	1,674,198	409,995	2.44	0.89	7.5	1.04	> 7.5					0.32	63.6	25,624	366,372
1985	6	1,606,584	168,787	1,897,976	1,540,158	357,818	2.44	0.89	7.5	1.04	> 7.5					0.00	64.8	25,768	367,080
1985	7	2,686,430	169,067	3,102,354	2,602,184	500,169	2.44	0.89	7.5	1.04	> 7.5					0.00	69.0	25,912	367,788
1985	8	2,435,325	169,638	2,750,472	2,367,748	382,724	2.44	0.89	7.5	1.04	> 7.5					0.00	75.3	26,056	368,496
1985	9	2,270,898	169,989	2,595,314	2,202,125	393,189	2.44	0.89	7.5	1.04	> 7.5					0.00	72.4	26,200	369,204
1985	10	2,215,607	7 170,384	2,549,637	2,139,986	409,650	2.44	0.89	7.5	1.04	> 7.5					0.20	69.8	26,344	369,912
1985	11	1,748,478	170,788	2,071,097	1,667,608	403,489	2.44	0.89	7.5	1.04	> 7.5					0.29	67.9	26,488	370,620
1985	12	1,560,862	2 171,201	1,876,660	1,472,327	404,333	2.44	0.89	7.5	1.04	> 7.5					4.92	60.1	26,632	371,328
1986	1	1,612,425	171,662	1,930,687	1,518,888	411,799	2.44	0.89	7.5	1.04	> 7.5					1.06	58.0	26,776	372,036
1986	2	1,687,611	172,105	1,997,060	1,598,176	398,884	2.44	0.89	7.5	1.04	> 7.5					0.75	61.0	26,920	372,744
1986	3	1,730,411	172,453	2,074,954	1,629,491	445,462	2.44	0.89	7.5	1.04	> 7.5					2.59	58.9	27,064	373,452
1986	4	1,618,550	172,757	1,954,191	1,522,696	431,495	2.44	0.89	7.5	1.04	> 7.5					3.12	60.5	27,208	374,160
1986	5	2,011,15	1 172,991	2,342,725	1,923,224	419,501	2.44	0.89	7.5	1.04	> 7.5					1.17	62.8	27,352	374,868
1986	6	1,646,87	3 173,499	1,933,615	1,597,614	336,002	2.44	0.89	7.5	1.04	> 7.5					0.00	64.6	27,496	375,576

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SDUSET	SDACCT	SDTREV	SDTVREV	SDTFC	SDSC	SDP1	SDB1	SDP2	SDB2	SDP3	SDB3		SDB4		SDTEMP	SDHHI	
1986	7	2,981,147	173,508	3,602,285	3,033,979	568,305	2.76	1.01	7.5	1.17	> 7.5					0.00		27,640	376,284
1986	8	2,444,388	174,437	3,044,651	2,627,215	417,437	2.76	1.01	7.5	1.17	> 7.5					0.01	69.6	27,784	376,992
1986	9	2,277,359	173,971	2,933,770	2,481,164	452,605	2.76	1.01	7.5	1.17	> 7.5					0.00	71.8	27,928	377,700
1986	10	2,147,181	174,716	2,816,778	2,329,567	487,210	2.76	1.01	7.5	1.17	> 7.5					1.04	66.9	28,072	378,408
1986	11	1,640,258	174,943	2,187,432	1,694,838	492,594	2.76	1.01	7.5	1.17	> 7.5			á.		1.39	65.5	28,216	379,116
1986	12	1,597,121	175,462	1,983,820	1,534,310	449,511	2.76	1.01	7.5	1.17	> 7.5					1.16	62.8	28,360	379,824
1987	1	1,574,514	175,882	2,008,903	1,555,813	453,090	2.76	1.03	7.5	1.19	> 7.5					0.95	57.6	28,504	380,532
1987	2	1,440,882	176,190	1,964,334	1,548,498	415,836	2.76	1.03	7.5	1.19	> 7.5					1.68	55.4	28,648	381,240
1987	3	1,597,899	176,349	2,176,208	1,717,649	458,559	2.76	1.03	7.5	1.19	> 7.5					1.53	58.0	28,792	381,948
1987	4	1,878,071	176,703	2,588,892	2,039,114	549,778	2.76	1.03	7.5	1.19	> 7.5					1.04	59.1	28,936	382,656
1987	5	2,265,109	177,158	3,009,105	2,497,453	511,652	2.76	1.03	7.5	1.19	> 7.5					0.78	63.4	29,080	383,364
1987	6	1,334,387	177,121	1,763,933	1,486,555	277,377	2.76	1.03	7.5	1.19	> 7.5					0.03	64.7	29,224	384,072
1987	7	3,068,299	177,831	4,179,473	3,433,519	745,954	3.12	1.16	7.5	1.34	> 7.5					0.00	65.8	29,368	384,780
1987	8	2,423,793	178,511	3,359,087	2,931,019	428,069	3.12	1.16	7.5	1.34	> 7.5					0.03	67.1	29,512	385,488
1987	9	2,127,044	178,957	3,061,188	2,654,484	406,704	3.12	1.16	7.5	1.34	> 7.5					0.01	69.9	29,656	386,196
1987	10	2,126,813	179,190	3,167,143	2,646,502	520,640	3.12	1.16	7.5	1.34	> 7.5					0.70	69.9	29,800	386,904
1987	11	1,592,820	-	2,472,667	1,955,930	516,737	3.12	1.16	7.5	1.34	> 7.5					1.74	69.5	29,944	387,612
1987	12	1,437,802	180,010	2,340,372	1,750,790	589,582	3.12	1.16	7.5	1.34	> 7.5					1.33	61.8	30,088	388,320
1988	1	1,442,021	180,060	2,301,233	1,756,352	544,881	3.12	1.18	7.5	1.36	> 7.5					2.73	53.9	30,232	389,028
1988	2	1,549,049	180,351	2,424,438	1,903,203	521,235	3.12	1.18	7.5	1.36	> 7.5					0.89	56.7	30,376	389,736
1988	3	1,740,095	•	2,740,241	2,153,191	587,049	3.12	1.18	7.5	1.36	> 7.5					1.37	59.9	30,520	390,444
1988	4	1,828,465	181,170	2,884,567	2,280,151	604,415	3.12	1.18	7.5	1.36	> 7.5					0.59	61.6	30,664	391,152
1988	5	1,978,063	181,435	3,017,746	2,474,070	543,676	3.12	1.18	7.5	1.36	> 7.5					3.71	62.4	30,808	391,860
1988	- 6	1,564,556	181,764	2,344,388	1,969,384	375,004	3.12	1.18	7.5	1.36	> 7.5					0.08	63.9	30,952	392,568
1988	7	2,464,033	182,076	3,768,219	3,126,122	642,097	3.12	1.18	7.5	1.36	> 7.5					0.00	64.9	31,096	393,276
1988	8	2,803,289	-	4,256,855	3,581,757	675,098	3.12	1.18	7.5	1.36	> 7.5					0.00	70.4	31,240	393,984
1988	9	2,591,145		3,896,201	3,303,519	592,682	3.12	1.18	7.5	1.36	> 7.5					0.00	70.0	31,384	394,692
1988	10	2,353,171	183,146	3,572,886	2,973,584	599,302	3.12	1.18	7.5	1.36	> 7.5					0.00	71.0	31,528	395,400
1988		1,971,333	-	3,055,357	2,472,203	583,154	3.12	1.18	7.5	1.36	> 7.5					0.00		31,672	
1988		1,751,664	•	2,795,077	2,184,575	610,502	3.12	1.18	7.5	1.36	> 7.5					1.39		31,816	396,816
1989		1,525,807	•	2,494,250	1,910,077	584,173	3.12	1.21	7.5	1.39	> 7.5					2.23		31,960	397,524
1989		1,363,344		2,233,116	1,716,295	516,821	3.12	1.21	7.5	1.39	> 7.5					0.42		32,104	398,232
1989	3	• •	•	2,561,850	1,987,735	574,115	3.12	1.21	7.5	1.39	> 7.5					0.70		32,248	398,940
1989	4	• •		2,846,358	2,265,455	580,904	3.12	1.21	7.5	1.39	> 7.5					0.69		32,392	•
1989	5	2,016,936	184,691	3,171,699	2,579,720	591,979	3.12	1.21	7.5	1.39	> 7.5					0.04	63.7	32,536	400,356

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SDUSET	SDACCT	SDTREV	SDTVREV	SDTFC	SDSC	SDP1	SDB1	SDP2	SDB2	SDP3	SDB3	SDP4	SDB4	SDPREC	SDTEMP	SDHHI	SDNHH
1989	6	2,085,670	185,072	3,197,129	2,679,083	518,046	3.12	1.21	7.5	1.39	> 7.5					0.04	63.7	32,680	401,064
1989	7	2,837,817	185,357	4,325,951	3,663,237	662,714	3.12	1.21	7.5	1.39	> 7.5					0.06	66.0	32,824	401,772
1989	8	2,759,980	185,574	4,180,479	3,612,714	567,765	3.12	1.21	7.5	1.39	> 7.5					0.00	70.1	32,968	402,480
1989	9	2,604,908	185,882	3,968,486	3,411,348	557,138	3.12	1.21	7.5	1.39	> 7.5					0.00	71.0	33,112	403,188
1989	10	2,526,378	186,163	3,918,632	3,310,565	608,068	3.12	1.21	7.5	1.39	> 7.5					0.23	70.4	33,256	403,896
1989	11	2,035,330	186,551	3,242,280	2,994,157	248,123	3.12	1.21	7.5	1.39	> 7.5					0.47	66.3	33,400	404,604
1989	12	1,650,240	186,905	2,636,792	1,030,344	257,097	3.12	1.21	7.5	1.39	> 7.5					0.09	63.1	33,544	405,312
1990	1	1,729,560	187,043	2,763,531	2,227,189	536,342	3.12	1.25	7.5	1.44	> 7.5					1.01	58.7	33,688	406,020
1990	2	1,393,254	187,382	2,360,731	1,810,856	549,875	3.12	1.25	7.5	1.44	> 7.5					2.52	56.6	33,832	406,728
1990	3	1,563,235	188,039	2,632,722	2,040,453	592,269	3.12	1.25	7.5	1.44	> 7.5					0.25	58.7	33,976	407,436
1990	4	1,742,294	188,338	2,882,682	2,291,174	591,508	3.12	1.25	7.5	1.44	> 7.5					0.25	58.7	34,120	408,144
1990	5	1,945,897	188,684	3,164,433	2,575,343	589,090	3.12	1.25	7.5	1.44	> 7.5					0.76	63.2	34,264	408,852
1990	6	1,651,731	189,028	2,728,525	2,198,196	530,329	3.12	1.25	7.5	1.44	> 7.5					0.51	64.3	34,408	409,560
1990	7	2,713,345	189,366	4,421,242	3,638,430	782,812	3.12	1.25	7.5	1.44	> 7.5					0.87	69.0	34,552	410,268
1990	8	2,585,659	189,606	4,030,987	3,486,527	544,459	3.12	1.25	7.5	1.44	> 7.5					0.00	72.3	34,696	410,976
1990	9	2,320,297	189,737	3,637,291	3,116,907	520,384	3.12	1.25	7.5	1.44	> 7.5					0.01	71.6	34,840	411,684 °
1990	10	2,099,507	189,992	3,408,965	2,805,526	603,439	3.12	1.25	7.5	1.44	> 7.5					0.00	71.7	34,984	412,392
1990	11	1,682,273	190,002	2,833,627	2,234,169	599,458	3.12	1.25	7.5	1.44	> 7.5					0.00	68.6	35,128	413,100
1990	12	1,873,936	190,125	3,072,284	2,482,806	589,477	3.12	1.25	7.5	1.44	> 7.5					0.65	62.7	35,272	413,808
1991	1	1,617,938	190,112	2,669,290	2,126,360	542,930	3.12	1.25	7.5	1.44	> 7.5					0.59	55.6	35,416	414,516
1991	2	1,299,807	190,191	2,255,166	1,695,599	559,567	3.12	1.25	7.5	1.44	> 7.5					1.06	57.4	35,560	415,224
1991	3	1,297,399	190,351	2,272,794	1,675,439	597,355	3.12	1.25	7.5	1.44	> 7.5					2.46	59.4	35,704	415,932
1991	4	1,251,274	190,922	2,197,898	1,612,671	585,227	3.12	1.25	7.5	1.44	> 7.5					6.96	56.5	35,848	416,640
1991	5	1,442,284	191,967	2,482,911	1,883,097	599,814	3.12	1.25	7.5	1.44	> 7.5					0.05	61.7	35,992	417,348
1991	6	1,343,581	192,211	2,318,371	1,768,603	549,768	3.12	1.25	7.5	1.44	> 7.5					0.01	62.1	36,136	418,056
1991	7	1,955,401	192,262	3,358,688	2,576,506	782,182	3.12	1.25	7.5	1.44	> 7.5					0.00	64.1	36,280	418,764
1991	8	1,793,588	192,338	2,941,481	2,368,940	572,541	3.12	1.25	7.5	1.44	> 7.5					0.23	67.4	36,424	419,472
1991	9	1,742,173	192,349	2,862,063	2,298,553	563,510	3.12	1.25	7.5	1.44	> 7.5					0.01	68.9	36,568	420,180
1991	10	1,777,715	192,389	2,969,529	2,355,990	613,539	3.12	1.25	7.5	1.44	> 7.5					0.28	69.4	36,712	420,888
1991	11	1,376,781	192,463	2,491,206	1,885,646	605,560	3.12	1.44	7.5	1.62	> 7.5					0.69	68.0	36,856	421,596
1991	12	1,499,758	192,569	2,784,663	2,166,213	618,450	3.12	1.44	7.5	1.62	> 7.5					0.05	62.3	37,000	422,304
1992	1	1,329,744	192,580	2,509,494	1,961,271	548,222	3.12	1.44	7.5	1.62	> 7.5					1.70	57.3	37,144	423,012
1992	2	1,131,443	192,562	2,251,168	1,668,597	582,570	3.12	1.44	7.5	1.62	> 7.5					1.81	57.4	37,288	423,720
1992	3	1,164,057	192,680	2,291,236	1,709,030	582,206	3.12	1.44	7.5	1.62	> 7.5					3.34	61.1	37,432	424,428
1992	4	1,373,599	192,718	2,498,631	2,038,465	460,166	3.12	1.44	7.5	1.62	> 7.5					2.82	2 60.4	37,576	425,136

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SDUSET	SDACCT	SDTREV	SDTVREV	SDTFC	SDSC	SDP1	SDB1	SDP2	SDB2		SDB3	SDP4	SDB4	SDPREC	SDTEMP	SDHHI	SDNHH
1992	5	1,751,793	192,787	3,116,435	2,642,978	473,456	3.12	1.44	7.5	1.62	> 7.5					0.28	67.0	37,720	425,844
1992	6	1,559,384	192,845	2,869,715	2,384,568	485,146	3.12	1.44	7.5	1.62	> 7.5					0.07	68.0	37,864	426,552
1992	7	2,688,471	192,927	5,129,400	4,254,430	874,970	3.12	1.56	7.5	1.75	> 7.5					0.04	68.1	38,008	427,260
1992	8	2,276,444	193,018	4,263,375	3,716,321	547,054	3.12	1.56	7.5	1.75	> 7.5					0.03	71.8	38,152	427,968
1992	9	1,698,489	193,084	3,322,941	2,760,469	562,472	3.12	1.56	7.5	1.75	> 7.5					0.05	74.9	38,296	428,676
1992	10	1,373,845	193,127	2,821,574	2,209,245	612,329	3.12	1.56	7.5	1.75	> 7.5					0.00	72.4	38,440	429,384
1992	11	1,280,853	193,189	2,483,813	1,952,842	530,971	3.12	1.56	7.5	1.75	> 7.5					0.18	68.2	38,584	430,092
1992	12	1,323,548	193,201	2,437,645	1,934,872	502,773	3.12	1.56	7.5	1.75	> 7.5					0.25	67.9	38,728	430,800
1993	1	1,500,895	193,445	2,879,351	2,305,392	573,959	3.12	1.72	7.5	1.90	> 7.5					8.79	56.9	38,872	431,508
1993	2	1,422,042	193,583	2,766,422	2,185,585	580,837	3.12	1.72	7.5	1.90	> 7.5					5.07	58.0	39,016	432,216
1993	3	1,315,540	193,650	2,667,502	2,013,907	653,595	3.12	1.72	7.5	1.90	> 7.5					1.17	61.3	39,160	432,924
1993	4	1,296,978	193,836	2,626,791	1,992,550	634,241	3.12	1.72	7.5	1.90	> 7.5					0.00	63.8	39,304	433,632
1993	5	1,567,105	193,836	3,042,219	2,428,078	614,142	3.12	1.72	7.5	1.90	> 7.5					0.00	66.0	39,448	434,340
1993	6	1,570,903	194,002	2,978,918	2,450,687	528,231	3.12	1.72	7.5	1.90	> 7.5					0.42	68.6	39,592	435,048
1993	7	2,875,050	194,432	5,443,963	4,625,206	818,757	3.12	1.72	7.5	1.90	> 7.5					0.03	69.8	39,736	435,756
1993	8	2,279,991	194,595	4,429,024	3,830,402	598,622	3.12	1.72	7.5	1.90	> 7.5					0.00	70.2	39,880	436,464
1993	9	2,392,302	194,798	4,732,633	4,115,684	616,948		1.72	7.5	1.90	> 7.5					0.00		40,024	437,172
1993		2,365,295	-		4,084,670	665,451	3.12	1.72	7.5	1.90	> 7.5					0.21		40,168	437,880
1993	11	1,911,642			3,289,343	598,426		1.72	7.5		> 7.5					0.78		40,312	438,588
1993	12		-		1,986,787	452,858		1.72	7.5		> 7.5					0.75		40,456	-
1994	1	1,539,426			2,603,273	586,158		1.73	7.5		> 7.5					0.69		40,600	440,004
1994	2	,	•		2,498,745	587,826		1.73	7.5		> 7.5					2.94		40,744	440,712
1994	3	1,725,601	195,602	3,614,401	2,937,773	676,628	3.12	1.73	7.5		> 7.5					3.54		40,888	441,420
1994	4	1,551,679	195,611	3,272,739		641,924	3.12	1.73	7.5		> 7.5					0.93		41,032	•
1994	5	.,,	•	• •		603,289		1.73	7.5		> 7.5					0.00		41,176	•
1994	6	1,479,795	•			541,478		1.73	7.5		> 7.5					0.00		41,320	•
1994		2,473,739	•		4,377,101	797,197		1.73	7.5		> 7.5					0.03		41,464	444,252
1994	8	2,101,747	-		3,775,720	533,422		1.73	7.5		> 7.5					0.0		41,608	444,960
1994	9		•		4,438,990	611,057		1.73	7.5		> 7.5					0.00		41,752	
1994	10	2,574,322	2 196,831			641,165		1.73	7.5		> 7.5					0.0		41,896	
1994		2,176,699	•			610,133		1.73			> 7.5					0.46		42,040	•
1994	12	1,549,75	-			578,975		1.73			> 7.5					0.80		42,184	=
1995	1	1,601,050	•		2,740,594	625,281		1.73			> 7.5					8.00		42,328	-
1995			•			560,378		1.73			> 7.5					1.93		42,472	-
1995	3	1,396,959	9 197,261	3,017,523	2,364,840	652,684	3.12	1.73	7.5	1.91	> 7.5					3.8	1 60.4	42,616	449,916

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YI	EAR	MONTH	SDUSET	SDACCT	SDTREV	SDTVREV	SDTFC	SDSC	SDP1	SDB1	SDP2	SDB2	SDP3	SDB3	SDP4	SDB4	SDPREC S	SDTEMP	SDHHI	SDNHH
	1995	4	1.337.217	197,307	2.068,823	1,610,277	458,546	3.12	1.73	7.5	1.91	> 7.5					0.96	61.5	42,760	450,624

1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	CON	S. CA	ATEGO	RIES	
YEAR	MONTH	SDULFRET	SDLLFRET	SDSCHSED	SDPLBORD	SDLITPI	SDTVPI	SDRADPI	SDSPKPI	SDNEWSPI	SDHOTLPI	SDEMGORD	SDNEWHPI	SDAUDPI	SDKITPI	SDLSPI	ED	PI I	RET C	<u>ORD</u>	M
1984	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	2	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	3	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1 .	0	1	0	0	0
1984	4	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	5	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	6	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	7	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	8	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	i	0	0	0
1984	9	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	10	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	11	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1984	12	0	0 .	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	2	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	3	0	0	0	0	1	1	1	1	1	0	0 .	0	0	0	1	0	1	0	0	0
1985	4	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	`0
1985	5	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	6	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	7	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	8	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	9	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	10	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	11	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1985	12	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	1	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	2	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	3	0	0	0	0	1	. 1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	4	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	5	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	6	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	7	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	8	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	, 9	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	10	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0

1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	CONS	S. CA	TEGO	ORIES	
YEAR	MONTH	SDULFRET	SDLLFRET	SDSCHSED	SDPLBORD	SDLITPI	SDTVPI	SDRADPI	SDSPKPI	SDNEWSPI	SDHOTLPI	SDEMGORD	SDNEWHPI	SDAUDPI	SDKITPI	SDLSPI	ED 1	PI F	RET C	ORD	M
1986	11	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1986	12	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0	1	0	0	0
1987	1	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1 .	0	1	0	0	0
1987	2	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	3	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	4	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	5	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	6	0	0	0	0	1	1	1	1	ı	0	1	0	0	0	1	0	1	0	0	0
1987	7	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	. 0
1987	8	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	9	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	10	0	0 .	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1987	11	0	0	0	0	1	1	1	1	1	0	1	0	0 .	0	1	0	1	0	0	0
1987	12	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	1	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	2	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	o
1988	3	0	0	0	0	1	1	1	1	1	0	1	0	0	0 -	1	0	1	0	0	0
1988	4	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	5	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	6	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	7	0	0	0	0	1	1	1	1	I	0	1	0	0	0	1	0	1	0	0	0
1988	8	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	9	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	10	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	11	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1988	12	0	0	0	0	1	1	1	1	1	0	. 1	0	0	0	1	0	1	0	0	0
1989	1	0	0	0	0	1	. 1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1989	2	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	i	0	0	0
1989		0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	ı	0	0	0
1989		0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	. 0	1	0	0	0
1989	5	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1989		0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1989	7	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1989	8	0	0	0	0	1	1	1	11	1	0	11	00	0	0	1	0	1	0	0	0

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1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	CON	S. C.	ATEG	ORIES	,
YEAR	MONTH	SDULFRET	SDLLFRET	SDSCHSED	SDPLBORD	SDLITPI	SDTVPI	SDRADPI	SDSPKPI	SDNEWSPI	SDHOTLPI	SDEMGORD	SDNEWHPI	SDAUDPI	SDKITPI	SDLSPI	ED	ΡI	RET (ORD	M
1989	9	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	l	0	0	0
1989	10	0	0	0	0	. 1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1989	11	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1 .	0	1	0	0	0
1989	12	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1990	1	0	0	0	0	1	1	1	1	1	0	1	0	. 0	0	1	0	1	0	0	0
1990	2	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1990	3	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1990	4	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1990	5	0	0	0	0	1	1	1	1	1	0	1	0	0	0	1	0	1	0	0	0
1990	6	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0
1990	7	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	ı	0	0	0
1990	8	0	0 .	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0
1990	9	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0
1990	10	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0
1990	11	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	0	1	0	0	0
1990	12	0	0	0	0	1	1	1	1	1	i	1	0	0	0	1	0	1	0	0	0
1991	1	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1	0
1991	2	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1	0
1991	3	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1	0
1991	4	0	0	0	0	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1	0
1991	5	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991	6	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991		1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991		1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991	9	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991	10	1	0	0	1	1	1	1	1	i	1	1	0	0	1	1	0	1	1	1	0
1991	11	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1991	12	1	0	0	1	1	1	1	1	1	1	1	0	0	1	1	0	1	1	1	0
1992	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992	2	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992			0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992	4	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992	. 5	1	0	0	1	1	1	1	1	1	1	I	0	1	1	i	0	1	1	1	0
1992		1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
														 		. 	····				

1	2	21	22		24	25	26				30		32	33	34	35			TEGO		
	MONTH	SDULFRET	SDLLFRET	SDSCHSED	SDPLBORD	SDLITPI	SDTVPI	SDRADPI	SDSPKPI	SDNEWSPI	SDHOTLPI	SDEMGORD	SDNEWHPI	SDAUDPI	SDKITPI	SDLSPI	ED_	PI F	RET O	RD	M
1992	7	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992	8	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1992	9	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1 .	0	1	1	1	0
1992	10	1	0	0	1	1	1	1	1	1	1	1	0	1	ì	1	0	1	1	1	0
1992	11	1	0	0	1	1	1	1	1	1	1	1	0	1	t	1	0	1	1	1	0
1992	12	1	0	0	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0
1993	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	2	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	3	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	4	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	ì	1	1	0
1993	5	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	6	1	1 .	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	7	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1993	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1993	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1993	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	i	Ò
1993	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.	1	0
1993	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	i	1	1	1	1	0
1994	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	l	1	1	0
1994	4	1	1	1	1	. 1	1	. 1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	6	1	i	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1994	7	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1994	8	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
1994	9	1	1	1	1	1	٠ 1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1994	12	1	1	1	1	ì	1	1	1	1	1	1	1	1	1	1	- 1	1	1	1	0
1995	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	ì	1	0
1995	2	1	1	1	1	1	1	1	ı	1	1	1	1	1	1	1	1	1	1	1	0
1995	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
1995	4	1	.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0

Denver Residential Water --- Unit: 1,000 gallons Conversions made to TotUse, NumAcct & TotRev

					Con	version	Sillac	16 10 1	OLUS	e, Mui	IIACCI		JIKEV			····			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	DWUSET	DWACCT	DWTREV	DWTVREV	DWTFC	DWSC	DWP1	DWB1	DWP2	DWB2	DWP3	DWB3	DWP4	DWB4	DWPREC	DWTEMP	DWHHI	DWNHH
1980	5	404,791	26,936	338,482	275,182	63,300	2.35	0.68	15	0.58	35					2.73	57.1	15,826	211,546
1980	6	635,004	27,025	472,349	408,840	63,509	2.35	0.68	15	0.58	35					0.09	71.9	15,906	211,541
1980	7	1,040,776	27,080	707,908	644,270	63,638	2.35	0.68	15	0.58	35					2.93	76.4	15,986	211,536
1980	8	1,038,650	27,194	707,114	643,208	63,906	2.35	0.68	15	0.58	35					1.65	73.2	16,066	211,531
1980	9	779,463	27,317	557,259	493,064	64,195	2.35	0.68	15	0.58	35					0.63	65.8	16,146	211,526
1980	10	616,863	27,540	463,809	399,090	64,719	2.35	0.68	15	0.58	35					0.10	52.4	16,226	211,521
1980	11	305,430	27,622	272,604	207,692	64,912	2.35	0.68	15	0.58	35					0.66	41.9	16,306	211,516
1980	12	237,636		226,753	161,592	65,161	2.35	0.68	15	0.58	35					0.10	41.2	16,386	211,511
1981	1	222,579	26,817	214,374	151,354	63,020	2.35	0.68	15	0.58	35					0.29	37.3	16,466	211,506
1981	2	211,562	26,867	206,999	143,862	63,137	2.35	0.68	15	0.58						0.35	36.2	16,546	211,501
1981	3	192,688	26,921	194,292	131,028	63,264	2.35	0.68	15	0.58	35					2.27	41.2	16,626	211,496
1981	4	238,990	26,991	225,942	162,513	63,429	2.35	0.68	15	0.58	35					1.01	56.4	16,706	211,491
1981	5	442,741	27,046	360,917	297,358	63,558	2.35	0.68	15							3.76	57.1	16,786	211,486 .
1981	6	573,467	27,108	436,976	373,273	63,704	2.35	0.68	15							0.63	70.4	16,866	211,481
1981	7	853,150	27,193	599,520	535,617	63,904	2.35	0.68	15	0.58	35					0.90	75.9	16,946	211,476
1981	8	859,592	27,312	603,715	539,531	64,183	2.35	0.68	15	0.58	35					1.16	72.0	17,026	211,471
1981	9	691,691	27,384	506,609	442,256	64,352	2.35	0.68	15	0.58	35					0.35	68.2	17,106	211,466
1981	10	576,349	27,445	439,945	375,450	64,496	2.35	0.68	15	0.58	35					0.79	52.6	17,186	211,461
1981	11	285,624	27,506	258,863	194,224	64,639	2.35	0.68	15	0.58	35					0.42	45.9	17,266	211,456
1981	12	226,589	27,627	219,004	154,081	64,923	2.35	0.68	3 15	0.58	35					0.66	35.8	17,346	211,451
1982	1	200,959	27,684	201,710	136,652	65,057	2.35	0.68	3 15	0.58	35					0.32	30.3	17,426	211,446
1982	2	190,259	27,733	214,284	140,791	73,492	2.65	0.74	15	0.60	35					0.09	32.0	17,506	211,441
1982	3	225,014	27,749	240,045	166,510	73,535	2.65	0.74	1 15	0.60	35					0.18	41.1	17,586	211,436
1982	. 4	307,086	27,782	300,866	227,244	73,622	2.65	0.74	15	0.60	35					0.34	47.4	17,666	211,431
1982	. 5	505,141	27,804	435,154	361,473	73,681	2.65	0.74	1 15	0.60	35					3.48	55.1	17,746	211,426
1982	. 6	563,202	27,883	470,365	396,476	73,890	2.65	0.74	15							2.26		17,826	211,421
1982	7	764,298	27,910	591,151	517,190	73,962	2.65	0.74	1 15	0.60	35					0.92	72.7	17,906	211,416
1982	8	806,433	28,048	617,088	542,760	74,327	2.65	0.74	1 15	0.60	35	i				1.16	73.1	17,986	211,411
1982	9	631,885	28,092	512,568	438,124	74,444	2.65	0.74	1 15							1.38	61.7	18,066	211,406
1982	. 10	480,464	28,198	422,219	347,494	74,725			1 15			i				1.51		18,146	211,401
1982	. 11	232,595	28,225	246,916	172,120	74,796	2.65	0.74	1 15	0.60	35	;				0.47	35.7	18,226	211,396
1982	. 12	216,230	28,297	234,997	160,010	74,987	2.65	0.74	1 15	0.60	35					2.34	30.9	18,306	211,391

1	2	3	4	5	6	7	-	_								17	18	19	20
YEAR	MONTH	DWUSET	DWACCT	DWTREV	DWTVREV	DWTFC	DWSC	DWP1	DWB1	DWP2	DWB2	DWP3	DWB3	DWP4	DWB4	DWPREC	DWTEMP	DWHHI	DWNHH
1983	1	203,435	28,390	225,775	150,542	75,234	2.65	0.74	15	0.60	35					0.15	31.9	18,386	211,386
1983	2	191,315	28,560	217,257	141,573	75,684	2.65	0.74	15	0.60	35					0.07	36.6	18,466	211,381
1983	3	191,534	28,639	217,628	141,735	75,893	2.65	0.74	15	0.60	35					4.56	36.2	18,546	211,376
1983	4	210,307	28,806	231,963	155,627	76,336	2.65	0.74	15	0.60	35					2.10	41.0	18,626	211,371
1983	5	295,455	28,894	295,205	218,636	76,569	2.65	0.74	15	0.60	35				,	3.62	51.4	18,706	211,366
1983	6	385,802	29,133	362,696	285,493	77,202	2.65	0.74	15	0.60	35					2.65	62.8	18,786	211,361
1983	7	675,787	29,258	544,448	466,914	77,534	2.65	0.74	15	0.60	35					1.75	73.3	18,866	211,356
1983	8	769,552	29,438	601,561	523,551	78,011	2.65	0.74	15	0.60	35					1.51	74.4	18,946	211,351
1983	9	727,095	29,569	576,710	498,352	78,358	2.65	0.74	15	0.60	35					0.13	64.9	19,026	211,346
1983	10	595,959	29,700	498,650	419,945	78,705	2.65	0.74	15	0.60	35					0.39	52.7	19,106	211,341
1983	11	311,898	29,780	309,722	230,805	78,917	2.65	0.74	15	0.60	35					2.63	37.0	19,186	211,336
1983	12	251,655	29,887	265,425	186,224	79,201	2.65	0.74	15	0.60	35					0.63	17.5	19,266	211,331
1984	1	223,648	29,931	244,816	165,499	79,31 <i>7</i>	2.65	0.74	15	0.60	35					0.18	27.3	19,346	211,326
1984	2	214,098	29,970	237,853	158,432	79,421	2.65	0.74	15	0.60	35					0.81	34.1	19,426	211,321
1984	3	199,110	30,005	226,855	147,341	79,513	2.65	0.74	15	0.60	35					1.19	37.2	19,506	211,316
1984	4	216,729	30,149	240,274	160,379	79,895	2.65	0.74	15	0.60	35					2.42	42.3	19,586	211,311
1984	5	423,238	30,196	393,215	313,196	80,019	2.65	0.74	15	0.60	35					0.65	60.0	19,666	211,306
1984	6	601,750	30,371	505,312	424,829	80,483	2.65	0.74	15	0.60	35					1.26	66.5	19,746	211,301
1984	7	881,997	30,400	673,598	593,038	80,560	2.65	0.74	15	0.60	35					2.11	74.9	19,826	211,296
1984	8	880,967	30,583	673,849	592,804	81,045	2.65	0.74	15	0.60	35					3.20	71.8	19,906	211,291
1984	9	646,507	30,628	533,387	452,223	81,164	2.65	0.74	15	0.60	35					0.47	60.7	19,986	211,286
1984	10	497,212	30,758	444,428	362,919	81,509	2.65	0.74	15	0.60	35					3.47	44.8	20,066	211,281
1984	11	260,206	30,787	274,138	192,552	81,586	2.65	0.74	15	0.60	35					0.27	39.7	20,146	211,276
1984	12	225,067	30,804	248,180	166,550	81,631	2.65	0.74	15	0.60	35					0.46	32.8	20,226	211,271
1985	1	223,899	30,821	247,361	165,685	81,676	2.65	0.74	15	0.60	35					0.68	25.6	20,306	211,266
1985	2	211,483	30,866	238,292	156,497	81,795	2.65	0.74	15	0.60	35					0.59	27.7	20,386	211,261
1985	3	217,094	30,881	242,484	160,649	81,835	2.65	0.74	15	0.60	35					0.69	40.8	20,466	211,256
1985	4	276,496	31,009	286,781	204,607	82,174	2.65	0.74	15	0.60	35					2.61	51.0	20,546	211,251
1985	5	492,735	31,034	443,053	360,812	82,240	2.65	0.74	15	0.60	35					1.33	60.0	20,626	211,246
1985	6	649,537	31,139	537,632	455,114	82,518	2.65	0.74	15	0.60	35					1.46	68.0	20,706	211,241
1985	7	886,577	31,171	680,008	597,405	82,603	2.65	0.74	15	0.60	35					3.71	73.0	20,786	211,236
1985	8	864,055	31,221	666,732	583,997	82,736	2.65	0.74	15	0.60	35					0.28	72.4	20,866	211,231
1985	; 9	703,499	31,262	570,594	487,749	82,844	2.65	0.74	15	0.60	35					2.33	58.8	20,946	211,226
1985	10	554,619	31,362	481,741	398,632	83,109	2.65	0.74	1 15	0.60	35					0.77	50.7	21,026	211,221
1985	11	271,852	2 31,376	284,317	201,170	83,146	2.65	0.74	1 15	0.60) 35					1.20	29.8	21,106	211,216

i	2	3		5		7								15	16	17	18	19	20
YEAR	MONTH	DWUSET	DWACCT	DWTREV	DWTVREV	DWTFC	DWSC	DWP1	DWB1	DWP2		DWP3	DWB3	DWP4	DWB4	DWPREC	DWTEMP	DWHHI	DWNHH
1985	12	236,786	31,493	258,678	175,221	83,456	2.65	0.74	15	0.60						0.66	29.4	21,186	211,211
1986	1	222,514	31,502	248,141	164,660	83,480	2.65	0.74	15	0.60	35					0.22	40.3	21,266	211,206
1986	2	229,639	31,486	253,370	169,932	83,438	2.65	0.74	15	0.60	35					0.65	36.1	21,346	211,201
1986	3	265,663	31,486	280,029	196,591	83,438	2.65	0.74	15	0.60	35					0.43	47.1	21,426	211,196
1986	4	336,225	31,521	349,148	265,618	83,531	2.65	0.74	15	0.60	35					2.59	49.6	21,506	211,191
1986	5	532,097	31,534	501,365	411,493	89,872	2.85	0.79	15	0.64	35					1.30	56.7	21,586	211,186
1986	6	622,140	31,691	559,793	469,474	90,319	2.85	0.79	15	0.64	35					1.07	70.3	21,666	211,181
1986	7	923,092	31,726	752,581	662,162	90,419	2.85	0.79	15	0.64	35					1.69	73.5	21,746	211,176
1986	8	961,178	31,869	777,686	686,859	90,827	2.85	0.79	15	0.64	35					0.53	72.2	21,826	211,171
1986	9	749,127	31,906	642,162	551,229	90,932	2.85	0.79	15	0.64	35					0.43	60.7	21,906	211,166
1986	10	591,822	32,005	541,991	450,777	91,214	2.85	0.79	15	0.64	35					1.80	49.3	21,986	211,161
1986	11	277,033	32,051	310,201	218,856	91,345	2.85	0.79	15	0.64	35					1.07	39.0	22,066	211,156
1986	12	252,335	32,038	290,653	199,345	91,308	2.85	0.79	15	0.64	35					0.31	31.0	22,146	211,151
1987	1	265,484	34,875	309,126	209,732	99,394	2.85	0.79	15	0.64	35					0.69	32.2	22,226	211,146
1987	2	255,778	38,835	312,744	202,065	110,680	2.85	0.79	15	0.64	35					1.21	36.1	22,306	211,141
1987	3	257,094	39,552	315,827	203,104	112,723	2.85	0.79	15	0.64	35					1.34	38.8	22,386	211,136
1987	4	302,787	40,508	366,761	251,313	115,448	2.85	0.79	15	0.64	35					1.03	51.9	22,466	211,131
1987	5	626,929	41,388	643,538	519,374	124,164	3.00	0.83	15	0.67	35					4.64	59.7	22,546	211,126
1987	6	862,568	42,708	808,543	680,419	128,124	3.00	0.83	15	0.67	35					3.50	69.2	22,626	211,121
1987	7	1,144,888	43,684	1,002,969	871,917	131,052	3.00	0.83	15	0.67	35					0.76	74.4	22,706	211,116
1987	8	1,175,407	44,739	1,029,113	894,896	134,217	3.00	0.83	3 15	0.67	7 35	;				2.00	70.7	22,786	211,111
1987	9	1,029,664	45,510	935,629	799,099	136,530	3.00	0.83	3 15	0.67	7 35	i				0.70	62.4	22,866	211,106
1987	10	840,149	46,538	814,205	674,591	139,614	3.00	0.83	3 15	0.67	7 35	i				1.24	51.7	22,946	211,101
1987	11	480,029	47,360	540,504	398,424	142,080	3.00	0.83	3 15	0.67	7 35	i				1.62	40.0	23,026	211,096
1987	12	367,400	47,445	447,277	304,942	142,335	3.00	0.83	3 15	0.67	7 35	i				1.30	28.4	23,106	211,091
1988	1	265,484	47,530	362,941	220,351	142,590	3.00	0.83	3 15	0.67	7 35	;				0.40	25.2	23,186	211,086
1988	2	255,778	47,615	355,141	212,296	142,845	3.00	0.83	3 15	0.67	7 35	i				0.60	34.1	23,266	211,081
1988	3	257,094	47,700	356,488	213,388	143,100	3.00	0.83	3 15	0.6	7 35	;				1.28	38.5	23,346	211,076
1988	4	302,787	47,785	394,668	251,313	143,355	3.00	0.83	3 15	0.6	7 35	i				0.65	50.3	23,426	211,071
1988	5	626,929	47,870	663,961	520,351	143,610	3.00	0.83	3 15	0.6	7 35	i				4.26	59.0	23,506	211,066
1988	6	862,568	47,955	836,877	693,012	143,865	3.00	0.83	3 1:	0.6	7 35	5				1.28	71.9	23,586	211,061
1988	3 7	1,144,888	48,040	1,026,491	882,371	144,120	3.00	0.83	3 15	0.6	7 35	5				2.19	74.2	23,666	211,056
1988	8 8	1,175,407	7 48,125	1,047,397	903,022	144,375	3.00	0.83	3 15	0.6	7 35	5				1.83	73.6	23,746	211,051
1988	3 9	1,029,664	48,210	950,209	805,579	144,630	3.00	0.83	3 15	0.6	7 35	5				0.90	62.3	23,826	211,046
1988	3 10	840,149	48,295	823,693	678,808	144,885	3.00	0.83	3 15	5 0.6	7 35	5				0.06	54.0	23,906	211,041

1	2	3		5		7	8	9				13	14	15	16	17		19	20
			DWACCT		DWTVREV							DWP3	DWB3	DWP4	DWB4		DWTEMP	DWHHI	DWNHH
1988	11	480,029	48,380	543,564	398,424	145,140	3.00	0.83								0.47		23,986	211,036
1988	12	390,575	48,465	469,572	324,177	145,395	3.00	0.83								1.04		24,066	211,031
1989	1	321,052	48,468	411,877	266,473	145,404	3.00	0.83								1.14		24,146	211,026
1989	2	315,365	48,862	408,339	261,753	146,586	3.00	0.83								0.66		24,226	211,021
1989	3	316,287	49,454	410,880	262,518	148,362	3.00	0.83								0.56		24,306	211,016
1989	4	399,963	50,438	483,283	331,969	151,314	3.00	0.83								1.00		24,386	211,011
1989	5	696,333	51,234	731,658	577,956	153,702	3.00	0.83								3.83		24,466	211,006
1989	6	880,415	52,392	872,795	715,619	157,176	3.00	0.83								2.04		24,546	211,001
1989	7	1,305,222	53,463	1,163,199	1,002,810	160,389	3.00	0.83								1.64		24,626	210,996
1989	8	1,405,165	54,757	1,237,148	1,072,877	164,271	3.00	0.83								1.28		24,706	210,991
1989	9	1,176,418	55,640	1,088,656	921,736	166,920	3.00	0.83								1.55		24,786	210,986
1989	10	931,249	56,593	929,539	759,760	169,779	3.00	0.83								0.81		24,866	210,981
1989	11	519,438	57,699	604,230	431,133	173,097	3.00	0.83	15							0.15		24,946	210,976
1989	12	429,739	58,462	532,069	356,683	175,386		0.83	15	0.67	35					0.81	27.3	25,026	210,971
1990	1	365,609	59,013	480,494	303,455	177,039	3.00	0.83	15	0.67	35					0.74	36.4	25,106	210,966
1990	2	357,187	59,728	475,649	296,465	179,184	3.00	0.83	15	0.67	35					0.55	33.3	25,186	210,961
1990	3	347,442	60,531	428,276	246,683	181,593	3.00	0.71	15	0.89	> 15					3.10	39.5	25,266	210,956
1990	4	388,272	62,008	461,697	275,673	186,024	3.00	0.71	15	0.89	> 15					1.01	49.1	25,346	210,951
1990	5	800,503	63,102	757,663	568,357	189,306	3.00	0.71	15	0.89	> 15					1.51	56.6	25,426	210,946
1990	6	1,173,843	64,719	1,064,136	869,979	194,157	3.00	0.71	1 15	0.89	> 15					0.21	72.6	25,506	210,941
1990	7	1,501,693	65,810	1,356,249	1,158,819	197,430	3.00	0.71	1 15	0.89	> 15					3.57	70.8	25,586	210,936
1990	8	1,411,053	67,513	1,276,091	1,073,552	202,539	3.00	0.71	1 15	0.89	> 15					1.96	71.3	25,666	210,931
1990	9	1,122,787	68,561	1,019,849	814,166	205,683	3.00	0.71	1 15	0.89	> 15					1.46	66.9	25,746	210,926
1990	10	906,342	70,101	853,805	643,502	210,303	3.00	0.71	1 15	0.89	> 15					1.03	52.3	25,826	210,921
1990	11	542,447	71,332	599,133	385,137	213,996	3.00	0.71	1 15	0.89	> 15	i				1.28	44.0	25,906	210,916
1990	12	474,584	72,417	554,205	336,954	217,251	3.00	0.71	l 15	0.89	> 15	;				0.27	24.7	25,986	210,911
1991	1	444,556	73,354	535,696	315,634	220,062	3.00	0.71	1 15	0.89	> 15	;				0.76	27.9	26,066	210,906
1991	2	441,253	74,508	536,814	313,290	223,524	3.00	0.71	l 15	0.89	> 15	i				0.08	40.3	26,146	210,901
1991						227,664										0.76		26,226	210,896
1991		565,004		•	•	234,570										1.94		26,306	210,891
1991		-		851,055	•											2.43		26,386	210,886
1991																2.20		26,466	210,881
1991		1,485,279	-		•	•										4.11		26,546	210,876
1991																3.69		26,626	210,871
1991		1,490,878	=													0.79		26,706	210,866

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR			DWACCT		DWTVREV	DWTFC	_	-									DWTEMP	DWHHI	DWNHH
1991	10	1,337,129	93,514	1,229,904	949,362	280,542						Dillo	DWDJ	Dilli	DWD	0.70	50.3	26,786	210,861
1991	11	852,429	95,507	891,746	605,225	286,521	3.00	0.71			> 15					2.67	34.7	26,866	210,856
1991	12	682,309	97,624	777,311	484,439	292,872		0.71			> 15					0.19	33.1	26,946	210,851
1992	1	588,620	99,202	715,526	417,920	297,606		0.71			> 15					1.16	31.8	27,026	210,846
1992	2	585,941	101,463	720,407	416,018	304,389										0.09	40.1	27,106	210,841
1992		630,122	103,453	757,746	447,387	310,359		0.71								3.44	43.0	27,186	210,836
1992		841,707	106,793	917,991	597,612	320,379										0.55	54.8	27,266	210,831
1992		1,519,800	108,707	1,405,179	1,079,058	326,121	3.00									1.09	60.6	27,346	210,826
1992	6		112,245	1,741,769	1,405,034	336,735	3.00	0.76	15	0.95	> 15					2.04	66.1	27,426	210,821
1992	7	2,138,085	114,024	2,048,284	1,706,212	342,072	3.00	0.76	15	0.95						2.19	70.5	27,506	210,816
1992	8	2,164,636	116,722	2,073,912	1,723,746	350,166	3.00	0.76	15	0.95	> 15					2.28	68.4	27,586	210,811
1992	9	2,003,240	117,418	1,920,690	1,568,436	352,254	3.00	0.76	15	0.95	> 15					0.00	65.2	27,666	210,806
1992	10	1,774,470	119,114	1,705,939	1,348,597	357,342	3.00	0.76	15	0.95	> 15					0.49	53.6	27,746	210,801
1992	11	1,096,830	119,320	1,191,550	833,590	357,960	3.00	0.76	15	0.95	> 15					1.49	33.9	27,826	210,796
1992	12	846,792	119,353	1,001,621	643,562	358,059	3.00	0.76	15	0.95	> 15					0.67	25.4	27,906	210,791
1993	1	714,187	119,342	900,808	542,782	358,026	3.00	0.76	15	0.95	> 15					0.24	27.3	27,986	210,786
1993	2	680,592	119,343	875,279	517,250	358,029	3.00	0.76	15	0.95	> 15					1.12	29.4	28,066	210,781
1993	3	708,024	119,342	896,124	538,098	358,026	3.00	0.76	15	0.95	> 15					0.88	42.5	28,146	210,776
1993	4	845,587	119,429	1,000,933	642,646	358,287	3.00	0.76	15	0.95	> 15					2.10	48.5	28,226	210,771
1993	5	1,434,747	119,494	1,448,889	1,090,407	358,482	3.00	0.76	15	0.95	> 15					0.91	58.8	28,306	210,766
1993	6	1,922,617	119,615	2,063,850	1,705,005	358,845	3.00	0.83	11	1.01	> 11					1.70	66.4	28,386	210,761
1993	7	2,662,836	119,683	2,811,541	2,452,492	359,049	3.00	0.83	11	1.01	> 11					0.88	73.0	28,466	210,756
1993	8	2,635,993	119,789	2,784,537	2,425,170	359,367	3.00	0.83	11	1.01	> 11					0.64	70.0	28,546	210,751
1993	9	1,972,832	119,851	2,114,808	1,755,255	359,553	3.00	0.83	3 11	1.01	> 11					2.31	60.6	28,626	210,746
1993	10	1,506,366	119,897	1,643,725	1,284,034	359,691	3.00	0.83	3 11	1.01	> 11					2.22	49.1	28,706	210,741
1993	11	843,583	119,903	1,059,883	700,174	359,709	3.00	0.83	3 11	1.01	> 11					1.40	34.7	28,786	210,736
1993		747,442	119,909	980,104	620,377	359,727		0.83	3 11	1.01	> 11					0.43	34.1	28,866	210,731
1994	1	743,629	119,909	976,939	617,212	359,727	3.00	0.83	3 11	1.01	> 11					0.52	34.3	28,946	210,726
1994		•	•		•	360,498		0.83	3 11							0.88		29,026	210,721
1994	3	723,090	120,266	960,962	600,164	360,798	3.00	0.83	3 11	1.01						0.85	44.8	29,106	210,716
1994	4	,,,,,			659,624	360,987	3.00									1.92		29,186	210,711
1994																1.25		29,266	210,706
1994			-	2,618,335		401,115										1.00		29,346	210,701
1994			•			•										0.49		29,426	210,696
1994	1 8	3,147,242	120,581	3,912,946	3,511,412	401,535	3.33	3 1.00) 11	1.20) > 11					0.61	75.0	29,506	210,691

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	DWUSET	DWACCT	DWTREV	DWTVREV	DWTFC	DWSC	DWP1	DWB1	DWP2	DWB2	DWP3	DWB3	DWP4	DWB4	DWPREC	DWTEMP	DWHHI	DWNHH
1994	9	2,257,659	120,644	2,845,519	2,443,774	401,745	3.33	1.00	11	1.20	> 11					0.46	67.2	29,586	210,686
1994	10	1,417,850	120,707	1,837,819	1,435,865	401,954	3.33	1.00	11	1.20	> 11					1.40	52.0	29,666	210,681
1994	11	917,158	120,770	1,319,322	917,158	402,164	3.33	1.00	11	1.20	> 11					1.34	37.8	29,746	210,676
1994	12	664,360	120,833	1,066,733	664,360	402,374	3.33	1.00	11	1.20	> 11					0.30	35.8	29,826	210,671
1995	1	684,623	120,896	1,181,872	739,393	442,479	3.66	1.08	11	1.29	> 11					0.21	34.3	29,906	210,666
1995	2	714,163	120,959	1,214,005	771,296	442,710	3.66	1.08	11	1.29	> 11					0.88	38.2	29,986	210,661
1995	3	744,691	121,022	1,247,206	804,266	442,941	3.66	1.08	11	1.29	> 11					0.28	40.7	30,066	210,656
1995	4	750,881	121,085	1,254,122	810,951	443,171	3.66	1.08	11	1.29	> 11					2.44	44.0	30,146	210,651

1	2		22	23	24	25	26	27	28	29		31		33	34	35		CONS				
1980	MONTH 5	OWULFRET 0	DWSCHVED 1	0 O	DWWBORD 0	0 DWBILTEI	DWNEWSPI 0	0 0	DWTVPI 0	0 DWPOSTED	DWBUSBPI 0	0 0	DWHOTEPI 0	DWCDSORD 1	OWAUDPI 0	DWETPI 0	DWXERPI 0	<u>ED</u>	1 1	RET 0		<u>м</u>
1980	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0		0
1980	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0		0
1980	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0		0
1980	9	0	1	0	0	0	0	0	0	0	0	0	0	1	. 0	0	0	1	1	0		0
1980	10	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0		(
1980	11	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	(
1980	12	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	(
1981	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	
1981	2	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1981	3	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1981	4	0	1	. 0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1981	5	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1981	6	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	(
1981	7	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0) (
1981	8	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	* 0) (
1981	9	0	1	0	0	0	1	0	0	0	0	0	0	1	0 .	1	1	1	1	0	0) (
1981	10	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0)
1981	11	0	1	0	0	0	1	0	0 .	0	0	0	0	1	0	0	1	1	1	0	0) (
1981	12	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) 1
1982	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (
1982	2	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (
1982	3	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (
1982	4	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (
1982	5	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (
1982		0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0) (
1982		0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0) (
1982			0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0)
1982			1	0	0	0	1	0	0	0	0	0	0	1	0	1	1	1	1	0)
1982			1	0	0	0	1	0	0	0	0	0	0	1	0	0	1.,	1	1	0) (
1982			1	0	0	0	1	0	0	0	0	0	0	1	0	0	. 1	1	1	0) (
1982			1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0) (
1983		0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0		(
1983	2	. 0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0) (

1	2		22	23	24	25	26	27	28	29	30	31		33		35		CONS				
			DWSCHVED	DWPLBORD			DWNEWSPI		DWTVPI	DWPOSTED			DWHOTLPI				DWXERPI			RET (
1983	3	0		0	0	0	i	0	0	0	0	0	0	1	0	0	ı	1	1	0		0
1983	4	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0		0
1983	5	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	ì	1	0	-	C
1983	6	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0		C
1983	7	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0		0
1983	8	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0		(
1983	9	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	1	1	ì	0	0	(
1983	10		1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1983	11	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1983	12		1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	1	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	2	0	1	. 0	0	0	1	0	0	0	0	0	0	1	0	0	ì	1	1	0	0	(
1984	3	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	4	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	5	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	6	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	. 0	(
1984	7	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	(
1984	8	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	(
1984	9	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	1	1	1	0	0	-
1984	10	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	11	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1984	12	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	(
1985	1	0	1	0	0	0	1	0	0	1 .	0	0	0	1	0	0	1	1	1	0	0	(
1985	2	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	•
1985	3	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	(
1985	4	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	(
1985	5	0	1	0	0	0	-1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	
1985	6	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	-
1985	7	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	(
1985	8	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1,	0	ı	0	0	(
1985	9	0	1	0	0	0	1	0	0	1	0	0	0	1	0	1	1	1	1	0	0	(
1985	10	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	
1985	11	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	(
1985	12	. 0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	0	(

1	_	21		23	24	25	26	27	28	29		31		33	34	35		CONS				
			DWSCHVED				DWNEWSPI		DWTVPI	DWPOSTED	DWBUSBPI			DWCDSORD		DWETPI	DWXERPI			RET (
1986		0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	-	0
1986		0	i	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0		0
1986		0	1	0	0	0	1	0	0	1	0	0	0		0	0				0		0
1986		0	1	0	0	0	1	0	0	1	0	U	0		0	0	1	1	1	0		0
1986		0	1	0	0	0	i	0	0	l	0	0	0	1	0	0	l .	l o	1	0		0
1986		0	0	0	0	0	l .	0	0	0	0	0	0	ı	0	0	1	0	1	0		0
1986		0	0	0	0	0	1	0	0	. 0	0	0	0	3	0	l	1	0	1	0		0
1986		0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	0	1	0		0
1986		0	1	0	0	0	1	0	0	1	0	0	0	1	0	1	1	1	1	0		0
1986		0	1	0	0	0	1	0	0	1	0	0	0	i	0	0	1	1		0		0
1986		0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0	-	0
1986		0		. 0	0	0	1	0	0	1	0	0	0	1	0	0	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0	_	0
1987 1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	;	n		0
1987		0	0	0	0	0	1	0	0	0	٥	0	0	1	1	0	i	0	i	0		0
1987		0	0	0	0	0	,	0	0	0	0	0	0	1	1	1	,	0	1	0		0
1987		0	n	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	n	0	1	1	0	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	•	0	1	1	1	0		0
1987		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0		0
1988		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0	_	0
1988		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0		0
1988		0	1	0	0	0	4	0	0	1	0	0	0	ı	1	0	1	1	1	0	0	0
1988		0	1	0	0	0	1	0	0	ı	0	0	0	1	1	0	1	1	1	0	0	0
1988		0	1	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	1	0	0	0
1988		0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1.	0	i	0	0	0
1988		0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0
1988		0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	ı	0	0	0
198	8 9	0	1	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1	1	0	0	0
198	8 10	0	1	0	0	0	1	0	0	1	0	0_	0	1	1	0	l	1	1_	0	0	0

YEAR MO 1988 1988 1989 1989	11 12 1 2 3 4	0 0 0 0 0	l l l	0 0	0	DWBILLPI 0	DWNEWSPI	DWRADPI	DWTVPI	DWPOSTED	DWDIICDDI	DWDIICDI	DWHOTI PI	DWCDSORD D	INVALIDADI.	DWETPI	DWXERPI	ED	PΙ	DET	OPD	
1988 1989 1989	12 1 2	0 0	1 1	0		11		^														
1989 1989	1 2	0	1				1	0	0	1	0	0	0	1	1	0	1	1	1	0		0
1989	2		1	^	0	0	-	_	·	i	0	0	0	1	1	0	1	1	ı	0	_	0
		U		0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0		C
1989	3 4	_	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	-	C
	4	0	l	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	C
1989		0	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	C
1989	5	0	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0
1989	6	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	1	0	1	0	0	C
1989	7	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0
1989	8	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	C
1989	9	0	1	0	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	C
1989	10	0	1	. 0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	C
1989	11	0	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	C
1989	12	0	1	0	1	1	1	0	0	0	0	0	0	1	1	0	1	1	1	0	0	C
1990	1	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1	0	(
1990	2	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1	٠٠٥	(
1990	3	1	1	0	1	1	1	1	0	0	1	0	0	1	1 .	0	1	1	1	1	0	(
1990	4	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1	0	(
1990	5	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1	0	(
1990	6	1	0	0	1	1	1	1	0	0	1	0	0	1	1	0	1	0	1	1		(
1990	7	1	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	0	1	1		(
1990	8	1	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	0	1	1		Ċ
1990	9	1	1	0	i	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1		Ċ
1990	10	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1		Ċ
1990	11	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1		(
1990	12	1	1	0	1	1	1	1	0	0	1	0	0	1	1	0	1	1	1	1		(
1991	1	1	1	0	1		1	1	0	0	1	0	1	1	1	0	1	1	1	1		(
1991	2	1	1	0	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1		
1991	3	1	1	0	1	1	1	1	0	0	1	0	1	1	1	0	1		1	ı		(
1991	4	1	1	0	1	1	1	1	0	0	1	0	1	1	1		1		1	1		
1991	5	1	1	0	1	1	1	1	0	0	1	0	1	1		0	<u>.</u> 1	1	1	1		(
1991	5 6	1	0	0	1	-	-	1	0	0	1	0	1	1	1	0	1	1	1	1		(
1991	-	1		-	1	1	1	1	0	U	1	0	1	1	1	0	1	0	1	I .		(
1991	7 8	1	0	0	1	1	ı	1	0	0	l	0	1	1	1	1	1	0	1	1		(

1	2	21	22	23	24	25	26	27	28	29		31			34	35		CONS				
		DWULFRET		DWPLBORD	DWWBORD		DWNEWSPI	DWRADPI	DWTVPI		DWBUSBPI			DWCDSORD D						RET		
1991	9	1	1	0	1	1	1	1	0	0	1	0	1	1	1	1	1	1		1) (
1991	10	1	1	0	1	1	1	1	0	0	1	0	1	1	1	0	1	1	_	1)
1991	11	1	1	0	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1)
1991	12	1	1	0	1	1	l	1	0	0	1	0	1	1	1	0	1	1	l	1	-)
1992	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	ļ
1992	2	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	I	l
1992	3	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	ĵ	l
1992	4	1	1	1	I	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	l
1992	5	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	. 1	l
1992	6	1	0	1	1	1	1	1	0	0	1	0	1	1	1	0	1	0	1	1	1	l
1992	7	1	0	1	1	1	1	1	0	0	1	0	1	1	1	1	1	0	1	1	1	l
1992	8	1	0	· 1	1	1	1	1	0	0	1	0	1	1	1	1	1	0	1	1	ſ	l
1992	9	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	l
1992	10	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	l
1992	11	1	1	i	1	1	i	1	0	0	1	0	1	1	1	0	1	1	1	1	1	ł
1992	12	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	l
1993	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1 .	0	0	1	1	0	. !	i
1993	2	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	0	. !	l
1993	3	1	1	1	1	ı	1	1	0	0	1	0	1	1	1	0	0	1	1	0	. 1	l
1993	4	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	0	. !	l
1993	5	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	0	, 1	1
1993	6	1	0	ı	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	0		i
1993	7		0	1	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0		ı
1993	8		0	1	1	1	1	1	0	0	1	0	ı	1	1	1	0	0	-	0	, ,	1
1993			1	1	1	1	1	1	0	0	1	0	1	1	1	1	0	0	-	0		- 1
1993			1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	1		0		I
1993			1	1	1	1	1	1	0	0	1	0	1	- 1	1	0	0	1	1	0		1
1993			1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	0		1
1994		0	0	1	1	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0		1
1994			0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0		1
1994			0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0		ı İ
1994		0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0		1
1994		0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	1	1	0		1
1994		-	0	1	0	1	1	1	1	0	1	0	1	. 1	1	0	0	-	1			ı 1

1	2	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	CONS	. CA	TEG	ORII	ES
YEAR	MONTH I	OWULFRET	DWSCHVED	DWPLBORD	DWWBORD	DWBILLPI	DWNEWSPI	DWRADPI	DWTVPI	DWPOSTED	DWBUSBPI	DWBUSPI	DWHOTLPI	DWCDSORD	DWAUDPI	DWETPI	DWXERPI	ED	PI I	RET (ORD	М
1994	7	0	0	1	0	1	1	1	1	0	1	0	1	1	1	1	0	0	1	0	1	0
1994	8	0	0	1	0	1	1	1	1	0	1	0	1	1	1	1	0	0	1	0	1	0
1994	9	0	0	1	0	1	1	1	1	0	1	0	1	1	1	1	0	0	1	0	1	0
1994	10	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1994	11	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1994	12	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1995	1	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1995	2	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1995	3	0	0	1	0	1	1	1	1	0	1	0	1	1	1	0	0	0	1	0	1	0
1995	4	0	0	1	0	1	1	1	1	0	11	0	1	1	1	0	0	0	1	0	1	0

Broomfield Residential Water --- Unit: 1,000 gallons Conversions made to TotUse, NumAcct & TotRev

						0111011	10115	Haac	10 101	030, 1	umace		OLICCY						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	BRUSET	BRACCT	BRTREV	BRTVREV	BRTFC	BRSC	BRP1	BRBI	BRP2	BRB2	BRP3	BRB3	BRP4	BRB4	BRPREC	BRTEMP	BRHHI	BRNHH
1980	2	34,654	4,885	36,783	29,456	7,328	1.50	0.85	None							0.80	36.5	23,395	6,883
1980	3	30,569	4,901	33,335	25,984	7,352	1.50	0.85	None							1.18	38.9	23,526	6,898
1980	4	30,241	4,932	33,102	25,704	7,398	1.50	0.85	None							2.17	47.7	23,657	6,913
1980	5	55,835	4,936	54,864	47,460	7,404	1.50	0.85	None							2.48	55.6	23,788	6,928
1980	6	99,022	4,972	91,627	84,169	7,458	1.50	0.85	None							0.32	71.7	23,919	6,943
1980	7	127,482	4,986	155,828	146,604	9,224	1.85	1.15	None							1.50	74.7	24,050	6,958
1980	8	123,651	5,015	151,476	142,198	9,278	1.85	1.15	None							0.92	71.9	24,181	6,973
1980	9	96,121	5,025	119,835	110,539	9,296	1.85	1.15	None							1.18	65.7	24,312	6,988
1980	10	66,386	5,041	85,670	76,344	9,326	1.85	1.15	None							0.60	52.6	24,443	7,003
1980	11	43,056	5,057	58,870	49,514	9,355	1.85	1.15	None							1.14	43.8	24,574	7,018
1980	12	36,169	5,082	50,996	41,594	9,402	1.85	1.15	None							0.17	44.1	24,705	7,033
1981	1	36,705	5,098	51,642	42,211	9,431	1.85	1.15	None							0.19	39.0	24,836	7,048
1981	2	33,394	5,114	47,864	38,403	9,461	1.85	1.15	None							0.37	39.3	24,967	7,063
1981	3	31,800	5,119	46,040	36,569	9,470	1.85	1.15	None							2.30	42.2	25,098	7,078
1981	4	38,675	5,124	53,955	44,476	9,479	1.85	1.15	None							1.16	56.7	25,229	7,093
1981	5	53,011	5,133	70,459	60,963	9,496	1.85	1.15	None							4.47	55.1	25,360	7,108
1981	6	62,951	5,146	81,913	72,393	9,520		1.15	None							1.75	69.1	25,491	7,123
1981	7	86,380	5,164	108,890	99,337	9,553		1.15	None							1.97	71.7	25,622	7,138
1981	8	95,664	5,174	119,585	110,013	9,572		1.15	None							1.20	68.7	25,753	7,153
1981	9	79,154	5,184	100,618	91,027	9,590	1.85	1.15	None							1.45	64.5	25,884	7,168
1981	10	61,112	5,192	79,883	70,278	9,605	1.85	1.15	None							1.28	50.7	26,015	7,183
1981	11	40,611	5,197	56,317	46,702	9,614	1.85	1.15	None							0.21	46.0	26,146	7,198
1981	12	33,848	5,202	48,549	38,925	9,624	1.85	1.15	None							0.55	46.9	26,277	7,213
1982	1	33,362	5,202	47,990	38,366	. 9,624	1.85	1.15	None							0.02	33.7	26,408	7,228
1982	2	33,426	5,205	56,426	46,796	9,629	1.85	1.40	None							0.29	35.5	26,539	7,243
1982	3	39,956	5,205	65,568	55,938	9,629	1.85	1.40	None							0.61	43.9	26,670	7,258
1982	4	54,099	5,212	85,381	75,739	9,642	1.85	1.40	None							0.33	50.1	26,801	7,273
1982		67,543	5,211	104,201	94,560	•	1.85	1.40	None							4.65	55.9	26,932	7,288
1982		71,802		110,176				1.40								1.71	62.3	27,063	7,303
1982		84,106		127,401	117,748	9,653	1.85	1.40								3.45	71.8	27,194	7,318
1982	8	86,572	5,223	130,863	121,200	9,663	1.85	1.40	None							2.72	72.6	27,325	7,333

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	BRUSET	BRACCT					BRP1		BRP2	BRB2	BRP3	BRB3	BRP4	BRB4	BRPREC	BRTEMP	BRHHI	BRNHH
1982	9	68,243	5,228	105,212	95,540	9,672	1.85	1.40	None				DICOS	Did 1	DRDT	4.36	61.4	27,456	7,348
1982	10	49,182	5,240	78,549	68,855	9,694	1.85	1.40	None							1.43	50.5	27,587	7,363
1982	11	35,723	5,241	59,707	50,012	9,696	1.85	1.40	None							0.45	39.3	27,718	7,378
1982	12	33,314	5,247	56,347	46,640	9,707	1.85	1.40	None							1.52	35.5	27,849	7,393
1983	1	33,414	5,248	56,488	46,779	9,709	1.85	1.40	None							0.07	35.1	27,980	7,408
1983	2	33,215	5,272	56,254	46,500	9,753	1.85	1.40	None							0.23	39.5	28,111	7,423
1983	3	33,564	5,272	56,743	46,990	9,753	1.85	1.40	None							4.60	38.7	28,242	7,438
1983	4	35,933	5,295	60,101	50,306	9,796	1.85	1.40	None							2.88	43.5	28,373	7,453
1983	5	41,167	5,300	67,439	57,634	9,805	1.85	1.40	None							5.54	53.1	28,504	7,468
1983	6	56,083	5,312	88,343	78,516	9,827	1.85	1.40	None							2.55	62.6	28,635	7,483
1983	7	78,447	5,316	119,660	109,826	9,835	1.85	1.40	None							2.84	72.4	28,766	7,498
1983	8	83,042	5,324	126,108	116,259	9,849	1.85	1.40	None							0.78	74.8	28,897	7,513
1983	9	76,266	5,327	116,627	106,772	9,855	1.85	1.40	None							0.38	65.4	29,028	7,528
1983	10	62,074	5,344	96,789	86,903	9,886	1.85	1.40	None							0.30	53.5	29,159	7,543
1983	11	44,299	5,344	71,904	62,018	9,886	1.85	1.40	None							3.46	40.5	29,290	7,558
1983	12	37,562	5,375	64,409	54,465	9,944	1.85	1.40	None							0.88	20.7	29,421	7,573
1984	1	34,277	5,381	61,809	49,702	12,107	2.25	1.45	None							0.55	29.8	29,552	7,588
1984	2	32,760	5,422	59,702	47,502	12,200	2.25	1.45	None							0.80	35.8	29,683	7,603
1984	3	34,556	5,424	62,309	50,105	12,204	2.25	1.45	None							2.66	40.1	29,814	7,618
1984	4	38,426	5,455	67,991	55,718	12,274	2.25	1.45	None							2.29	43.8	29,945	7,633
1984	5	55,206	5,459	92,331	80,048		2.25	1.45	None							0.45	60.4	30,076	7,648
1984		83,456	5,496	133,376	121,010	-		1.45	None							1.85	65.6	30,207	7,663
1984		105,230	5,500	164,959	152,584			1.45	None							1.67	73.5	30,338	7,678
1984		95,709	5,549	151,263	138,777			1.45								2.57	71.5	30,469	7,693
1984		73,159	5,552	118,572	106,080			1.45								1.01	61.0	30,600	7,708
1984		54,377	5,569	91,376	78,846			1.45								4.25	45.4	30,731	7,723
1984		36,909	5,574	66,059	•			1.45								0.01	40.8	30,862	7,738
1984		35,626	5,583	64,219	51,657			1.45								0.43	33.9	30,993	7,753
1985		38,802	5,586	68,831	56,263			1.45								0.99	26.8	31,124	7,768
1985		35,714	5,593	64,370	51,785			1.45								0.89	29.5	31,255	7,783
1985		36,691	5,596	65,792	53,201		2.25	1.45								1.43	41.6	31,386	7,798
1985		46,103	5,609	79,469	66,849	•		1.45								1.82	52.0	31,517	7,813
1985		68,469	5,614	111,911	99,279			1.45								1.37	59.7	31,648	7,828
1985	6	93,968	5,629	148,918	136,253	12,665	2.25	1.45	None							1.91	68.6	31,779	7,843

									10			12	1.4	1.5	16		10	10	
Vr.in	2 MONTH	3 BRUSET	4 BRACCT	5 BRTREV	6 DDTVDEV	7 DDTEC		9 BRP1	10	11 BRP2	12	13	14 BRB3	15 BRP4	16 BRB4	17 BRPREC	18 BRTEMP	19 BRHHI	20 DDNIUU
1985	MONTH 7	108,138	5,637	169,483	156,799	12,683	2.25	1.45	BRB1 None	DKP2	BRB2	BRP3	DKD3	DKF4	DKD4	1.99	72.2	31,910	7,858
1985	8	103,259	5,645	162,426	149,725	12,701	2.25	1.45								0.03	72.2	32,041	7,838 7,873
1985	9	88,941	5,644	141,663	128,964	12,699	2.25	1.45								2.86	59.2	32,172	7,888
1985	10	63,614	5,671	104,999	92,240	12,760	2.25	1.45	None							1.07	51.8	32,303	7,903
1985	11	38,369	5,672	68,396	55,634	12,762	2.25	1.45	None							1.95	31.1	32,434	7,903
1985	12	34,760	5,729	63,292	50,401	12,890	2.25	1.45	None							1.13	31.8	32,565	7,933
1986	1	38,485	5,729	72,103	58,496	13,606	2.38	1.52	None							0.09	43.5	32,696	7,948
1986	2	40,425	5,878	75,405	61,445	13,960		1.52	None							1.04	37.6	32,827	7,963
1986	3	50,168	5,881	90,223	76,255	13,967	2.38	1.52	None							0.61	48.8	32,958	7,978
1986	4	57,227	5,823	100,814	86,984	13,830		1.52	None							4.88	50.7	33,089	7,993
1986	5	47,953	5,831	86,736	72,888	13,849		1.52								2.62	56.9	33,220	8,008
1986	6	60,962	5,917	106,715	92,662	14,053		1.52								1.68	69.2	33,351	8,023
1986	7	80,986	5,921	137,161	123,099	14,062		1.52	None							1.94	71.6	33,482	8,038
1986	8	110,612	5,986	182,347	168,130	14,217	2.38	1.52	None							0.97	70.7	33,613	8,053
1986	9	115,501	5,996	189,801	175,561	14,241	2.38	1.52	None							1.15	59.3	33,744	8,068
1986	10	69,487	6,021	119,920	105,620	14,300	2.38	1.52	None							3.66	50.3	33,875	8,083
1986	11	43,004	6,023	79,671	65,366	14,305	2.38	1.52	None							2.37	40.7	34,006	8,098
1986	12	38,200	6,050	72,433	58,064	14,369	2.38	1.52	None							0.64	33.5	34,137	8,113
1987	1	37,415	6,057	76,370	60,986	15,385	2.54	1.63	None							1.17	34.3	34,268	8,128
1987	2	35,274	6,164	73,152	57,496	15,657	2.54	1.63	None							2.44	37.0	34,399	8,143
1987	3	37,729	6,167	77,162	61,497	15,664	2.54	1.63	None							2.42	39.8	34,530	8,158
1987	4	44,134	6,207	87,703	71,938	15,766	2.54	1.63	None							2.55	52.5	34,661	8,173
1987	5	66,175	6,213	123,645				1.63								2.12	59.0	34,792	8,188
1987		83,245	6,228	151,508	135,689			1.63								6.04	68.6	34,923	8,203
1987		106,248		189,011	173,184			1.63								1.26	72.7	35,054	8,218
1987		119,182		210,152				1.63								1.99	69.0	35,185	8,233
1987	9	104,244	6,269	185,840	•			1.63								1.13	61.7	35,316	8,248
1987		77,673	-	•	· ·			1.63								0.94	52.8	35,447	8,263
1987		48,759			•	•										1.79	41.0	35,578	8,278
1987		40,392	-	•	•	•										1.97	30.8	35,709	8,293
1988		40,017	•	•	•											0.40	28.9	35,840	8,308
1988		41,051	-	-	•											1.14	35.8	35,971	8,323
1988		39,499	•	-	-											2.53	40.9	36,102	8,338
1988	3 4	45,690	6,350	90,603	74,474	16,129	2.54	1.63	None							1.48	51.6	36,233	8,353

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	BRUSET	BRACCT	BRTREV	BRTVREV	BRTFC	BRSC	BRPI	BRB1	BRP2	BRB2	BRP3	BRB3	BRP4	BRB4	BRPREC	BRTEMP	BRHHI	BRNHH
1988	5	74,752	6,361	138,002	121,845	16,157	2.54	1.63	None							3.70	59.3	36,364	8,368
1988	6	96,127	6,372	172,872	156,687	16,185	2.54	1.63	None							0.70	70.9	36,495	8,383
1988	7	122,215	6,383	215,423	199,210	16,213	2.54	1.63	None							0.71	72.8	36,626	8,398
1988	8	132,326	6,394	231,932	215,691	16,241	2.54	1.63	None							1.33	71.9	36,757	8,413
1988	9	116,572	6,405	206,281	190,012	16,269	2.54	1.63	None							2.02	62.3	36,888	8,428
1988	10	90,169	6,416	163,272	146,975	16,297	2.54	1.63	None							0.03	54.8	37,019	8,443
1988	11	61,076	6,427	115,878	99,554	16,325	2.54	1.63	None							0.75	46.0	37,150	8,458
1988	12	49,039	6,438	96,286	79,934	16,353	2.54	1.63	None							2.16	32.8	37,281	8,473
1989	1	42,149	6,449	85,083	68,702	16,380	2.54	1.63	None							1.19	36.5	37,412	8,488
1989	2	42,648	6,460	85,924	69,515	16,408	2.54	1.63	None							1.27	24.1	37,543	8,503
1989	3	40,086	6,464	81,758	65,339	16,419	2.54	1.63	None							0.97	44.9	37,674	8,518
1989	4	48,380	6,478	95,314	78,859	16,454	2.54	1.63	None							1.95	51.2	37,805	8,533
1989	5	72,724	6,483	135,006	118,539	16,467	2.54	1.63	None							2.68	59.2	37,936	8,548
1989	6	89,841	6,494	162,936	146,441	16,495	2.54	1.63	None							2.93	64.3	38,067	8,563
1989	7	117,390	6,501	207,857	191,345	16,513	2.54	1.63	None							1.43	73.2	38,198	8,578
1989	8	142,940	6,475	249,438	232,991	16,447	2.54	1.63	None							1.78	72.1	38,329	8,593
1989	9	126,303	6,487	222,350	205,873	16,477	2.54	1.63	None							3.54	64.7	38,460	8,608
1989	10	81,940	6,516	150,112	133,561	16,551	2.54	1.63	None							1.40	54.4	38,591	8,623
1989	11	55,162	6,504	106,433	89,913	16,520	2.54	1.63	None							0.09	46.2	38,722	8,638
1989	12	32,002	6,675	69,118	52,163	16,955	2.54	1.63	None							1.54	30.2	38,853	8,653
1990	1	54,050	6,525	121,248	88,101	33,147	5.08	1.63	None							1.04	40.0	38,984	8,668
1990	2	29,739	6,536	84,638	50,259	34,379	5.26	1.69	None							1.32	33.8	39,115	8,683
1990	3	36,436	6,535	95,950	61,576	34,374	5.26	1.69	None							4.53	40.0	39,246	8,698
1990	4	49,016	6,539	117,232	82,837	34,395	5.26	1.69	None							2.16	48.0	39,377	8,713
1990	5	84,228	6,542	176,756	142,345	34,411	5.26	1.69	None							1.73	54.5	39,508	8,728
1990	6	107,615	6,569	216,422	181,869	34,553	5.26	1.69	None							0.39	70.0	39,639	8,743
1990	7	100,930	6,584	205,203	170,571	34,632	5.26	1.69	None							4.23	68.6	39,770	8,758
1990	8	97,242	6,602	199,066	164,339	34,727	5.26	1.69	None							1.13	68.8	39,901	8,773
1990	9	80,869	6,603	171,400	136,669	34,732	5.26	1.69	None							1.84	64.7	40,032	8,788
1990	10	58,550	6,624	133,792	98,950	34,842	5.26	1.69	None							0.96	53.7	40,163	8,803
1990	11	50,501	6,613	120,130	85,346	34,784	5.26	1.69	None							1.60	45.2	40,294	8,818
1990	12	45,114	6,641	111,174	76,243	34,932	5.26	1.69	None							0.75	27.5	40,425	8,833
1991	1	38,752	6,650	100,470	65,491	34,979	5.26	1.69	None							1.05	29.9	40,556	8,848
1991	2	40,082	6,656	106,952	70,543	36,408	5.47	1.76	None							0.15	40.9	40,687	8,863

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	BRUSET	BRACCT	BRTREV	BRTVREV	BRTFC	BRSC	BRP1	BRBI	BRP2	BRB2	BRP3	BRB3	BRP4	BRB4	BRPREC	BRTEMP	BRHHI	BRNHH
1991	3	52,299	6,672	128,541	92,045	36,496	5.47	1.76	None					-		0.43	42.8	40,818	8,878
1991	4	57,606	6,674	137,892	101,386	36,507	5.47	1.76	None							2.41	47.8	40,949	8,893
1991	5	62,190	6,686	146,026	109,454	36,572	5.47	1.76	None							2.90	58.2	41,080	8,908
1991	6	84,306	6,690	184,973	148,379	36,594	5.47	1.76	None							3.59	66.6	41,211	8,923
1991	7	73,832	6,750	166,866	129,943	36,923	5.47	1.76	None							3.11	70.5	41,342	8,938
1991	8	88,760	6,744	193,107	156,218	36,890	5.47	1.76	None							2.08	69.2	41,473	8,953
1991	9	103,528	6,774	219,263	182,209	37,054	5.47	1.76	None							1.21	61.7	41,604	8,968
1991	10	59,913	6,793	142,605	105,447	37,158	5.47	1.76	None							0.93	52.1	41,735	8,983
1991	11	40,711	6,816	108,934	71,650	37,284	5.47	1.76	None							3.30	36.8	41,866	8,998
1991	12	38,323	6,848	104,907	67,448	37,459	5.47	1.76	None							0.01	35.3	41,997	9,013
1992	1	41,109	6,864	109,897	72,351			1.76	None							1.08	30.7	42,128	9,028
1992	2	45,759	6,904	123,023	83,739			1.83	None							0.00	33.9	42,259	9,043
1992	3	60,646	6,920	150,357	110,982			1.83	None							4.77	42.7	42,390	9,058
1992	4	<i>7</i> 9,997	6,959	185,991	146,395			1.83	None							0.27	49.4	42,521	9,073
1992	5	99,114	6,982	221,106				1.83	None							1.71	58.3	42,652	9,088
1992		103,999	7,029	230,312				1.83	None							1.53	64.8	42,783	9,103
1992		122,603	7,068	264,580	· ·			1.83	None							1.53	69.9	42,914	9,118
1992		121,683	7,089	263,015	-			1.83	None							3.54	66.3	43,045	9,133
1992		99,886	7,107	223,229				1.83	None							0.00	60.3	43,176	9,148
1992		85,104	7,139	196,360												0.45	49.3	43,307	9,163
1992		48,736	7,157	129,909	·-											2.07	35.0	43,438	9,178
1992	12	44,784	7,211	122,984	81,954	41,031	5.69	1.83	None							0.48	32.1	43,569	9,193
1993	1	48,521	7,242	129,999	·-	-										0.15	28.6	43,700	9,208
1993		43,004	7,273	123,466	•	-		1.88	None							0.87	29.9	43,831	9,223
1993		43,511	7,302	124,589												1.68	41.7	43,962	9,238
1993		67,981	7,338	170,804	•											1.50	47.2	44,093	9,253
1993		107,519	7,359	245,259	•	43,124										1.02	57.0	44,224	9,268
1993		119,965	7,439	269,126	-	-										2.43	64.0	44,355	9,283
1993		143,946	7,496	314,545												1.23	70.3	44,486	9,298
1993		153,291	7,546		-											0.66	67.2	44,617	9,313
1993		96,871	7,583	226,554												1.89	58.0	44,748	9,328
1993		68,174	7,665	173,084	*											1.77	47.1	44,879	9,343
1993		57,593	7,679	153,273	-											1.56	34.2	45,010	9,358
1993	12	48,403	7,770	136,530	90,998	45,532	5.86	1.88	None							0.42	34.1	45,141	9,373

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	BRUSET	BRACCT	BRTREV	BRTVREV	BRTFC	BRSC	BRP1	BRB1	BRP2	BRB2	BRP3	BRB3	BRP4	BRB4	BRPREC	BRTEMP	BRHHI	BRNHH
1994	1	52,372	7,872	144,688	98,527	46,161	5.86	1.88	None							0.87	33.6	45,272	9,388
1994	2	47,723	7,875	136,330	90,025	46,305	5.86	1.88	None							1.26	32.8	45,403	9,403
1994	3	44,161	7,898	130,099	83,532	46,567	5.86	1.88	None							1.38	42.8	45,534	9,418
1994	4	65,497	7,960	170,940	123,975	46,964	5.86	1.88	None							3.09	47.1	45,665	9,433
1994	5	124,854	8,002	283,539	236,327	47,212	5.86	1.88	None							1.29	60.7	45,796	9,448
1994	6	145,264	8,036	323,245	275,704	47,541	5.86	1.88	None							1.65	70.3	45,927	9,463
1994	7	173,766	8,525	381,001	330,466	50,535	5.86	1.88	None							0.39	70.3	46,058	9,478
1994	8	181,373	8,525	396,796	346,091	50,705	5.86	1.88	None							1.50	70.9	46,189	9,493
1994	9	118,106	8,528	276,642	225,817	50,825	5.86	1.88	None							0.57	63.7	46,320	9,508
1994	10	100,978	8,528	243,891	193,067	50,824	5.86	1.88	None							1.14	50.5	46,451	9,523
1994	11	83,337	8,525	210,282	159,443	50,839	5.86	1.88	None							1.45	37.8	46,582	9,538
1994	12	60,305	8,532	166,145	115,298	50,847	5.86	1.88	None							0.36	35.8	46,713	9,553
1995	1	57,801	8,533	161,901	110,879	51,022	5.86	1.88	None							0.31	34.3	46,844	9,568
1995	2	44,680	8,540	137,225	85,992	51,233	5.86	1.88	None							1.35	38.2	46,975	9,583
1995	3	55,714	8,525	158,789	107,512	51,277	5.86	1.88	None							1.00	40.7	47,106	9,598
1995	4	64,504	8,542	176,315	124,800	51,514	5.86	1.88	None		~~~					4.37	44.0	47,237	9,613

Albuquerque Residential Water ---- Unit: 1,000gallons
Converstions made to TotUse
Water rates have been converted to reflect the price of 1,000 gallons of water vs. 748 gallons.

									10	11		12	1.4	16	1.	17	10	10	20
l VEAR	2 MONTH	ADJUGET.	4 ADACCT	5 ADTREV	6 ADTUDEV	7	8	9 A D D I	10	11	12	13	14	15 ADD4	16	17 ABPREC	18 ABTEMP	19 ABHHI	ABNHH
1980	MONTH			ABTREV	ABTVREV 258,972	ABTFC	2.50	0.41	ABB1 None	ABP2	ADD2	ADIS	ABB3	ADF4	ADD4	0.87	40.2	16,514	124,032
	1	631,638	82,373	464,904		205,933		0.41								0.58		16,606	124,032
1980	2	565,240	82,586	438,213	231,748	206,465	2.50		None							0.60	44.2	-	
1980 1980	3	684,370	82,686	487,307 554,591	280,592	206,715 207,258	2.50 2.50	0.41 0.41	None None							0.60	46.1 52.1	16,698 16,790	124,528 124,776
1980	4	847,154	82,903 83,021	731,719	347,333 524,166	207,238	2.50	0.41	None							0.56	61.1	16,790	124,776
1980		1,278,454 1,827,355	83,115	957,003	749,216	207,788	2.50	0.41	None							0.30	77.2	16,882	125,024
1980		2,480,229	83,202	1,224,899	1,016,894	208,005	2.50	0.41	None							0.01	82.7	17,066	125,520
1980		2,210,809	83,323	1,114,739	906,432	208,308	2.50	0.41	None							2.61	77.4	17,000	125,768
1980		1,682,596	83,474	898,549	689,864	208,685	2.50	0.41	None							1.83	69.9	17,150	126,016
1980		1,259,137	83,633	725,329	516,246	209,083	2.50	0.41	None							0.09	54.5	17,342	126,264
1980	11	862,054	83,790	562,917	353,442	209,475	2.50	0.41	None							0.30	43.5	17,434	126,512
1980	12		85,420	503,794	290,244	213,550	2.50	0.41								0.74	40.5	17,526	126,760
1981	1	776,508	-	532,158	318,368	213,790	2.50	0.41								0.05	38.0	17,618	127,008
1981	2			604,351	326,135	278,216	3.25	0.49								0.67	42.8	17,710	127,256
1981	3	664,793		595,937	325,749	270,189	3.25	0.49								0.80	46.2	17,802	127,504
1981	4			767,445	488,651	278,795	3.25	0.49								0.30	59.0	17,894	127,752
1981		1,643,153		1,084,294	805,145	279,149	3.25	0.49								0.53	64.5	17,986	128,000
1981		1,834,295			898,805	279,169	3.25	0.49								0.35	77.0	18,078	128,248
1981		2,089,553		-		279,614	3.25	0.53								1.07	79.7	18,170	128,496
1981		2,100,988	•	1,393,430	1,113,524	279,906	3.25	0.53								1.68	76.4	18,262	128,744
1981		1,708,728		1,185,812		280,186	3.25	0.53								0.41	69.7	18,354	128,992
1981		1,290,171	•	964,217	683,791	280,426	3.25	0.53								1.43	55.7	18,446	129,240
1981				736,267	455,603	280,664	3.25	0.53								0.37	47.0	18,538	129,488
1981				669,333	387,263	282,071	3.25	0.53								0.00	40.5	18,630	129,736
1982		816,375	-	•		•	3.25	0.53								0.32	35.8	18,722	129,984
1982		-	-	632,654	-	283,358	3.25	0.53								0.20	39.3	18,814	130,232
1982						284,408	3.25	0.53								0.84	47.3	18,906	130,480
1982	4	1,265,213		956,023		285,461	3.25	0.53	None							0.05	56.1	18,998	130,728
1982		1,475,274		1,067,882	781,895	285,987	3.25	0.53	None							0.52	63.0	19,090	130,976

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
_	MONTH A				ABTVREV	ABTFC			ABB1				ABB3			ABPREC		АВННІ	ABNHH
1982		073,604		1,381,139	1,099,010	282,129	3.25	0.53	None							0.09	74.7	19,182	131,224
1982		536,721		1,631,479	1,344,462	287,017	3.25	0.53	None							1.32	79.0	19,274	131,472
1982		563,206		1,115,812	828,499	287,313	3.25	0.53	None							1.09	77.4	19,366	131,720
1982		516,117		1,309,046	955,154	353,892	4.00	0.63	None							1.34	69.5	19,458	131,968
1982		174,845		1,094,200	740,152	354,048	4.00	0.63	None							0.26	54.7	19,550	132,216
1982		877,058		906,879	552,547	354,332	4.00	0.63	None							0.60	42.8	19,642	132,464
1982	12	667,961	88,601	775,219	420,815	354,404	4.00	0.63	None							0.78	34.3	19,734	132,712
1983	1	652,680	87,350	760,588	411,188	349,400	4.00	0.63	None							1.10	35.0	19,826	132,960
1983	2	580,886	87,327	715,266	365,958	349,308	4.00	0.63	None							0.71	39.7	19,918	133,208
1983	3	744,877	87,399	818,869	469,273	349,596	4.00	0.63	None							0.61	46.8	20,010	133,456
1983	4	991,363	87,466	974,423	624,559	349,864	4.00	0.63	None							0.02	50.2	20,102	133,704
1983	5 1,	,618,042	87,720	1,370,246	1,019,366	350,880	4.00	0.63	None							0.32	63.0	20,194	133,952
1983	6 2,	,015,259	87,977	1,621,521	1,269,613	351,908	4.00	0.63	None							1.21	73.4	20,286	134,200
1983	7 2,	,172,572	88,181	1,721,444	1,368,720	352,724	4.00	0.63	None							0.55	80.4	20,378	134,448
1983	8 1,	,833,741	88,530	1,509,377	1,155,257	354,120	4.00	0.63	None							0.27	79.4	20,470	134,696
1983	9 2,	,051,113	88,671	1,646,885	1,292,201	354,684	4.00	0.63	None							0.91	73.4	20,562	134,944
1983		,130,476	88,772	1,067,288	712,200	355,088	4.00	0.63	None							1.20	58.2	20,654	135,192
1983		795,423		857,036	501,116			0.63	None							0.44	45.1	20,746	135,440
1983		707,92		802,454	445,994	356,460		0.63	None							0.42	36.7	20,838	135,688
1984		751,012	-	829,650	473,138			0.63	None							0.33	34.1	20,930	135,936
1984	. 2	707,69	0 89,322	803,133	445,845			0.63								0.00	40.1	21,022	136,184
1984	3	875,829	9 89,608	910,204	551,772			0.63								0.62	46.7	21,114	136,432
1984		,144,87			721,273	-		0.63								0.50	52.7	21,206	136,680
1984		,672,55	-					0.63								0.16	69.9	21,298	136,928
1984		,078,15			1,309,235			0.63								0.48	73.5	21,390	137,176
1984		,098,36	-		1,321,972			0.63								1.13	78.9	21,482	137,424
1984		,812,33			1,141,772			0.63								2.70	75.7	21,574	137,672
1984		,667,66			1,050,629			0.63								1.13	68.7	21,666	137,920
1984		,230,91	-					0.63								3.04	51.6	21,758	138,168
1984		755,86	-	-	476,193			0.63								0.63	43.7	21,850	138,416
1984		698,22			439,881			0.63								1.36	35.6	21,942	138,664
1985		721,87	•													0.49	33.7	22,034	138,912
1985		668,51	· ·	•												0.54	38.2	22,126	139,160
1985	5 3	746,88	0 91,978	838,446	470,534	367,912	4.00	0.63	None							0.70	47.5	22,218	139,408

1	2		3 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR		ABUSE	т авасст		ABTVREV	ABTFC			ABB1				ABB3				ABTEMP	АВННІ	ABNHH
1985	4	1,104,74	6 92,185	1,064,730	695,990	368,740	4.00	0.63	None							1.69	57.3	22,310	139,656
1985	5	2,050,52	92,600	1,662,231	1,291,831	370,400	4.00	0.63	None							1.12	64.0	22,402	139,904
1985	6	2,355,88	92,760	1,855,244	1,484,204	371,040	4.00	0.63	None							0.53	74.0	22,494	140,152
1985	7	1,335,59	92,425	1,211,125	841,425	369,700	4.00	0.63	None							1.16	77.0	22,586	140,400
1985	8	1,083,92	92,869	1,054,346	682,870	371,476	4.00	0.63	None							0.49	76.5	22,678	140,648
1985	9	1,994,36	93,110	1,628,892	1,256,452	372,440	4.00	0.63	None							1.53	65.9	22,770	140,896
1985	10	1,120,84	93,303	1,079,342	706,130	373,212	4.00	0.63	None							2.15	57.5	22,862	141,144
1985	11	874,96	50 93,421	924,909	551,225	373,684	4.00	0.63	None							0.19	45.3	22,954	141,392
1985	12	796,46	93,530	875,890	501,770	374,120	4.00	0.63	None							0.16	37.6	23,046	141,640
1986	1	810,15	93,541	884,564	510,400	374,164	4.00	0.63	None							0.22	41.2	23,138	141,888
1986	2	929,54	15 93,740	960,573	585,613	374,960	4.00	0.63	None							1.01	43.0	23,230	142,136
1986		958,66	5 8 93,930	979,681	603,961	375,720	4.00	0.63	None							0.17	50.8	23,322	142,384
1986		1,306,87			823,329	376,384	4.00	0.63	None							0.33	56.5	23,414	142,632
1986		1,710,89			1,077,864	377,240	4.00	0.63	None							1.11	63.7	23,506	142,880
1986		2,025,02			1,275,766	378,104	4.00	0.63	None							2.57	72.7	23,598	143,128
1986		1,763,27			1,110,862	378,940	4.00	0.63	None							1.51	74.7	23,690	143,376
1986		2,070,5			1,304,447	379,884	4.00	0.63	None							2.26	76.0	23,782	143,624
1986		1,882,79			1,186,163	380,992	4.00	0.63								0.53	66.5	23,874	143,872
1986		1,193,98			752,212	381,940	4.00	0.63								1.54	54.6	23,966	144,120
1986		•		985,614	603,006	382,608	4.00	0.63								1.29	42.2	24,058	144,368
1986		•		864,929	481,541	383,388	4.00	0.63								0.44	36.2	24,150	144,616
1987		849,9		918,943	535,483	383,460	4.00	0.63								0.66	32.2	24,242	144,864
1987		•		835,526	450,606	384,920	4.00	0.63								0.61	39.2	24,334	145,112
1987		876,1		937,113	551,981	385,132	4.00	0.63								0.07	43.7	24,426	145,360
1987		1,124,4	-		708,378	385,840	4.00	0.63								1.00	54.7	24,518	145,608
1987		1,762,5			1,110,405	387,016		0.63								0.58	62.7	24,610	145,856
1987		2,020,9			1,273,173	388,544		0.63								0.13	73.0	24,702	146,104
1987		2,736,2			1,723,816	389,520	4.00	0.63								0.91	77.7	24,794	146,352
1987		2,021,9			1,273,852			0.63								2.98	74.7	24,886	146,600
1987		1,679,7	•		1,058,243	391,440	4.00	0.63								0.20	68.7	24,978	146,848
1987		1,601,0	•		1,008,633	391,796		0.63								0.44	61.2	25,070	147,096
1987		1,097,0			691,148	392,824	4.00	0.63								0.42		25,162	147,344
1987		•			542,346		4.00	0.63								0.34	35.2	25,254	147,592
1988	<u> </u>	810,6	91 98,497	904,723	510,735	393,988	4.00	0.63	None							0.15	34.6	25,346	147,840

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR			ABACCT		ABTVREV	ABTFC			ABB1				ABB3				ABTEMP	ABHHI	ABNHH
1988		735,727		858,020	463,508	394,512	4.00	0.63	None	71101 2	TUBBE	71DI J	71000	71014	порт	0.07	43.8	25,438	148,088
1988		1,077,169		1,073,696	678,616	395,080	4.00	0.63	None							0.85	47.0	25,530	148,336
1988		1,479,096		1,327,398	931,830	395,568	4.00	0.63	None							1.42	55.1	25,622	148,584
1988		1,598,759		1,403,306	1,007,218	396,088	4.00	0.63	None							0.62	64.2	25,714	148,832
1988		2,171,930	•	1,764,928	1,368,316	396,612	4.00	0.63	None							1.25	74.4	25,806	149,080
1988		2,078,388		1,706,020	1,309,384	396,636	4.00	0.63	None							2.26	78.0	25,898	149,328
1988		2,083,788		1,710,434	1,312,786	397,648	4.00	0.63	None							3.29	75.0	25,990	149,576
1988	9	1,559,313	99,631	1,593,011	1,075,926	517,085	5.19	0.69	None							2.63	66.2	26,082	149,824
1988	10	1,340,876	99,830	1,443,322	925,204	518,118	5.19	0.69	None							0.32	61.1	26,174	150,072
1988	11	1,237,798	99,945	1,372,795	854,081	518,715	5.19	0.69	None							0.22	45.3	26,266	150,320
1988	12	848,507	100,088	1,104,927	585,470	519,457	5.19	0.69	None							0.03	33.8	26,358	150,568
1989	1	866,993	100,244	1,118,492	598,225	520,266	5.19	0.69	None							0.57	35.5	26,450	150,816
1989	2	761,541	100,295	1,045,994	525,463	520,531	5.19	0.69	None							0.35	41.8	26,542	151,064
1989	3	1,029,259	100,383	1,231,176	710,189	520,988	5.19	0.69	None							0.48	52.7	26,634	151,312
1989	4	1,734,432	100,487	1,718,286	1,196,758	521,528	5.19	0.69	None							0.00	61.3	26,726	151,560
1989		2,106,642	100,593	1,975,661	1,453,583	522,078	5.19	0.69	None							0.02	68.7	26,818	151,808
1989	6	2,730,070	100,696	2,406,361	1,883,748	522,612	5.19	0.69	None							0.02	75.5	26,910	152,056
1989		3,077,175	100,803	2,646,418	2,123,251	523,168	5.19	0.69	None							1.51	78.5	27,002	152,304
1989	8	2,042,453	100,897	1,932,948	1,409,293	523,655	5.19	0.69	None							0.48	74.2	27,094	152,552
1989	9	2,345,178	101,012	2,142,425	1,618,173	524,252	5.19	0.69	None							0.31	69.4	27,186	152,800
1989		1,682,986	101,105	1,685,995	1,161,260	524,735	5.19	0.69	None							0.97	56.7	27,278	153,048
1989	11	1,169,207	101,262	1,332,303	806,753	525,550	5.19	0.69	None							0.00	46.3	27,370	153,296
1989		955,830	101,223	1,184,870	659,523	525,347	5.19	0.69	None							0.28	35.1	27,462	153,544
1990		895,629		1,143,648	617,984	525,664	5.19	0.69								0.21	34.6	27,554	153,792
1990					538,301	525,680		0.69								0.49	38.5	27,646	154,040
1990		,	-		606,802	525,970		0.69								0.41	48.6	27,738	154,288
1990		1,326,604	•		915,357	526,510		0.69								1.71	57.2	27,830	154,536
1990		1,486,194		-	1,025,474	526,956		0.69								0.45		27,922	154,784
1990		2,542,82		2,282,031	1,754,551	527,480		0.69								0.27	79.0	28,014	155,032
1990		2,837,486	-	2,433,122	1,957,865	475,257		0.69								2.36		28,106	155,280
1990		2,070,83	-		1,428,873	475,803		0.69								1.79		28,198	155,528
1990		1,940,370	-	1,815,186	1,338,855	476,331	4.67	0.69								0.96		28,290	155,776
1990		1,450,61	•		1,000,922	476,774		0.69								0.15		28,382	156,024
1990	11	1,165,44	102,155	1,281,220	804,156	477,064	4.67	0.69	None							0.86	45.0	28,474	156,272

-	2	3	3 4	5	6	7	8	9	10	11	12	12	1.4	1.5	16	17	10	19	20
VEAD			ABACCT		o ABTVREV	ABTFC		_	ABB1		ABB2	13	14 ADD3	15 ABP4			18 ABTEMP	ABHHI	ABNHH
1990	12			1,077,066	599,731	477,335	4.67	0.69	None	ADPZ	ADDZ	ADF3	ADDJ	ADF4	ADD4	0.59	32.1	28,566	156,520
1991	12	900,906		1,077,008	621,625	477,573	4.67	0.69	None							0.59	35.7	28,658	156,768
1991	2	955,106		1,136,750	659,023	477,727	4.67	0.69	None							0.06	33.7 44.6	28,750	157,016
1991	3	968,602	•	1,146,184	668,335	477,848	4.67	0.69	None							0.00	46.1	28,730	157,016
1991	_	1,501,810	-		1,036,249	478,105	4.67	0.69	None							0.00	56.0	28,934	157,512
1991		1,996,807			1,030,249	478,357	4.67	0.69	None									•	157,312
1991		2,206,487	_		1,522,476	478,801	4.67	0.69	None							1.14 0.65	65.5 73.4	29,026 29,118	158,008
1991		2,491,278		2,001,277	1,818,633	477,844	4.67	0.09	None							2.63	75.4 76.9	29,118	158,256
1991		1,727,111	•		1,260,791	474,818	4.67	0.73	None							1.26	76.9 75.5	29,210	158,504
1991		1,988,448			1,451,567	475,327	4.67	0.73	None							1.43	68.0	29,302	158,752
1991		1,696,45			1,238,409	475,929	4.67	0.73	None							0.26	59.6	29,486	159,000
1991		1,118,010	-	• •	816,147	476,461	4.67	0.73	None							1.93	43.3	29,578	159,000
1991					565,361	476,723	4.67	0.73								1.49	37.2	29,670	159,496
1992		825,119			602,337	477,050		0.73								0.60	32.7	29,762	159,744
1992		•		994,418	516,934	477,484		0.73								0.20	42.2	29,854	159,992
1992		973,91		·-	710,960	478,087		0.73								0.63	48.8	29,946	160,240
1992		1,387,26		1,491,504	1,012,703	478,801	4.67	0.73								0.22	60.0	30,038	160,488
1992	5	1,861,53	8 102,655	1,838,322	1,358,923	479,399	4.67	0.73	None							1.81	64.5	30,130	160,736
1992	6	1,791,23	3 102,797	1,787,662	1,307,600	480,062	4.67	0.73	None							0.67	72.4	30,222	160,984
1992	7	2,707,55	3 102,967	2,457,370	1,976,514	480,856	4.67	0.73	None							2.01	76.2	30,314	161,232
1992	8	2,187,00	6 103,167	2,078,304	1,596,514	481,790	4.67	0.73	None							2.17	75.0	30,406	161,480
1992	9	2,014,06	7 103,341	1,952,871	1,470,269	482,602	4.67	0.73	None							0.79	70.2	30,498	161,728
1992	10	1,730,06	3 103,500	1,746,291	1,262,946	483,345	4.67	0.73	None							0.70	60.7	30,590	161,976
1992	. 11	1,120,32	8 103,657	1,301,918	817,839	484,078	4.67	0.73	None							1.12	39.7	30,682	162,224
1992	. 12	805,37	7 103,806	1,072,699	587,925	484,774	4.67	0.73	None							1.16	32.7	30,774	162,472
1993	1	792,61	4 103,866	1,063,662	578,608	485,054	4.67	0.73	None							0.94	39.7	30,866	162,720
1993	2	676,78	2 103,944	979,469	494,051	485,418	4.67	0.73	None							1.82	42.5	30,958	162,968
1993	3	884,79	4 104,065	1,131,883	645,900	485,984	4.67	0.73	None							0.22	48.7	31,050	163,216
1993	4	1,470,05	1 104,207	1,559,784	1,073,137	486,647	4.67	0.73	None							0.00	57.1	31,142	163,464
1993	5	1,966,88	3 104,378	1,923,270				0.73	None							0.20	65.7	31,234	163,712
1993	6	2,574,46	4 104,606	2,367,869	1,879,359	488,510	4.67	0.73	None							0.44	75.0	31,326	163,960
1993	7	2,891,38	8 104,830	2,791,574			4.84	0.79	None							0.21	79.9	31,418	164,208
1993	8	2,421,19	3 104,957	2,420,734	1,912,742		4.84	0.79	None							2.94	75.6	31,510	164,456
1993	9	1,831,28	6 105,113	1,955,463	1,446,716	508,747	4.84	0.79	None	;						0.48	69.1	31,602	164,704

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	ABUSET	ABACCT	ABTREV	ABTVREV	ABTFC	ABSC	ABPI	ABBI	ABP2	ABB2	ABP3	ABB3	ABP4	ABB4	ABPREC	ABTEMP	ABHHI	ABNHH
1993	10	1,699,268	105,272	1,851,938	1,342,422	509,516	4.84	0.79	None							0.63	56.1	31,694	164,952
1993	11	1,066,890	105,487	1,353,400	842,843	510,557	4.84	0.79	None							0.96	43.3	31,786	165,200
1993	12	826,889	105,704	1,164,849	653,242	511,607	4.84	0.79	None							0.03	37.3	31,878	165,448
1994	1	920,911	105,840	1,239,785	727,519	512,266	4.84	0.79	None							0.03	38.0	31,970	165,696
1994	2	839,821	105,987	1,176,436	663,459	512,977	4.84	0.79	None							0.27	40.7	32,062	165,944
1994	3	1,195,481	106,271	1,458,781	944,430	514,352	4.84	0.79	None							0.57	50.2	32,154	166,192
1994	4	1,465,207	106,391	1,672,446	1,157,514	514,932	4.84	0.79	None							0.06	58.4	32,246	166,440
1994	5	1,809,464	106,727	1,946,035	1,429,476	516,559	4.84	0.79	None							1.80	66.8	32,338	166,688
1994	6	2,175,801	106,928	2,236,414	1,718,883	517,532	4.84	0.79	None							0.27	80.4	32,430	166,936
1994	7	3,064,545	107,137	2,939,533	2,420,990	518,543	4.84	0.79	None							0.60	81.3	32,522	167,184
1994	8	2,146,951	107,372	2,215,772	1,696,092	519,680	4.84	0.79	None							2.61	76.4	32,614	167,432
1994	9	1,918,320	107,377	2,035,178	1,515,473	519,705	4.84	0.79	None							1.20	71.0	32,706	167,680
1994	10	1,571,253	107,132	1,759,808	1,241,290	518,519	4.84	0.79	None							1.50	56.9	32,798	167,928
1994	11	1,014,979	107,173	1,320,551	801,834	518,717	4.84	0.79	None							1.38	44.5	32,890	168,176
1994	12	810,346	107,251	1,159,268	640,173	519,095	4.84	0.79	None							0.62	40.9	32,982	168,424
1995	1	847,183	107,423	1,290,864	770,937	519,927	4.84	0.91	None							0.55	39.2	33,074	168,672
1995	2	785,980	107,556	1,235,813	715,242	520,571	4.84	0.91	None							0.39	49.3	33,166	168,920
1995	3	950,613	107,713	1,386,389	865,058	521,331	4.84	0.91	None							0.16	50.7	33,258	169,168
1995	4	1,273,065	107,928	1,680,861	1,158,489	522,372	4.84	0.91	None							0.69	54.2	33,350	169,416
1995	5	1,523,289	108,093	1,909,363	1,386,193	523,170	4.84	0.91	None							0.08	64.5	33,442	169,664
1995	6	2,142,370	108,161	2,473,056	1,949,557	523,499	4.84	0.91	None							0.20	74.8	33,534	169,912
1995	7	2,556,743	108,400	2,851,292	2,326,636	524,656	4.84	0.91	None							0.35	80.0	33,626	170,160
1995	8	2,382,693	108,471	2,693,250	2,168,250	525,000	4.84	0.91	None							0.74	79.8	33,718	170,408
1995	9	1,961,823	108,625	2,311,004	1,785,259	525,745	4.84	0.91	None							2.32	69.5	33,810	170,656
1995	10	1,424,862	108,975	1,824,064	1,296,625	527,439	4.84	0.91	None							0.00	59.5	33,902	170,904

1	2	21	22	23	24	25	26	27	CON	VS. C	ATEG	ORIES	
YEAR	MONTH	ABSCHPED	ABBILLPI	ABTVPI	ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED	PI	RET	ORD	M
1980	ı	0	0	0	0	0	0	0	0	0	0	0	0
1980	2	0	0	0	0	0	0	0	0	0	0	0	0
1980	3	0	0	0	0	0	0	0	0	0	0	0	0
1980	4	0	0	0	0	0	0	0	0	0	0	0	0
1980	5	0	0	0	0	0	0	0	0	0	0	0	0
1980	6	0	0	0	0	0	0	0	0	0	0	0	0
1980	7	0	0	0	0	0	0	0	0	0	0	0	0
1980	8	0	0	0	0	0	0	0	0	0	0	0	0
1980	9	0	0	0	0	0	0	0	0	0	0	0	0
1980	10	0	0	0	0	0	0	0	0	0	0	0	0
1980	11	0	0	0	0	0	0	0	0	0	0	0	0
1980	12	. 0	. 0	0	0	0	0	0	0	0	0	0	0
1981	1	0	0	0	0	0	0	0	0	0	0	0	0
1981	2	. 0	0	0	0	0	0	0	0	0	0	0	0
1981	3	0	0	0	0	0	0	0	0	0	0	0	0
1981	4	0	0	0	0	0	0	0	0	0	0	0	0
1981	5	0	0	0	0	0	0	0	0	0	0	0	0
1981	6	0	0	0	0	0	0	0	0	0	0	0	0
1981	7	0	0	0	0	0	0	0	0	0	0	0	0
1981	8	3 0	0	0	0	0	0	0	0	0	0	0	0
1981	9	0	0	0	0	0	0	0	0	0	0	0	0
1981	10) 0	0	0	0	0	0	0	0	0	0	0	0
1981	11	. 0	0	0	0	0	0	0	0	0	0	0	C
1981	12	2 0	0	0	0	0	0	0	0	0	0	0	C
1982	. 1	0	0	0	0	0	0	0	0	0	0	0	C
1982	. 2	2 0	0	0	0	0	0	0	0	0	0	0	(
1982	: 3	3 0	0	0	0	. 0	0	0	0	0	0	0	(
1982	. 4	1 0	0	0	0	0	0	0	0	0	0	0	(
1982		5 0	0	0	0	0	0	0	0	0	0	0	(
1982	. 6	5 0	0	0	0	0	0	0	0	0	0	0	(
1982	: 7	7 0	0	0	0	0	0	0	0	0	0	0	(
1982	: 8	B 0	0	0	0	0	e 0	0	0	0	0	0	(
1982	; 9	9 0	0	0	0	. 0	0	0	0	0	0	0	(
1982	. 10	0 0	0	0	0	0	0	0	0	0	0	0	0

1	2	21	22	23	24	25	26	27	CO	VS. C	ATEG	ORIES	
YEAR	_	ABSCHPED			ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED ED		RET	ORD	M
1982	11	0	0	0	0	0	0	0	0	0	0	0	0
1982	12		0	0	0	0	0	0	0	0	0	0	0
1983	1		0	0	0	0	0	0	0	0	0	. 0	0
1983	2	0	0	0	0	0	0	0	0	0	0	0	0
1983	3	0	0	0	0	0	0	0	0	0	0	0	0
1983	4	0	0	0	0	0	0	0	0	0	0	0	0
1983	5	0	0	0	0	0	0	0	0	0	0	0	0
1983	6	0	0	0	0	0	0	0	0	0	0	0	0
1983	7	0	0	0	0	0	0	0	0	0	0	0	0
1983	8	0	0	0	0	0	0	0	0	0	0	0	0
1983	9	0	0	0	0	0	0	0	0	0	0	0	0
1983	10	0	. 0	0	0	0	0	0	0	0	0	0	0
1983	11	0	0	0	0	0	0	0	0	0	0	0	0
1983	12	0	0	0	0	0	0	0	0	0	0	0	0
1984	1	0	0	0	0	0	0	0	0	0	0	0	0
1984	2	0	0	0	0	0	0	0	0	0	0	0	0
1984	3	0	0	0	0	0	0	0	0	0	0	0	0
1984	4	0	0	0	0	0	0	0	0	0	0	0	0
1984	5	0	0	0	0	0	0	0	0	0	0	0	0
1984	6	0	0	0	0	0	0	0	0	0	0	0	0
1984	7	0	0	0	0	0	0	0	0	0	0	0	0
1984	8	0	0	0	0	0	0	0	0	0	0	0	0
1984	9	0	0	0	0	0	0	0	0	0	0	0	0
1984	10	0	0	0	0	0	0	0	0	0	0	0	0
1984	11	0	0	0	0	0	0	0	0	0	0	0	0
1984	12	. 0	0	0	0	0	0	0	0	0	0	0	0
1985		0	0	0	0	. 0	0	0	0	0	0	0	0
1985	2	0	0	0	0	0	0	0	0	0	0	0	0
1985	3	0	0	0	0	0	0	0	0	0	0	0	0
1985		0	0	0	0	0	0	0	0	0	0	0	0
1985	5	0	0	0	0	0	0	0	0	0	0	0	0
1985		0	0	0	0	0	. 0	0	0	0	0	0	0
1985	7	0	0	0	0	0	0	0	0	0	0	0	0
1985	8	3 0	0	00	0	00	0	0	0	0	0	0	0

1	2	21	22	23	24	25	26	27	CON	IS. C	ATEG	ORIES	
YEAR		ABSCHPED			ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED	PI		ORD	М
1985			0	0	0	0	0	0	0	0	0	0	0
1985			0	0	0	0	0	0	0	0	0	0	0
1985			0	0	0	0	0	0	0	0	0	0	0
1985			0	0	0	0	0	0	0	0	0	0	0
1986			0	0	0	0	0	0	0	0	0	0	0
1986		. 0	0	0	0	0	0	0	0	0	0	0	0
1986		0	0	0	0	0	0	0	0	0	0	0	0
1986	4	0	0	0	0	0	0	0	0	0	0	0	0
1986		0	0	0	0	0	0	0	0	0	0	0	0
1986	6	0	0	0	0	0	0	0	0	0	0	0	0
1986	. 7	0	. 0	0	0	0	0	0	0	0	0	0	0
1986	5 8	0	0	0	0	0	0	0	0	0	0	0	0
1986	5 9	0	0	0	0	0	0	0	0	0	0	0	0
1986	10	0	0	0	0	0	0	0	0	0	0	0	0
1986	11	. 0	0	0	0	0	0	0	0	0	0	0	0
1986	5 12	2 0	0	0	0	0	0	0	0	0	0	0	0
1987	' 1	0	0	0	0	0	0	0	0	0	0	0	0
1987	' 2	2 0	0	0	0	0	0	0	0	0	0	0	0
1987	' :	3 0	0	0	0	0	0	0	0	0	0	0	0
1987	7 4	4 0	0	. 0	0	0	0	0	0	0	0	0	0
1987	' :	5 0	0	0	0	0	0	0	0	0	0	0	0
1987	7 (6 0	0	0	0	0	0	0	0	0	0	0	0
1987	, ·	7 0	0	0	0	0	0	0	0	0	0	0	0
1987		8 0	0	0	0	0	0	0	0	0	0	0	0
1987		9 0	0	0	0	0	0	0	0	0	0	0	0
1987			0	0	0	0	0	0	0	0	0	0	0
1987			0	0	0	. 0	0	0	0	0	0	0	0
1987			0	0	0	0	0	0	0	0	0	0	0
1988		1 0	0	0	0	0	0	0	0	0	0	0	0
1988		2 0	0	0	0	0	0	0	0	0		0	0
1988		3 0	0	0	0	0	0	0	0	0		0	0
1988		4 0	0	0	0	0	. 0	0	0	0	-	0	0
1988		5 0	0	0	0	0	0	0	0	0	_	0	0
1988	8	6 0	. 0	0	0	0	0	00	0	0	0	0	0

1	2	21	22	23	24	25	26	27	CON	NS. C	ATEG	ORIES	
YEAR	MONTH	ABSCHPED	ABBILLPI	ABTVPI	ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED	ΡI	RET	ORD	М
1988	7	0	0	0	0	0	0	0	0	0	0	0	0
1988	8	0	0	0	0	0	0	0	0	0	0	0	0
1988	9	0	0	0	0	0	0	0	0	0	0	0	0
1988	10	0	0	0	0	0	0	0	0	0	0	0	0
1988	11	0	0	0	0	0	0	0	0	0	0	0	0
1988	12	0	0	0	0	0	0	0	0	0	0	0	0
1989	1	0	0	0	0	0	0	0	0	0	0	0	0
1989	2	0	0	0	0	0	0	0	0	0	0	0	0
1989	3	0	0	0	0	0	0	0	0	0	0	0	0
1989	4	0	0	0	0	0	0	0	0	0	0	0	0
1989	5	0	0	0	0	0	0	0	0	0	0	0	0
1989	6	0	. 0	0	0	0	0	0	0	0	0	0	0
1989	7	0	0	0	0	0	0	0	0	0	0	0	0
1989	. 8	0	0	0	0	0	0	0	0	0	0	0	0
1989	9	0	0	0	0	0	0	0	0	0	0	0	0
1989	10	0	0	0	0	0	0	0	0	0	0	0	0
1989	11	0	0	0	0	0	0	0	0	0	0	0	0
1989	12	2 0	0	0	0	0	0	0	0	0	0	0	0
1990) 1	١ 0	0	0	0	0	0	0	0	0	0	0	0
1990) 2	2 0	0	0	0	0	0	0	0	0	0	0	0
1990) 3	3 0	0	0	0	0	0	0	0	0	0	0	0
1990) 4	4 0	0	0	0	0	0	0	0	0	0	0	0
1990) :	5 0	0	0	0	0	0	0	0	0	0	0	0
1990) (6 0	0	0	0	0	0	0	0	0	0	0	0
1990) 1	7 0	0	0	0	0	0	0	0	0	0	0	0
1990) 1	8 0	0	0	0	0	0	0	0	0	0	0	0
1990) !	9 0	0	0	0	. 0	0	0	0	0	0	0	0
1990) 10	0 0	0	0	0	0	0	0	0	0	0	0	0
1990) 1	1 0	0	0	0	0	0	0	0	0	0	0	0
1990) 1:	2 0	0	0	0	0	0	0	0	0	0	0	0
1991	1	1 0	0	0	0	0	0	0	0	0	0	0	0
1991	1 :	2 0	0	0	0	0	· 0	0	0	0	0	0	0
1991	1	3 0	0	0	0	0	0	0	0	0	0	0	(
199	1	4 0	0	0	0	0	0	0	0	0	0	0	0

1	2	21	22	23	24	25	26	27	CON	S. CAT	EGC	RIES	
YEAR	MONTH	ABSCHPED	ABBILLPI	ABTVPI	ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED	PI R	ET	ORD	M
1991	5	0	0	0	0	0	0	0	0	0	0	0	0
1991	6	0	0	0	0.	0	0	0	0	0	0	0	0
1991	7	0	0	0	0	0	0	0	0	0	0	0	0
1991	8	0	0	0	0	0	0	0	0	0	0	0	0
1991	9	0	0	0	0	0	0	0	0	0	0	0	. 0
1991	10	0	0	0	0	0	0	0	0	0	0	0	0
1991	11	0	0	0	0	0	0	0	0	0	0	0	0
1991	12	0	0	0	0	0	0	0	0	0	0	0	0
1992	1	0	0	0	0	0	0	0	0	0	0	0	0
1992	2	0	0	0	0	0	0	0	0	0	0	0	0
1992	3	0	0	0	0	0	0	0	0	0	0	0	0
1992	4	0	. 0	0	0	0	0	0	0	0	0	0	0
1992	5	0	0	0	0	0	0	0	0	0	0	0	0
1992	6	0	0	0	0	0	0	0	0	0	0	0	0
1992	7	0	0	0	0	0	0	0	0	0	0	0	0
1992	8	0	0	0	0	0	0	0	0	0	0	0	0
1992	9	0	0	0	0	0	0	0	0	0	0	0	0
1992	10	0	0	0	0	0	0	0	0	0	0	0	0
1992	11	0	0	0	0	0	0	0	0	0	0	0	0
1992		0	0	0	0	0	0	0	0	0	0	0	0
1993	1	0	0	0	0	0	0	0	0	0	0	0	0
1993	2	0	0	0	0	0	0	0	0	0	0	0	0
1993	3	0	0	0	0	0	0	0	0	0	0	0	0
1993	4	0	0	0	0	0	0	0	0	0	0	0	0
1993	5	0	0	0	0	0	0	0	0	0	0	0	0
1993	6	0	0	0	0	0	0	0	0	0	0	0	0
1993	7	0	0	0	0	. 0	0	0	0	0	0	0	0
1993	8	0	0	0	0	0	0	0	0	0	0	0	0
1993	9	0	0	0	0	0	0	0	0	0	0	0	0
1993	10	0	0	0	0	0	0	0	0	0	0	0	0
1993	11	0	0	0	0	0	0	0	0	0	0	0	0
1993	12	. 0	0	0	0	0	. 0	0	0	0	0	0	0
1994	1	0	0	0	0	0	0	0	0	0	0	0	0
1994	2	. 0	0	0	0	0	0	0	0	0	0	0	0

1	2	21	22	23	24	25	26	27	CO	NS. C	ATEG	ORIES	
YEAR	MONTH	ABSCHPED	ABBILLPI	ABTVPI	ABRADPI	ABNEWSPI	ABBBRDPI	ABHOTLPI	ED	ΡI	RET	ORD	M
1994	3	0	0	0	0	0	0	0	0	0	0	0	0
1994	4	0	0	0	0	0	0	0	0	0	0	0	0
1994	5	0	0	0	0	0	0	0	0	0	0	0	0
1994	6	0	0	1	1	1	0	0	0	1	0	0	0
1994	7	0	0	1	1	1	0	1	0	1	0	0	0
1994	8	1	0	1	1	1	0	1	1	1	0	0	0
1994	9	1	1	1	1	1	0	1	1	1	0	0	0
1994	10	1	0	1	1	1	0	1	1	1	0	0	0
1994	11	1	1	1	1	1	0	1	1	1	0	0	0
1994	12	1	0	1	1	1	0	1	1	1	0	0	0
1995	1	0	0	1	1	1	0	1	0	1	0	0	0
1995	2	0	· 1	1	1	1	0	1	0	1	0	0	0
1995	3	0	0	1	1	1	0	1	0	1	0	0	0
1995	4	0	1	1	1	1	0	1	0	1	0	0	0
1995	5	0	0	1	1	1	0	1	0	1	0	0	0
1995	6	0	0	1	1	i	1	1	0	1	0	0	0
1995	7	0	1	1	1	1	1	1	0	1	0	0	0
1995	8	0	0	1	1	1	1	1	0	1	0	0	0
1995	9	0	0	1	1	1	1	1	0	1	0	0	0
1995	10	0	0	1 .	1	1	1	1	0	1	0	0	0

Santa Fe Residential Water Data ---- Unit: 1,000 gallons

1	2	3	4	5	6	7	8	9	10	11	12	13 14 15	16	17	18	19	20
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC	SFSC	SFPI	SFB1	SFP2	SFB2	SFP3 SFB3 SFP4	SFB4		SFTEMP	SFHHI	SFNHH
1981	1	71,445	12,727	159,625	121,444	38,181	3.00	1.72	5	1.37	> 5	3113 3133 3114	31 07	0.11	35.5	17,329	18,451
1981	2	68,071	12,795	154,408	116,023	38,385	3.00	1.72	5	1.37	> 5			0.00	37.7	17,446	18,501
1981	3	74,139	12,799	162,693	124,266	38,427	3.00	1.72	5	1.37	> 5			0.96	39.6	17,563	18,551
1981	4	74,542	12,821	257,749	219,286	38,463	3.00	2.79	5	2.43	> 5			0.98	52.8	17,680	18,601
1981	5	139,560	13,006	339,887	300,869	39,018	3.00	2.79	5	2.43	> 5			1.53	57.1	17,797	18,651
1981	6	115,883	13,077	346,916	307,685	39,231	3.00	2.79	5	2.43	> 5			0.46	70.4	17,914	18,701
1981	7	124,805	13,062	368,099	328,913	39,186	3.00	2.79	5	2.43	> 5			3.00	71.8	18,031	18,751
1981	8	103,704	13,071	369,798	330,585	39,213	3.00	2.79	5	2.43	> 5			3.80	68.4	18,148	18,801
1981	9	99,734	13,239	307,283	267,566	39,717	3.00	2.79	5	2.43	> 5			1.17	63.0	18,265	18,851
1981	10	86,362	13,257	175,025	135,254	39,771	3.00	1.72	5	1.37	> 5			1.10	51.7	18,382	18,901
1981	11	87,504	13,278	183,713	143,879	39,834	3.00	1.72	5	1.37	> 5			0.53	43.3	18,499	18,951
1981	12	81,030	13,200	175,094	135,494	39,600	3.00	1.72	5	1.37	> 5			0.00	35.8	18,616	19,001
1982	1	76,856	13,146	168,686	129,248	39,438	3.00	1.72	5	1.37	> 5			1.54	29.3	18,733	19,051
1982	2	54,578	13,149	137,420	97,973	39,447	3.00	1.72	5	1.37	> 5			1.02	32.6	18,850	19,101
1982	3	69,858	13,181	158,275	118,732	39,543	3.00	1.72	5	1.37	> 5			0.75	41.4	18,967	19,151
1982	4	68,289	13,238	248,272	208,558	39,714	3.00	2.79	5	2.43	> 5			0.00	48.7	19,084	19,201
1982	5	105,426	13,259	323,281	283,504	39,777	3.00	2.79	5	2.43	> 5			0.72	55.7	19,201	19,251
1982	6	136,597	13,387	399,607	359,446	40,161	3.00	2.79	5	2.43	> 5			0.15	66.3	19,318	19,301
1982	7	149,348	13,462	430,734	390,348	40,386	3.00	2.79	5	2.43	> 5			2.75	68.2	19,435	19,351
1982	8	123,447	13,543	367,753	327,124	40,629	3.00	2.79	5	2.43	> 5			0.86	69.6	19,552	19,401
1982	9	99,563	13,596	309,526	268,738	40,788	3.00	2.79	5	2.43	> 5			2.81	62.4	19,669	19,451
1982	10	99,240	13,630	194,992	154,102	40,890	3.00	1.72	5	1.37	> 5			0.70	49.0	19,786	19,501
1982	11	67,534	13,649	158,184	117,237	40,947	3.00	1.72	5	1.37	> 5			1.25	38.5	19,903	19,551
1982	12	86,666	13,668	184,355	143,351	41,004	3.00	1.72	5	1.37	> 5			1.22	29.7	20,020	19,601
1983	1	76,499	13,714	170,324	129,182	41,142	3.00	1.72	5	1.37	> 5			0.46	31.2	20,137	19,651
1983	2	45,515	13,735	127,474	86,269	41,205	3.00	1.72	5	1.37	> 5			0.86	34.2	20,254	19,701
1983	3	82,057	13,759	177,588	136,311	41,277	3.00	1.72	5	1.37	> 5			1.21	40.1	20,371	19,751
1983	4	67,022	13,812	245,876	204,440	41,436	3.00	2.79	5	2.43	> 5			0.39	43.1	20,488	19,801
1983	5	105,621	13,869	325,338	283,731	41,607	3.00	2.79	5	2.43	> 5			0.28	55.1	20,605	19,851
1983	6	136,239	13,935	401,112	359,307	41,805	3.00	2.79	5	2.43	> 5			0.36	64.8	20,722	19,901
1983	7	170,992	14,010	485,650	443,620	42,030	3.00	2.79	5	2.43	> 5			2.79	72.6	20,839	19,951
1983	8	99,664	14,072	312,662	270,446	42,216	3.00	2.79	5	2.43	> 5			1.46	71.9	20,956	20,001

1	2	3	4	5	6	7			10	11	12	13 14	15	16		10	19	
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC	8 SFSC	9 SFP1	SFB1	11 SFP2	12 SFB2	13 14 SFP3 SFB3		16 SFB4	17 SEDDEC	18 SFTEMP	SFHHI	20 SFNHH
1983	9	132,689	14,147	393,915	351,474	42,441	3.00	2.79	5	2.43	> 5	3113 3133	SFF4	SFD4	1.11	67.7	21,073	20,051
1983	10	91,539	14,147	170,898	128,256	42,642	3.00	1.72	5	1.37	> 5				0.85	54.3	21,073	20,031
1983	11	77,050	14,214	175,426	132,592	42,834	3.00	1.72	5	1.37	> 5				0.83	41.6	21,190	20,101
1983	12	103,548	14,278	210,455	167,489	42,966	3.00	1.72	5	1.37	> 5				0.86			-
1983	12	-			107,489		3.00	1.72	-		> 5 > 5					32.7	21,424	20,201
	-	61,379	14,383	152,824	•	43,149			5	1.37	_				0.08	30.9	21,541	20,251
1984	2	64,147	14,419	156,115	112,858	43,257	3.00	1.72	5	1.37	> 5				0.06	37.1	21,658	20,301
1984	3	84,467	14,478	185,584	142,150	43,434	3.00	1.72	5	1.37	> 5				2.01	42.2		20,351
1984	4	71,038	14,521	256,451	212,888	43,563	3.00	2.79	5	2.43	> 5				0.60	47.4	•	20,401
1984	5	109,738	14,575	338,594	294,869	43,725	3.00	2.79	5	2.43	> 5				0.57	64.3	22,009	20,451
1984	6	153,295	14,661	445,149	401,166	43,983	3.00	2.79	5	2.43	> 5				4.00	67.8	22,126	20,501
1984	7	117,412	14,797	436,741	392,350	44,391	3.00	2.79	5	2.43	> 5				0.97	74.4	22,243	20,551
1984	8	130,812	14,978	470,433	425,499	44,934	3.00	2.79 2.79	5	2.43 2.43	> 5 > 5				2.90	71.0	22,360	20,601
1984	9	134,162	15,027	481,265	436,184	45,081	3.00		5						0.62	64.5	22,477	20,651
1984	10	90,773	15,132	227,306	172,831	54,475	3.60	2.06	5	1.64	> 5				2.59	48.1	22,594	20,701
1984	11	80,754	15,161	218,417	163,837	54,580	3.60	2.06	5	1.64	> 5				0.68	42.6	22,711	20,751
1984	12	85,935	15,189	227,503	172,823	54,680	3.60	2.06	5	1.64	> 5				2.62		22,828	20,801
1985	1	72,568	15,235	214,886	160,040	54,846	3.60	2.06	5	1.64	> 5				0.37	30.6	22,945	20,851
1985	2	76,436	15,253	245,618	190,707	54,911	3.60	2.06	5	1.64	> 5				0.72		23,062	20,901
1985	3	73,680	15,277	241,007	186,010	54,997	3.60	2.06	5	1.64	> 5				2.16		23,179	20,951
1985	4	90,554	15,284	318,144	223,383	94,761	6.20	2.56	5	2.92	> 5				3.53	52.6	23,296	21,001
1985	5	94,926	15,304	355,424	260,539	94,885	6.20	2.56	5	2.92	> 5				1.58		23,413	21,051
1985	6	133,291	15,352	464,257	369,075	95,182	6.20	2.56	5	2.92	> 5				1.99		23,530	21,101
1985	7	154,376	15,409	522,398	426,862	95,536	6.20	2.56	5	2.92	> 5				0.97		23,647	21,151
1985	8	120,177	15,472	433,406	337,480	95,926	6.20	2.56	5		> 5				0.85		23,764	21,201
1985	9	140,183	15,492	485,603	389,553	96,050	6.20	2.56	5		> 5				2.35		23,881	21,251
1985	10	87,176	15,550	371,587	259,627	111,960	7.20	3.08	5	3.60	> 5				3.16		23,998	21,301
1985	11	94,375	15,594	422,616	310,339	112,277	7.20	3.08	5	3.60	> 5				0.27		24,115	21,351
1985	12	74,723	15,635	357,925	245,353	112,572	7.20	3.08	5	3.60	> 5				0.05		24,232	21,401
1986	1	86,876	15,681	399,810	286,907	112,903	7.20	3.08	5	3.60	> 5				0.03		24,349	21,451
1986	2	77,477	15,721	367,065	253,874	113,191	7.20	3.08	5	3.60	> 5				1.03		24,466	21,501
1986	3	80,513	15,745	377,632	264,268	113,364	7.20	3.08	5	3.60	> 5				0.68		24,583	21,551
1986	4	98,620	15,805	441,042	327,246	113,796		3.08	5	3.60	> 5				1.27		24,700	21,601
1986	5	115,349	15,839	501,304	387,263	114,041	7.20	3.08	5	3.60	> 5				1.14		24,817	21,651
1986	6	137,231	15,875	578,753	464,453	114,300	7.20	3.08	5	3.60	> 5				2.26	67.6	24,934	21,701

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC	SFSC	SFP1	SFB1	SFP2	SFB2	SFP3	SFB3	SFP4	SFB4	SFPREC	SFTEMP	SFHHI	SFNHH
1986	7	131,516	15,949	557,466	442,633	114,833	7.20	3.08	5	3.60	> 5					2.14	70.5	25,051	21,751
1986	8	137,301	15,968	580,089	465,119	114,970	7.20	3.08	5	3.60	> 5					1.40	71.4	25,168	21,801
1986	9	133,064	16,047	565,535	449,997	115,538	7.20	3.08	5	3.60	> 5					2.81	60.5	25,285	21,851
1986	10	89,334	16,109	410,243	294,258	115,985	7.20	3.08	5	3.60	> 5					1.38	50.5	25,402	21,901
1986	11	82,776	16,147	388,466	272,208	116,258	7.20	3.08	5	3.60	> 5					3.52	38.6	25,519	21,951
1986	12	95,115	16,173	402,495	286,049	116,446	7.20	3.08	5	3.60	> 5					1.62	32.5	25,636	22,001
1987	1	87,300	16,201	404,146	287,499	116,647	7.20	3.08	5	3.60	> 5					0.85	30.5	25,753	22,051
1987	2	80,843	16,231	383,191	266,328	116,863	7.20	3.08	5	3.60	> 5					0.34	35.9	25,870	22,101
1987	3	76,230	16,280	366,007	248,791	117,216	7.20	3.08	5	3.60	> 5					0.20	40.4	25,987	22,151
1987	4	100,763	16,315	455,142	337,674	117,468	7.20	3.08	5	3.60	> 5					0.17	51.1	26,104	22,201
1987	5	104,478	16,398	464,219	346,153	118,066	7.20	3.08	5	3.60	> 5					2.26	56.8	26,221	22,251
1987	6	133,749	16,467	569,366	450,804	118,562	7.20	3.08	5	3.60	> 5					0.68	68.5	26,338	22,301
1987	7	189,174	16,528	767,390	648,388	119,002	7.20	3.08	5	3.60	> 5					0.65	72.1	26,455	22,351
1987	8	149,424	16,584	625,878	506,473	119,405	7.20	3.08	5	3.60	> 5					3.52		26,572	22,401
1987	9	123,718	16,634	534,339	414,574	119,765	7.20	3.08	5	3.60	> 5					0.46		26,689	22,451
1987	10	122,714	16,675	531,455	411,395	120,060	7.20	3.08	5	3.60	> 5					0.75	55.9	26,806	22,501
1987	11	93,807	16,715	429,712	309,364	120,348	7.20	3.08	5	3.60	> 5					0.94	40.6	-	22,551
1987	12	91,542	16,767	421,244	300,522	120,722	7.20	3.08	5	3.60	> 5					0.37	31.4	27,040	22,601
1988	1	91,626	16,781	421,874	301,051	120,823	7.20	3.08	5	3.60	> 5					0.92		27,157	22,651
1988	2	80,989	16,808	383,422	266,774	116,648	6.94	3.08	5	3.60	> 5					0.13	39.1	27,274	22,701
1988	3	95,000	16,825	430,000	313,235	116,766		2.97	5		> 5					0.17		27,391	22,751
1988	4	110,377	16,847	470,658	353,740	116,918	6.94	2.97	5		> 5					1.25		27,508	22,801
1988	5	137,738	16,894	565,256	448,012	117,244	6.94	2.97	5	3.47	> 5					1.04		27,625	22,851
1988	6	145,030	16,953	589,218	471,564	117,654	6.94	2.97	5	3.47	> 5					3.83		27,742	22,901
1988	7	139,577	17,004	571,373	453,365	118,008		2.97	5	3.47	> 5					3.00		27,859	22,951
1988	8	137,289	17,054	563,376	445,021	118,355		2.97	5	3.47	> 5					2.26		27,976	23,001
1988	9	112,249	17,078	478,204	359,683	118,521	6.94	2.97	5		> 5					3.56		28,093	23,051
1988	10	102,239	17,131	444,893	326,004	118,889		2.97	5		> 5					0.79		28,210	23,101
1988	11	102,153	17,164	444,740	325,622						> 5					0.92		•	23,151
1988	12	94,600	17,232	419,462	299,872						> 5					0.00			23,201
1989	1	94,101	17,269	417,907	298,060	•										1.01		•	23,251
1989	2	85,768	17,317	390,630	270,450	•										0.74			23,301
1989	3	91,071	17,361	409,213	288,728	-										0.85		28,795	23,351
1989	4	121,961	17,407	512,784	391,979	120,805	6.94	2.97	5	3.47	> 5					0.09	52.9	28,912	23,401

I VEAD	2	3	4	5	6	7	8	9	10	11	12	13 14		16	17	18	19	20
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC		SFP1	SFB1	SFP2	SFB2	SFP3 SFB3	SFP4	SFB4		SFTEMP	SFHHI	SFNHH
1989	5	155,259	17,453	627,333	506,209	121,124	6.94	2.97	5	3.47	> 5				0.49	59.4	29,029	23,451
1989	6	184,897	17,509	730,019	608,507	121,512	6.94	2.97	5	3.47	> 5				0.32	67.0	29,146	23,501
1989	7	204,656	17,550	798,050	676,253	121,797	6.94	2.97	5	3.47	> 5				2.32	70.6	29,263	23,551
1989	8	136,607	17,578	563,433	441,442	121,991	6.94	2.97	5	3.47	> 5				1.61	66.5	29,380	23,601
1989	9	152,504	17,634	618,623	496,243	122,380	6.94	2.97	5	3.47	> 5				0.52	67.8	29,497	23,651
1989	10	125,378	17,679	527,092	404,400	122,692	6.94	2.97	5	3.47	> 5				1.62	54.0	29,614	23,701
1989	11	103,541	17,716	452,670	329,721	122,949	6.94	2.97	5	3.47	> 5				0.40	41.4	29,731	23,751
1989	12	108,557	17,777	469,900	346,528	123,372	6.94	2.97	5	3.47	> 5				0.37	31.3	29,848	23,801
1990	1	94,706	17,808	417,663	294,075	123,588	6.94	2.97	5	3.47	> 5				0.41	30.5	29,965	23,851
1990	2	85,749	17,838	398,663	274,867	123,796	6.94	2.97	5	3.47	> 5				0.82	35.9	30,082	23,901
1990	3	88,082	17,903	401,939	277,692	124,247	6.94	2.97	5	3.47	> 5				0.41	45.2	30,199	23,951
1990	4	103,606	17,957	453,957	329,335	124,622	6.94	2.97	5	3.47	> 5				1.77	50.9	30,316	24,001
1990	5	123,482	18,009	521,633	396,651	124,982	6.94	2.97	5	3.47	> 5				1.23	55.3	30,433	24,051
1990	6	195,645	18,067	768,455	643,070	125,385	6.94	2.97	5	3.47	> 5				0.00	70.6	30,550	24,101
1990	7	185,159	18,157	733,711	607,701	126,010	6.94	2.97	5	3.47	> 5				2.56	68.4	30,667	24,151
1990	8	137,849	18,194	521,308	395,042	126,266	6.94	2.97	5	3.47	> 5				2.60	66.8	30,784	24,201
1990	9	150,250	18,243	614,852	488,246	126,606	6.94	2.97	5	3.47	> 5				2.30	59.0	30,901	24,251
1990	10	115,039	18,277	494,154	367,312	126,842	6.94	2.97	5	3.47	> 5				0.56	51.5	31,018	24,301
1990	11	98,893	18,332	440,404	313,180	127,224	6.94	2.97	5	3.47	> 5				1.19	40.7	31,135	24,351
1990	12	101,116	18,359	447,560	320,149	127,411	6.94	2.97	5	3.47	> 5				1.60	26.7	31,252	24,401
1991	1	99,039	18,371	440,533	313,038	127,495	6.94	2.97	5	3.47	> 5				0.04	28.7	31,369	24,451
1991	2	87,861	18,385	404,412	276,820	127,592	6.94	2.97	5	3.47	> 5				0.00	38.0	31,486	24,501
1991	3	90,579	18,403	413,658	285,941	127,717	6.94	2.97	5	3.47	> 5				1.45	39.0	31,603	24,551
1991	4	109,976	18,446	478,062	350,047	128,015	6.94	2.97	5	3.47	> 5				0.00	46.9	31,720	24,601
1991	5	157,984	18,487	642,911	514,611	128,300	6.94	2.97	5	3.47	> 5				2.08	57.0	31,837	24,651
1991	6	156,841	18,521	638,371	509,835	128,536	6.94	2.97	5	3.47	> 5				2.64	65.8	31,954	24,701
1991	7	171,614	18,543	688,970	560,282	128,688	6.94	2.97	5	3.47	> 5				4.43	67.9	32,071	24,751
1991	8	124,497	18,589	528,661	399,653	129,008	6.94	2.97	5	3.47	> 5				3.59	67.4	32,188	24,801
1991	9	139,593	18,605	580,212	451,093	129,119	6.94	2.97	5	3.47	> 5				1.95	60.3	32,305	24,851
1991	10	127,116	18,639	537,426	408,071	129,355	6.94	2.97	5	3.47	> 5				0.38	51.6	32,422	24,901
1991	11	103,378	18,681	457,949	328,303	129,646	6.94	2.97	5	3.47	> 5				1.53	36.8	32,539	24,951
1991	12	114,946	18,718	497,521	367,618	129,903	6.94	2.97	5	3.47	> 5				1.36	31.0	-	25,001
1992	1	96,820	18,730	433,471	303,485	129,986	6.94	2.97	5	3.47	> 5				0.82	26.4	32,773	25,051
1992	2	84,946	18,772	397,269	266,991	130,278	6.94	2.97	5	3.47	> 5				0.28	35.9	32,890	25,101

									10			12	1.4	1.5	16	17	18	19	20
I	2	3	4	5	6	7	8	9	10	11 SFP2	12 SFB2	13	14 SFB3	15 CER4	16 SFB4		SFTEMP	SFHHI	SFNHH
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC		SFP1	SFB1		> 5 > 5	3573	SEDS	SFF4	SFD4	0.72	41.8	33,007	25,151
1992	3	89,102	18,818	410,364	279,767	130,597	6.94	2.97	5	3.47	> 5					0.72	51.2	33,124	25,201
1992	4	120,668	18,865	517,506	386,583	130,923	6.94	2.97	5 5	3.47	> 5					2.37	56.8	33,241	25,251
1992	5	148,602	18,920	611,708	480,403	131,305	6.94	2.97	_	3.47						1.15	63.8	33,358	25,301
1992	6	148,886	18,938	613,430	482,000	131,430	6.94	2.97	5	3.47	> 5					0.94	68.4	33,475	25,351
1992	7	203,204	18,994	799,912	668,094	131,818	6.94	2.97	5	3.47	> 5								
1992	8	174,290	19,042	700,597	568,446	132,151	6.94	2.97	5	3.47	> 5					2.65	67.0	33,592	25,401
1992	9	163,377	19,124	664,212	531,491	132,721	6.94	2.97	5	3.47	> 5					1.68	61.7	33,709	25,451
1992	10	144,431	19,164	599,365	466,367	132,998	6.94	2.97	5	3.47	> 5					0.53	53.1	33,826	25,501
1992	11	106,790	19,225	472,067	338,646	133,422	6.94	2.97	5	3.47	> 5					1.61	33.2	33,943	25,551
1992	12	113,008	19,279	492,310	358,514	133,796	6.94	2.97	5	3.47	> 5					2.18	25.3	34,060	25,601
1993	1	102,259	19,294	456,906	323,006	133,900	6.94	2.97	5	3.47	> 5					2.08	32.3	34,177	25,651
1993	2	87,399	19,355	408,808	274,484	134,324	6.94	2.97	5	3.47	> 5					0.98	35.5	34,294	25,701
1993	3	93,916	19,394	430,112	295,518	134,594	6.94	2.97	5	3.47	> 5					1.25		34,411	25,751
1993	4	113,794	19,463	496,809	361,736	135,073	6.94	2.97	5	3.47	> 5					0.00		34,528	25,801
1993	5	154,404	19,500	635,836	500,506	135,330	6.94	2.97	5	3.47	> 5					0.75		34,645	25,851
1993	6	186,124	19,534	743,555	607,989	135,566	6.94	2.97	5	3.47	> 5					0.54		•	25,901
1993	7	211,034	19,597	830,361	694,358	136,003	6.94	2.97	5	3.47	> 5					1.71			25,951
1993	8	193,473	19,623	772,463	636,279	136,184	6.94	2.97	5	3.47	> 5					3.36			26,001
1993	9	161,194	19,653	683,900	547,508	136,392	6.94	2.97	5	3.47	> 5					0.54		35,113	26,051
1993	10	156,963	19,709	621,673	484,893	136,780	6.94	3.00	5	3.50	> 5					0.66		35,230	26,101
1993	11	111,722	19,749	496,298	359,240	137,058	6.94	3.01	5	3.51	> 5					0.99		•	26,151
1993	12	117,395	19,819	513,411	375,867	137,544	6.94	3.00	5	3.50	> 5					0.24		•	26,201
1994	1	115,026	19,866	504,999		137,870		2.97	5	3.47	> 5					0.30		35,581	26,251
1994	2	112,864	19,915	502,101	363,891	138,210		3.00	5	3.50	> 5					0.63		•	26,301
1994	3	82,162	19,970	392,768				3.01	5	3.51	> 5					1.86		•	26,351
1994	4	94,416	20,020	439,530		138,939		3.00	5	3.50						1.53		•	26,401
1994	5	144,645	20,064	611,496		139,244		3.00	5							3.84			26,451
1994	6	152,037	20,094	639,259	•	139,452		3.02	5							0.57		36,166	26,501
1994	7	245,697	20,197	960,055	•	140,167		3.01	5							0.63		36,283	26,551
1994	8	214,344	20,270	850,499		140,674		3.01	5	3.51						2.85		•	
1994	9	163,704	20,327	682,777		· ·		3.00	5	3.50						2.34		•	26,651
1994	10	149,929	20,408	631,097	-	•			5							2.52		•	•
1994	11	129,101	20,472	559,447	-				5							2.00		•	26,751
1994	12	106,405	20,479_	482,159	340,035	142,124	6.94	3.01	5	3.51	> 5					0.66	34.0	36,868	26,801

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	SFUSET	SFACCT	SFTREV	SFTVREV	SFTFC	SFSC	SFP1	SFB1	SFP2	SFB2	SFP3	SFB3	SFP4	SFB4	SFPREC	SFTEMP	SFHHI	SFNHH
1995	1	97,860	20,503	448,703	306,412	142,291	6.94	3.00	5	3.50	> 5					0.70	31.9	36,985	26,851
1995	2	99,025	20,539	455,580	313,039	142,541	6.94	3.01	5	3.51	> 5					0.48	39.1	37,102	26,901
1995	3	94,945	20,586	447,513	304,646	142,867	6.94	3.02	5	3.52	> 5					0.38	42.1	37,219	26,951
1995	4	116,815	20,578	514,400	371,589	142,811	6.94	3.00	5	3.50	> 5					0.70	45.7	37,336	27,001
1995	5	127,618	20,609	555,025	411,999	143,026	6.94	3.01	5	3.51	> 5					1.25	55.2	37,453	27,051
1995	6	183,301	20,657	749,055	605,695	143,360	6.94	3.01	5	3.51	> 5					1.25	62.2	37,570	27,101
1995	7	212,143	20,681	848,637	705,111	143,526	6.94	3.01	5	3.51	> 5					0.91	70.0	37,687	27,151
1995	8	211,784	20,712	846,136	702,395	143,741	6.94	3.02	5	3.52	> 5					2.52	71.4	37,804	27,201
1995	9	189,120	20,732	768,425	624,545	143,880	6.94	3.00	5	3.50	> 5					1.86	61.8	37,921	27,251

1	2	21	22	23	24			S. CATEG		
YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	EI) P	RET	ORD	M
1980	1	0.00	0.00	0.00	0.00	() (0	0	0
1980	2	0.00	0.00	0.00	0.00	() (0	0	0
1980	3	0.00	0.00	0.00	0.00	() (0	0	0
1980	4	0.00	0.00	0.00	0.00	() (0	0	0
1980	5	0.00	0.00	0.00	0.00	() (0	0	0
1980	6	0.00	0.00	0.00	0.00	() (0	0	0
1980	7	0.00	0.00	0.00	0.00	(C	0	0	0
1980	8	0.00	0.00	0.00	0.00	(0 (0	0	0
1980	9	0.00	0.00	0.00	0.00) (0	0	0
1980	10	0.00	0.00	0.00	0.00		0 (0	0	0
1980	11	0.00	0.00	0.00	0.00	1	0 (0	0	0
1980	12	0.00	0.00	0.00	0.00	1	0 (0	0	0
1981	1	0.00	0.00	0.00	0.00		0 (0	0	0
1981	2	0	0	0	0		0 (0 0	0	0
1981	3	0	0	0	0		0 (0 0	0	0
1981	4	0	0	0	0		0	0 0	0	0
1981	5	0	0	0	0		0	0 0	0	0
1981	6	0	0	0	0		0	0 0	0	0
1981	7	0	0	0	0		0	0 0	0	0
1981	8	0	0	0	0		0	0 0	0	0
1981	9	0	0	0	0		0	0 0	0	0
1981	10	0	0	0	0		0	0 0	0	0
1981	11	0	0	0	0		0	0 0	0	0
1981	12	0	0	0	0		0	0 0	0	0
1982	1	0	0	0	0		0	0 0	0	0
1982	2	0	0	0	0		0	0 0	0	0
1982	3	0	0	0	0		0	0 0	0	0
1982	4	0	0	0	0		0	0 0	0	0
1982	5	0	0	0	0		0	0 0	0	0
1982	6	0	0	0	0		0	0 0	0	0
1982	. 7	0	0	0	0		0	0 0	0	0
1982	. 8	0	0	0	0		0	0 0	0	0
1982	9	0	0	0	0		0	0 0	0	0
1982	. 10	0	0	0	0		0	0 0	0	0

1	2	21	22	23	24	(CONS.	CATEG	ORIES	
YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	ED	PI	RET	ORD	M
1982	11	0	0	0	0	0	0	0	0	0
1982	12	0	0	0	0	0	0	0	0	0
1983	1	0	0	0	0	0	0	0	0	0
1983	2	0	0	0	0	0	0	0	0	0
1983	3	0	0	0	0	0	0	0	0	0
1983	4	0	0	0	0	0	0	0	0	0
1983	5	0	0	0	0	0	0	0	0	0
1983	6	0	0	0	0	0	0	0	0	0
1983	7	0	0	0	0	0	0	0	0	0
1983	8	0	0	0	0	0	0	0	0	0
1983	9	0	0	0	0	0	0	0	0	0
1983	10	0	0	0	0	0	0	0	0	0
1983	11	0	0	0	0	0	0	0	0	0
1983	12	0	0	0	0	0	0	0	0	0
1984	1	0	0	0	0	0	0	0	0	0
1984	2	0	0	0	0	0	0	0	0	0
1984	3	0	0	0	0	0	0	0	0	0
1984	4	0	0	0	0	0	0	0	0	0
1984	5	0	0	0	0	0	0	0	0	0
1984	6	0	0	0	0	0	0	0	0	0
1984	7	0	0	0	0	0	0	0	0	0
1984	8	0	0	0	0	0		0	0	0
1984	9	0	0	0	0	0	0	0	0	0
1984	10	0	0	0	0	0	0	0	0	0
1984	11	0	0	0	0	0	0	0	0	0
1984	12	0	0	0	0	0	0	0	0	0
1985	1	0	0	0	0	. 0	0	0	0	0
1985	2	0	0	0	0	0	0	0	0	0
1985	3	0	0	0	0	0	0	0	0	0
1985	4	0	0	0	0	0	0	0	0	0
1985	5 5	0	0	0	0	0	0	0	0	0
1985	6	0	0	0	0	0	0	- 0	0	0
1985	5 7	0	0	0	0	O	0	0	0	0
1985	5 8	0	0	0	0	C	0	0	0	0

1	2	21	22	23	24		CONS.	CATEG	ORIES	
YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	ED	PI	RET	ORD	M
1985	9	0	0	0	0	0	0	0	0	0
1985	10	0	0	0	0	0	0	0	0	0
1985	11	0	0	0	0	0	0	0	0	0
1985	12	0	0	0	0	0	0	0	0	0
1986	1	0	0	0	0	0	0	0	0	0
1986	2	0	0	0	0	0	0	0	0	0
1986	3	0	0	0	0	0	0	0	0	0
1986	4	0	0	0	0	0	0	0	0	0
1986	- 5	0	0	0	0	0	0	0	0	0
1986	6	0	0	0	0	0	0	0	0	0
1986	7	0	0	0	0	0	0	0	0	0
1986	8	0	0	0	0	0	0	0	0	0
1986	9	0	0	0	0	0	0	0	0	0
1986	10	0	0	0	0	0	0	0	0	0
1986	11	0	0	0	0	0	0	0	0	0
1986	12	0	0	0	0	0	0	0	0	0
1987	1	0	0	0	0	0	0	0	0	0
1987	2	0	0	0	0	0	0	0	0	0
1987	3	0	0	0	0	0	0	0	0	0
1987	4	0	0	0	0	0	0	0	0	0
1987	5	0	0	0	0	0	0	0	0	0
1987	6	0	0	0	0	0	0	0	0	0
1987	7	0	0	0	0	0	0	0	0	0
1987	8	0	0	0	0	0	0	0	0	0
1987	9	0	0	0	0	0	0	0	0	0
1987	10	0	0	0	0	0	0	0	0	0
1987	11	0	0	0	0	. 0	0	0	0	0
1987	12	0	0	0	0	0	0	. 0	0	0
1988	1	0	0	0	0	0	0	0	0	0
1988	2	0	0	0	1	0	1	0	0	0
1988	3	0	0	0	1	0	1	0	0	0
1988	3 4	0	0	0	1	0	1	. 0	0	0
1988	3 5	0	0	0	1	0	1	0	0	0
1988	8 6	0	0	0	1	0	I	0	0	0

1	2	21	22	23	24	(CONS.	CATEG	ORIES	
YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	ED	PI	RET	ORD	M
1988	7	0	0	0	1	0	i	0	0	0
1988	8	0	0	0	1	0	1	0	0	0
1988	9	0	0	0	1	0	1	0	0	0
1988	10	0	0	0	1	0	1	0	0	0
1988	11	0	0	0	1	0	1	0	0	0
1988	12	0	0	0	1	0	1	0	0	0
1989	1	0	0	0	1	0	1	0	0	0
1989	2	0	0	0	1	0	1	0	0	0
1989	3	0	0	0	1	0	1	0	0	0
1989	4	0	0	0	1	0	1	0	0	0
1989	5	0	0	0	1	0	1	0	0	0
1989	6	0	.0	0	1	0	1	0	0	0
1989	7	0	0	0	1	0	1	0	0	0
1989	8	0	. 0	0	1	0	1	0	0	0
1989	9	0	0	0	1	0	1	0	0	0
1989	10	0	0	0	1	0	1	0	0	0
1989	11	0	0	0	1	0	1	0	0	0
1989	12	0	0	0	1	0	1	0	0	0
1990	1	0	0	0	1	0	1	0	0	0
1990	2	1	0	1	1	0	1	0	0	0
1990	3	1	0	1	1	0	1	0	0	0
1990	4	1	0	1	1	0	1	0	0	0
1990	5	1	0	1	1	0	1	0	0	0
1990	6	1	0	1	1	0	1	0	0	0
1990	7	1	0	1	1	0	1	0	0	0
1990	8	1	0	1	1	0	1	0	0	0
1990	9	1	0	1	1	. 0	1	0	0	0
1990	10	1	0	1	1	Ò	1	0	0	0
1990	11	1	0	1	1	0	1	0	0	0
1990	12	1	1	1	1	0	1	0	0	0
1991	1	1 .	1	1	1	0	i	0	0	0
1991	2	1	0	1	1	0	1	. 0	0	0
1991	. 3	1	0	1	1	0	1	0	0	0
1991	4	1	0	11	11	0	1	0	0	0

1	2	21	22	23	24			CATEG		
YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	ED		RET	ORD	<u>M</u>
1991	5	1	0	1	1	C		0	0	0
1991	6	1	0	1	1	C	1	0	0	0
1991	7	1	. 0	1	i	C	1	0	0	0
1991	8	1	0	1	1	C	1	0	0	0
1991	9	1	0	1	1	() 1	0	0	0
1991	10	1	0	1	1	() 1	0	0	0
1991	11	1	0	1	1	() 1	0	0	0
1991	12	1	0	1	1	(1	0	0	0
1992	1	1	0	1	1	() 1	0	0	0
1992	2	1	0	1	1	() 1	0	0	0
1992	3	1	0	1	1	() 1	0	0	0
1992	4	I	.0	1	1	() 1	0	0	0
1992	5	1	0	1	1	() 1	0	0	0
1992	6	1	0	1	1	() 1	0	0	0
1992	7	1	0	1	1) 1	0	0	0
1992	8	1	0	1	1	() 1	0	0	0
1992	9	1	0	1	1	(1	0	0	0
1992	10	1	0	1	1	() 1	0	0	0
1992	11	1	0	1	1		0 1	0	0	0
1992	12	1	0	1	1	1	0 1	0	0	0
1993	1	1	0	1	1		0 1	0	0	0
1993	2	1	0	1	1		0 1	0	0	0
1993	3	1	0	1	1		0 1	0	0	0
1993	4	1	0	1	1		0 1	0	0	0
1993	5	1	0	1	1		0 1	0	0	0
1993	6	1	0	1	1		0 1	0	0	0
1993		1	0	1	1	•	0 1	0	0	0
1993		1	0	1	1		0 1	. 0	0	0
1993		1	0	1	1		0 1	0	0	0
1993		1	0	1	1		0 1	0	0	0
1993		1	0	1	1		0 1	0	0	0
1993		1	0	1	1		0 1	. 0	0	0
1994		1	0	1	1		0 1	0	0	0
1994		1	0	1	1		0 1	0	0	0_

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	1	2	21	22	23	24	C	ONS.	CATEG	ORIES	
	YEAR	MONTH	SFLITPI	SFCPPPI	SFKITPI	SFLSPI	ED	PI	RET	ORD	M
	1994	3	1	0	1	1	0	1	0	0	0
	1994	4	1	0	1	1	0	1	0	0	0
	1994	5	1	0	1	1	0	1	0	0	0
	1994	6	1	0	1	1	0	1	0	0	0
	1994	7	1	0	1	1	0	1	0	0	0
	1994	8	1	0	1	1	0	1	0	0	0
	1994	9	1	0	1	1	0	1	0	0	0
	1994	10	1	0	1	1	0	1	0	0	0
	1994	11	1	0	1	1	0	1	0	0	0
	1994	12	1	0	1	1	0	1	0	0	0
	1995	1	1	0	1	1	0	1	0	0	0
	1995	2	1	0	1	1	0	1	0	0	0
	1995	3	1	0	1	1	0	1	0	0	0
	1995	4	1	0	1	1	0	1	0	0	0
	1995	5	1	0	1	1	0	1	0	0	0
	1995	6	1	0	1	1	0	1	0	0	0
	1995	7	1	0	1	1	0	1	0	0	0
	1995	8	1	0	1	1	0	1	0	0	0
	1995	9	1	0	1	1	0	1	0	0	0

Las Cruces Residential Water Data --- Unit: 1,000 gallons

					Las	Cruces	1/621	aciitia	ı vv ai	CI Da	ia	Omt.	1,000 į	ganons	<u> </u>			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16 17	18	19	20
YEAR	MONTH	LCUSET	LCACCT	LCTREV	LCTVREV	LCTFC	LCSC	LCP1	LCB1	LCP2	LCB2	LCP3	LCB3	LCP4	LCB4 LCPREC	LCTEMP	LCHHI	LCNHH
1982	11	193,351	13,169	154,926	102,250	52,676	4.00	0.46	25	0.58	50	0.69	> 50		0.48	49.0	16,449	18,035
1982	12	282,551	13,167	220,283	167,615	52,668	4.00	0.46	25	0.58	50	0.69	> 50		1.53	41.6	16,533	18,090
1983	1	158,428	13,213	135,195	82,343	52,852	4.00	0.46	25	0.58	50	0.69	> 50		0.77	41.6	16,617	18,145
1983	2	131,702	13,187	120,550	67,802	52,748	4.00	0.46	25	0.58	50	0.69	> 50		0.70	47.7	16,701	18,200
1983	3	191,791	13,201	151,238	98,434	52,804	4.00	0.46	25	0.58	50	0.69	> 50		0.22	52.5	16,785	18,255
1983	4	229,772	13,284	171,103	117,967	53,136	4.00	0.46	25	0.58	50	0.69	> 50		0.68	54.0	16,869	18,310
1983	5	256,991	13,266	184,944	131,880	53,064	4.00	0.46	25	0.58	50	0.69	> 50		0.45	65.8	16,953	18,365
1983	6	337,673	13,380	229,523	176,003	53,520	4.00	0.46	25	0.58	50	0.69	> 50		0.20	74.3	17,037	18,420
1983	7	459,694	13,436	301,306	247,562	53,744	4.00	0.46	25	0.58	50	0.69	> 50		0.29	81.2	17,121	18,475
1983	8	399,013	13,520	265,890	211,810	54,080	4.00	0.46	25	0.58		0.69	> 50		0.87	79.4	17,205	18,530
1983	9	386,612	13,580	-	205,069	54,320	4.00	0.46	25	0.58		0.69	> 50		0.14	75.9	17,289	18,585
1983		,	13,574		133,120	54,296	4.00	0.46	25	0.58		0.69	> 50		1.33	62.9	17,373	18,640
1983	11	193,775	13,590		101,970	54,360	4.00	0.46	25	0.58		0.69	> 50		1.46	51.4	17,457	18,695
1983		•	-	-	77,875	54,436	4.00	0.46	25	0.58		0.69	> 50		0.17	42.6	17,541	18,750
1984		139,710	•	•	73,124	54,092	4.00	0.40	10			0.90	> 50		0.50	43.4	17,625	18,805
1984		,			72,269	53,984	4.00	0.40	10			0.90	> 50		0.00	45.2	17,709	18,860
1984		180,538			97,134	50,368	4.00		10				> 50		0.11	54.0	17,793	18,915
1984		210,891		-	116,074	50,508	4.00		10			0.90	> 50		0.01	59.6	17,877	18,970
1984				-	153,913	50,840	4.00		10				> 50		1.09	73.1	17,961	19,025
1984		,			203,638	51,116							> 50		1.11	77.8	18,045	19,080
1984		350,678			227,070	55,388			10				> 50		0.38	80.4	18,129	19,135
1984		,		,	167,412	55,595							> 50		4.82	77.3	18,213	19,190
1984		,	-	-	133,028	55,625							> 50		0.27	72.6	18,297	19,245
1984		,				55,943							> 50		2.73 0.40	58.2 49.9	18,381	19,300
1984		•				56,145							> 50 > 50		2.37	49.9 44.1	18,465	19,355 19,410
1984		•	•	•	-	56,248 56,403							> 50		1.28		18,549 18,633	19,410
1985		116,575	•	-		•							> 50		0.89		18,717	19,403
1985		. ,											> 50		0.09		18,801	19,520
198		141,981				56,868							> 50		0.59		18,885	19,575
198		207,343		-		56,635 57,160							> 50		0.39		18,969	19,685
198		5 275,447				57,169 57,216							> 50		0.14		19,053	19,740
198		426,238				57,706									1.39		19,033	19,740
198	3	7 396,05	13,42	0 317,974	200,208	31,700	4.30	0.43	10	0.70	30	0.97			1.39	19.9	17,137	17,793

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	LCUSET	LCACCT	LCTREV	LCTVREV	LCTFC	LCSC	LCPI	LCB1	LCP2	LCB2	LCP3	LCB3			LCPREC	LCTEMP	LCHHI	LCNHH
1985	8	317,041	13,397	258,331	200,724	57,607	4.30	0.43	10	0.70	50	0.97	> 50			2.05	78.7	19,221	19,850
1985	9	258,238	13,449	215,838	158,007	57,831	4.30	0.43	10	0.70	50	0.97	> 50			2.68	71.1	19,305	19,905
1985	10	154,947	13,386	144,404	86,844	57,560	4.30	0.43	10	0.70	50	0.97	> 50			3.19	61.2	19,389	19,960
1985	11	138,410	13,465	134,420	76,521	57,900	4.30	0.43	10	0.70	50	0.97	> 50			0.09	51.2	19,473	20,015
1985	12	149,348	13,558	141,669	83,370	58,299	4.30	0.43	10	0.70	50	0.97	> 50			0.12	43.3	19,557	20,070
1986	1	141,734	13,498	136,711	78,670	58,041	4.30	0.43	10	0.70	50	0.97	> 50			0.00	46.1	19,641	20,125
1986	2	139,818	13,537	135,478	77,269	58,209	4.30	0.43	10	0.70	50	0.97	> 50			0.19	51.0	19,725	20,180
1986	3	177,725	13,579	160,919	102,529	58,390	4.30	0.43	10	0.70	50	0.97	> 50			0.22	55.9	19,809	20,235
1986	4	246,535	13,618	207,339	148,782	58,557	4.30	0.43	10	0.70	50	0.97	> 50			0.04	64.6	19,893	20,290
1986	5	322,125	13,665	261,757	202,998	58,760	4.30	0.43	10	0.70	50	0.97	> 50			0.61	69.4	19,977	20,345
1986	6	356,683	13,716	287,577	228,598	58,979	4.30	0.43	10	0.70	50	0.97	> 50			2.08	77.3	20,061	20,400
1986	7	270,027	13,754	233,653	171,760	61,893	4.50	0.43	10	0.73	50	1.04	> 50			1.85	79.1	20,145	20,455
1986	8	302,253	13,771	258,254	196,285	61,970	4.50	0.43	10	0.73	50	1.04	> 50			1.99	79.4	20,229	20,510
1986	9	245,338	13,872	215,725	153,301	62,424	4.50	0.43	10	0.73	50	1.04	> 50			1.76	72.0	20,313	20,565
1986	10	188,350	13,865	175,223	112,831	62,393	4.50	0.43	10	0.73	50	1.04	> 50			0.60	61.1	20,397	20,620
1986	11	200,010	13,908	185,302	122,716	62,586	4.50	0.43	10	0.73	50	1.04	> 50			1.60	48.7	20,481	20,675
1986	12	152,328	13,915	149,952	87,335	62,618	4.50	0.43	10	0.73	50	1.04	> 50			2.06	42.2	20,565	20,730
1987	1	92,437	13,985	114,928	51,996	62,933	4.50	0.43	10	0.73	50	1.04	> 50			0.21	42.0	20,649	20,785
1987	2	136,674	14,004	140,622	77,604	63,018	4.50	0.43	10	0.73	50	1.04	> 50			0.22	46.8	20,733	20,840
1987	3	166,870	14,044	159,574	96,376	63,198	4.50	0.43	10	0.73	50	1.04	> 50			0.03	50.6	20,817	20,895
1987	4	213,666	14,093	192,737	129,319	63,419	4.50	0.43	10	0.73	50	1.04	> 50			0.01	59.5	20,901	20,950
1987	5	275,353	14,153	237,391	173,703	63,689	4.50	0.43	10	0.73	50	1.04	> 50			0.05	68.2	20,985	21,005
1987	6	352,711	14,186	299,915	236,078	63,837	4.50	0.43	10	0.73	50	1.04	> 50			1.27	77.0	21,069	21,060
1987	7	411,613	14,284	378,742	314,464	64,278	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.19	80.8	21,153	21,115
1987	8	383,490	14,312	352,685	288,281	64,404	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	4.78	78.2	21,237	21,170
1987	9	267,147	14,380	250,893	186,183	64,710	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.62	70.9	21,321	21,225
1987	10	236,950	14,392	226,420	161,656	64,764	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.24	65.9	21,405	21,280
1987	11	163,838	14,358	167,628	103,017	64,611	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.31	50.7	21,489	21,335
1987	12	178,481	14,426	180,549	115,632	64,917	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	1.24	40.4	21,573	21,390
1988	1	134,933	14,364	147,840	83,202	64,638	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.18	41.9	21,657	21,445
1988	2	129,696	14,435	143,865	78,908	64,958	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.84	48.5	21,741	21,500
1988	3	183,305	14,494	182,499	117,276	65,223	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.07	52.9	21,825	21,555
1988	4	244,893	14,522	231,113	165,764	65,349	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.31	59.6	21,909	21,610
1988	5	276,365	14,545	257,437	191,985	65,453	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.07	69.7	21,993	21,665

1	2	3		5	_	7	8	9	10	11	12	13	14	15	16	17	18	19	20
					LCTVREV	LCTFC		LCPI	LCB1		LCB2	LCP3	LCB3	LCP4		LCPREC	LCTEMP	LCHHI	LCNHH
1988	6	433,393	14,581	397,091	331,477	65,615	4.50	0.43	5	0.48	10	0.82	50	1.17	> 50	0.26	78.0	22,077	21,720
1988	7	386,990	14,564	367,683	302,145	65,538	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	1.55	81.1	22,161	21,775
1988	8	317,140	14,617	303,088	237,312	65,777	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	3.79	77.5	22,245	21,830
1988	9	244,058	14,627	240,220	174,399	65,822	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	2.05	71.1	22,329	21,885
1988	10	210,150	14,629	209,943	144,113	65,831	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	1.09	65.7	22,413	21,940
1988	11	178,918	14,658	184,910	118,949	65,961	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.06	53.3	22,497	21,995
1988	12	162,890	14,711	172,290	106,091	66,200	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.97	42.1	22,581	22,050
1989	1	155,042	14,715	166,059	99,842	66,218	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.30	42.9	22,665	22,105
1989	2	133,887	14,743	150,350	84,007	66,344	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.78	49.1	22,749	22,160
1989	3	190,799	14,751	193,644	127,265	66,380	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.67	57.4	22,833	22,215
1989	4	249,734	14,812	242,582	175,928	66,654	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.00	66.1	22,917	22,270
1989	5	368,220	14,911	348,833	281,734	67,100	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.57	72.1	23,001	22,325
1989	6	421,789	14,905	399,839	332,767	67,073	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.33	79.5	23,085	22,380
1989	7	478,409	14,961	455,369	388,045	67,325	4.50	0.43	5	0.48	10	0.87	50	1.23	> 50	0.71	82.7	23,169	22,435
1989	8	339,677	14,987	331,240	262,150	69,090	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	3.79	78.2	23,253	22,490
1989	9	250,191	15,034	250,384	181,077	69,307	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.76	73.2	23,337	22,545
1989	10	255,673	15,073	256,409	186,922	69,487	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.29	63.2	23,421	22,600
1989	11	187,757	15,061	198,118	128,687	69,431	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.04	52.7	23,505	22,655
1989	12	164,336	15,126	178,728	108,997	69,731	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	1.03	41.6	23,589	22,710
1990	1	160,851	15,144	176,116	106,302	69,814	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.51	42.0	23,673	22,765
1990	2	139,802	15,108	160,202	90,554	69,648	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.04	45.4	23,757	22,820
1990	3	188,447	15,123	197,506	127,789	69,717	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.20	54.7	23,841	22,875
1990	4	237,099	15,153	245,602	175,747	69,855	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.88	64.3	23,925	22,930
1990	5	297,485	15,285	292,905	222,441	70,464	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.30	69.5	24,009	22,985
1990	6	432,594	15,233	423,406	353,182	70,224	4.61	0.44	5	0.49	10	0.89	50	1.26	> 50	0.02	83.9	24,093	23,040
1990	7	431,089	15,172	430,191	357,365	72,826	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.87	79.9	24,177	23,095
1990	8	283,209	15,227	285,082	211,992	73,090	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.22	76.3	24,261	23,150
1990	9	235,928	15,284	242,942	169,579	73,363	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.44	74.1	24,345	23,205
1990	10	214,823	15,333	223,879	150,281	73,598	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.02	62.0	24,429	23,260
1990	11	163,805	15,276	179,261	105,936	73,325		0.46	5	0.51	10	0.93	50	1.31	> 50	0.62	52.7	24,513	23,315
1990	12	130,399	-			73,483		0.46	5	0.51	10	0.93	50	1.31	> 50	0.41	43.3	24,597	23,370
1991	1	140,113	15,328	161,279	87,705	73,574		0.46	5	0.51	10	0.93	50	1.31	> 50	0.44	43.5	24,681	23,425
1991	2	136,867	15,328			73,574		0.46	5	0.51	10	0.93	50	1.31	> 50	0.35	50.3	24,765	23,480
1991	3	132,779	15,350	155,006	81,326	73,680	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.69	51.7	24,849	23,535

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
YEAR	MONTH	LCUSET	LCACCT	LCTREV	LCTVREV	LCTFC	LCSC	LCP1	LCB1	LCP2	LCB2	LCP3	LCB3	LCP4	LCB4	LCPREC	LCTEMP	LCHHI	LCNHH
1991	4	235,830	15,449	241,251	167,096	74,155	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.00	60.7	24,933	23,590
1991	5	300,360	15,535	300,494	225,926	74,568	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.32	69.9	25,017	23,645
1991	6	337,782	15,467	335,972	261,730	74,242	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.12	76.6	25,101	23,700
1991	7	365,860	15,540	363,484	288,892	74,592	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.70	78.5	25,185	23,755
1991	8	280,390	15,555	282,143	207,479	74,664	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	5.19	78.1	25,269	23,810
1991	9	222,078	15,612	230,004	155,066	74,938	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.23	70.1	25,353	23,865
1991	10	224,478	15,655	233,260	158,116	75,144	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.40	64.2	25,437	23,920
1991	11	165,326	15,634	181,416	106,373	75,043	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.31	48.6	25,521	23,975
1991	12	134,214	15,711	157,300	81,887	75,413	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.91	43.7	25,605	24,030
1992	1	133,714	15,716	162,786	87,349	75,437	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.50	39.7	25,689	24,085
1992	2	118,113	15,710	146,172	70,764	75,408	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.04	47.7	25,773	24,140
1992	3	162,074	15,824	178,871	102,916	75,955	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.35	53.8	25,857	24,195
1992	4	215,442	15,826	224,135	148,170	75,965	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.44	63.1	25,941	24,250
1992	5	264,916	15,886	271,324	195,071	76,253	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	2.03	68.5	26,025	24,305
1992	6	290,912	15,844	293,192	217,141	76,051	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.15	76.7	26,109	24,360
1992	7	443,745	15,937	442,671	366,173	76,498	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.55	81.7	26,193	24,415
1992	8	329,914	15,890	329,731	253,459	76,272	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	3.19	78.2	26,277	24,470
1992	9	320,627	15,983	321,622	244,904	76,718	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.77	74.3	26,361	24,525
1992	10	274,198	16,017	278,114	201,232	76,882	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.64	64.2	26,445	24,580
1992	11	164,325	15,956	182,214	105,625	76,589	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.06	47.0	26,529	24,635
1992	12	163,283	16,069	180,989	103,858	77,131	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.31	42.6	26,613	24,690
1993	1	130,376	16,097	156,843	79,577	77,266	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	1.82	46.3	26,697	24,745
1993	2	115,547	16,038	145,565	68,583	76,982	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.19	48.4	26,781	24,800
1993	3	178,337	16,165	193,653	116,061	77,592	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.20	54.7	26,865	24,855
1993	4	252,106	16,227	257,729	179,839	77,890	4.80	0.46	5	0.51	10	0.93	50	1.31	> 50	0.02	61.1	26,949	24,910
1993	5	301,454	16,347	314,547	236,081	78,466	4.80	0.50	5	0.55	10	0.97	50	1.35	> 50	0.02	69.8	27,033	24,965
1993	6	381,130	16,396	395,956	317,255	78,701	4.80	0.50	5	0.55	10	0.97	50	1.35	> 50	0.40	78.5	27,117	25,020
1993	7	421,139	16,347	458,852	376,463	82,389	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	2.22	81.8	27,201	25,075
1993	8	320,483	16,463	352,311	269,337	82,974	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	2.46	79.7	27,285	25,130
1993	9	286,996	16,462	318,672	235,704	82,968	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.27	72.5	27,369	25,185
1993	10	272,710	16,477	302,800	219,756	83,044	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.72	61.8	27,453	25,240
1993	11	174,452	16,559	209,027	125,570	83,457	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.33	49.3	27,537	25,295
1993	12	154,969	16,595	191,517	107,878	83,639	5.04	0.57	5	0.62	: 10	1.06	50	1.46	> 50	0.75	44.0	27,621	25,350
1994	1	151,353	16,604	188,448	104,764	83,684	5.04	0.57	5	0.62	: 10	1.06	50	1.46	> 50	0.09	44.2	27,705	25,405

1	2	3	4	5	.6	7	8	9	10	11	12	13	14	15	16	. 17	18	19	20
YEAR	MONTH	LCUSET	LCACCT	LCTREV	LCTVREV	LCTFC	LCSC	LCP1	LCB1	LCP2	LCB2	LCP3	LCB3	LCP4	LCB4	LCPREC	LCTEMP	LCHHI	LCNHH
1994	2	126,012	16,580	167,443	83,880	83,563	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.18	46.4	27,789	25,460
1994	3	177,534	16,715	211,122	126,878	84,244	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.12	55.5	27,873	25,515
1994	4	244,567	16,693	274,866	190,733	84,133	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.36	62.0	27,957	25,570
1994	5	311,946	16,965	342,882	257,378	85,504	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.48	71.1	28,041	25,625
1994	6	363,286	16,992	397,367	311,727	85,640	5.04	0.57	5	0.62	10	1.06	50	1.46	> 50	0.12	83.3	28,125	25,680
1994	7	495,477	17,042	552,827	465,231	87,596	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	3.24	84.0	28,209	25,735
1994	8	373,090	17,092	415,839	327,986	87,853	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.54	83.0	28,293	25,790
1994	9	343,741	17,090	383,172	295,329	87,843	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.81	74.9	28,377	25,845
1994	10	274,034	17,088	308,096	220,264	87,832	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.27	63.2	28,461	25,900
1994	11	179,822	17,135	219,840	131,766	88,074	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.65	51.7	28,545	25,955
1994	12	149,409	17,168	193,318	105,074	88,244	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	1.11	47.7	28,629	26,010
1995	1	159,247	17,211	202,308	113,843	88,465	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.71	43.6	28,713	26,065
1995	2	129,013	17,192	175,462	87,095	88,367	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.60	53.3	28,797	26,120
1995	3	174,955	17,260	215,331	126,615	88,716	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.07	55.9	28,881	26,175
1995	4	253,385	17,245	289,760	201,121	88,639	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.01	58.6	28,965	26,230
1995	5	294,571	17,428	331,398	241,818	89,580	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.11	67.6	29,049	26,285
1995	6	418,187	17,386	464,363	374,999	89,364	5.14	0.58	5	0.63	10	1.08	50	1.49	> 50	0.17	78.2	29,133	26,340
1995	7	432,386	17,456	506,355	412,093	94,262	5.40	0.61	5	0.66	10	1.13	50	1.56	> 50	2.13	81.2	29,217	26,395
1995	8	383,550	17,558	444,000	349,187	94,813	5.40	0.61	5	0.66	10	1.13	50	1.56	> 50	0.47	82.4	29,301	26,450
1995	9	371,280	17,490	433,268	338,822	94,446	5.40	0.61	5	0.66	10	1.13	50	1.56	> 50	2.79	74.5	29,385	26,505