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# Water System Revenue Requirements and Rate Restructuring Report

August 10, 2007

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# EXECUTIVE SUMMARY

In November 2006, the Bexar Metropolitan Water District (District) engaged Brown and Caldwell to study the District's water utility costs for the purpose of developing recommendations that would consolidate the existing water rate structures, decrease monthly bills for low-use customers, promote conservation among high-use customers, and bring the District's rates more into parity with those charged by the San Antonio Water System (SAWS). This report summarizes the procedures utilized as well as the findings and recommendations of the rate restructuring efforts, the results of which are summarized in Tables 1 through 4.

## RESIDENTIAL RATES

Table 1. Residential Class Monthly Service Charge

| Meter Size (in.) | Charge |
|---|---|
| 5/8 | $6.50 |
| ¾ | $8.50 |
| 1 | $13.00 |
| 1½ | $32.50 |
| 2 | $52.00 |

Table 3. Residential Class Volume Charges

| Monthly Consumption (gal) | Volume Charge (per 1,000 gallons) |
|---|---|
| 0 – 7,000 | $0.85 |
| 7,001 – 10,000 | $1.25 |
| 10,001 – 17,000 | $3.40 |
| Over 17,000 | $5.44 |

## COMMERCIAL RATES

Table 2. Commercial Class Monthly Service Charge

| Meter Size (in.) | Charge |
|---|---|
| 5/8 | $20.00 |
| ¾ | $25.00 |
| 1 | $40.00 |
| 1½ | $100.00 |
| 2 | $160.00 |
| 2½ | $260.00 |
| 3 | $360.00 |
| 4 | $640.00 |
| 6 | $1,400.00 |
| 8 | $2,400.00 |

Table 4. Commercial Class Volume Charges

| Monthly Consumption (gal) | Volume Charge (per 1,000 gallons) |
|---|---|
| 0 to 25,000 | $1.22 |
| 25,001 – 150,000 | $2.07 |
| Over 150,000 | $5.21 |

Brown and Caldwell used statistical analyses and Monte Carlo simulation modeling to calculate the proposed rates. We followed a three-step iterative process for designing the rates that required us to (1) normalize and statistically define water demands, (2) set up and run the simulation model, and (3) test the simulation results against the District's goals and objectives. The latter two steps were repeated as necessary until the rates were judged to meet the goals and objectives. Ultimately, the Board adopted the proposed rates as shown in the Appendix and in Tables 1 through 4. The proposed rate structure compares favorably to the Board's established objectives, as summarized in the following paragraphs.

**Single Rate Structure:** As of the Report Date, the District was serving 49 named service areas and using 4 separate water rate schedules. In its history, the District has had as many as 23 separate rate schedules, which it has consolidated over time to the 4 that existed prior to engaging Brown and Caldwell for the Study. The rates recommended in this report constitute a single rate schedule applicable to the entire District. In addition, the System Improvement/Resource Development Charges are to be consolidated into one fee and will be based on volume. The pass-through Edwards Aquifer Authority (EAA) Management Fee will remain the same as the current rate. Table 5 represents residential and commercial customer rates for these categories.

Table 5. System Improvement Charges and EAA Management Fees

| Development Charge (All Customer Classes) | EAA Management Fee (Pass-Through) |
|---|---|
| $1.51 per 1,000 gallons | $0.12 per 1,000 gallons |

**Decreased Residential Rates:** Approximately 75% of the District's residential customers use less than 10,000 gallons per month on average. The proposed rates have reduced monthly service charges significantly and are expected to result in a projected decrease in monthly bills for all typical residential customers (5/8-inch meters) using less than 10,000 gallons per month under normal conditions. Projected savings for the smallest of water users, those using less than 5,000 gallons per month, are substantial.

**Promotion of Conservation:** As a general rule, conservation-based pricing is said to occur when there is a higher price for increasing levels of usage. When presented with higher prices for water, it is expected that consumers will alter their usage characteristics over time, particularly for discretionary water usage, generally decreasing their demand in order to pay less overall. Because the District's adopted rate schedule includes increasing volume charges for increasingly higher levels of water use, it is an example of conservation-based pricing.

**Competitive Pricing:** The proposed rates are similar to rates charged by most Texas water utilities. Brown and Caldwell conducted a survey of water utilities in Texas and found that most rate structures resemble that of the proposed rates. That is, most rate structures are heavily dependent on volumetric charges as opposed to fixed monthly fees, and most rate structures resemble an "inclining block" conservation rate such as the proposed rates. The report contains several tables and graphs that illustrate how closely the District's rates resemble those of SAWS.

The report also documents a number of findings uncovered in the course of the Study, which the District will need to consider in the future. These include, but are not limited to, considerations pertaining to the impacts of decreased usage resulting from the conservation-based pricing or from very wet years. Additional considerations include debt service coverage strategies and also potential impacts of the pending HB1565 bill in the legislation.

# SECTION 1: INTRODUCTION AND OVERVIEW

## 1.1 Introduction and Background

In November 2006, the Bexar Metropolitan Water District (District) engaged Brown and Caldwell to study the District's water utility costs for the purpose of developing recommendations that would consolidate the existing water rate structures, decrease customer bills for low-use customers, promote conservation among high-use customers, and bring the District's rates more into parity with those charged by the San Antonio Water System (SAWS). Brown and Caldwell presented the recommended rates to the District's Board of Directors on April 23, 2007. This report documents the assumptions, methodology, findings, recommendations, and results of the Bexar Metropolitan Water District Rate Study for 2007 (Study).

The District is a governmental agency of the State of Texas created in 1945 by a special act of the Legislature of Texas. The District is a water purveying agency supplying retail water service to its customers, who are situated in multiple non-contiguous service areas in and around the City of San Antonio, and wholesale water service to Atascosa Rural Water Supply Corporation and the East Central Special Utility District. The District provides limited wastewater services to a limited commercial customer base in the City of Bulverde but otherwise is not engaged in providing wastewater collection or treatment anywhere in its certificated service area. On a contract basis, or as a convenience for its customers, the District bills for and collects charges for garbage removal and sewer services provided by other municipal agencies. As of the date of this report, the District collected garbage and sewer charges for the City of Castle Hills, sewer charges for the San Antonio River Authority, and sewer and volunteer fire department fees for the City of Somerset. The District also bills for waste management services in certain areas.

Although the District initially was established within a narrowly defined service area with a certificate of convenience and necessity (CCN), over time it either has allowed other utility districts and/or private companies to join the District or has acquired additional service areas. In each instance, whether through consolidation or acquisition, the District has expanded its service area and CCN. As of the date of this report, the District was serving 49 named service areas consolidated and served under 4 separate water rate schedules. In its history, the District has had as many as 23 separate rate schedules, which it has consolidated over time to the 4 that existed prior to engaging Brown and Caldwell for the Study.

In its 2007 legislative session, the Texas House of Representatives introduced legislation referred to as HB1565. The enacted purpose of HB1565 is to cause the District to meet various performance measurements and to report to an Oversight Committee that would have certain supervisory powers over the District until the next legislative session in 2009. As of the date of the report, however, the terms of HB1565 were not yet fully known; the version of the bill that was then being debated was aimed at severely limiting the District's powers and possibly consolidating the District under the supervision and management of Bexar County.

HB1565 was proposed approximately halfway through the execution of the Study. As described in this report, the introduction of HB1565 with its extreme proposed measures led to the District's prioritizing development of a new rate schedule and changed the Study approach accordingly.

## 1.2 Report Date

The effective date of this report is April 23, 2007 (Report Date), which is the date on which Brown and Caldwell presented the recommended rates to the District's Board of Directors. As such, this report only includes information that was available at the time the recommendations were made and does not include any subsequent events that have taken place between that date and the date this report was issued (Issue Date).

## 1.3 Overview of the Ratemaking Process

Brown and Caldwell follows standard industry practices for determining water rates. These practices are described in some detail in the American Water Works Association Manual of Water Supply Practices: M1 (*Principles of Water Rates, Fees, and Charges*, Fifth Ed., 2000). In general, the ratemaking process for water utilities includes three steps: determination of test-year revenue requirements, allocation of the revenue requirements to customer classes (sometimes called "cost-of-service" allocation), and calculation of rates that recover the revenue requirements. The scope of work outlined for the Study includes each of these steps.

Subsequent to the introduction of HB1565, however, the District prioritized the rate calculations and directed Brown and Caldwell to focus its efforts to develop a rate schedule that met the District's objectives for the water rates. As a result, Brown and Caldwell, as of the Report Date, had completed only two of the three major steps described above: calculation of the test-year revenue requirements, and calculation of rates that recover those revenue requirements. The allocation of revenue requirements was not completed as of the Report Date, but will be completed at a later date with the results provided to the District for its consideration.

# SECTION 2: REVENUE REQUIREMENTS

Revenue requirements are the total operating and capital costs the District must recuperate from its rates to properly operate, maintain, and develop the water system infrastructure. The first step in the ratemaking process is to determine the revenue requirements for a given year, called a "test year." Both the determination of revenue requirements and selection of the test year are important because the rates developed need to recover the revenue requirements in the year in which those costs are expected to occur (the test year).

Under existing industry standards, there are two generally accepted approaches to projecting revenue requirements for a water utility: the cash-needs approach and the utility approach. Under the cash-needs approach, total revenue requirements are the annual expenditures necessary to meet operating and maintenance (O&M) costs, debt service requirements, and any cash-funded capital expenditures. Government-owned utilities, such as the District, typically use the cash-needs approach to calculate revenue requirements since the approach lends itself to actual requirements for expenditure, which in turn supports the governmental budgeting process.

The utility approach is typically used by investor-owned or private utilities. The utility approach differs from the cash-needs approach in that debt service and cash-funded capital expenditures are removed from the total and replaced with depreciation expense and a component allowing the utility owners to earn a return on investment in the used and useful rate base. Under the utility approach, the "rate base" is essentially the utility plant in service net of accumulated depreciation, less allowances for contributed assets and other adjustments, and includes allowances for working capital. Although used extensively by privately owned utilities, government-owned utilities often apply this approach in calculating revenue requirements for customers outside of their jurisdictional boundaries.

The District is a collection of service areas, each of which is included in the District's CCN. There are no significant concentrations of customers outside the District's jurisdictional boundaries. As such, Brown and Caldwell used the cash-needs approach to calculate revenue requirements and did not apply the utility approach.

## 2.1 Selection of the Test Year

The District's fiscal year runs from May 1$^{st}$ through April 30$^{th}$. Brown and Caldwell began the Study in November 2006 noting that the fiscal year ended on April 30, 2007 (fiscal year 2007). After introduction of HB1565, the District accelerated the ratemaking process and directed that the proposed rates would become effective as of June 1, 2007. As a result, Brown and Caldwell recommended that the District use its 2008 fiscal year (May 1, 2007 through April 30, 2008) as the test year for calculating the

revenue requirements and the resulting rates.

## 2.2 Methodology for Calculating Revenue Requirements

Brown and Caldwell used a financial planning model to calculate the District's revenue requirements for the test year, and to project those requirements over a ten-year period so that the District would have foresight of any additional changes to rates in the future. The financial planning model is a comprehensive tool that allows Brown and Caldwell to thoroughly calculate and account for each component of the revenue requirements and to determine the level of revenues needed to meet various financial constraints faced by the District such as debt service coverage requirements, minimum fund balances (reserves), and capital expenditure needs.

Inherent in the financial planning process is the need to meet future financial goals. Some of these goals are known and obligatory, as is the case with meeting the District's debt service coverage requirements. Other goals are embodied in the expectation for future costs, such as expected capital investment, required cash reserves, issuance of additional debt, inclusion of new water supply contracts, increasing or decreasing staff levels, etc. The process followed by Brown and Caldwell was to develop a base financial plan, followed by a series of interviews and discussions with staff, which allowed us to revise the financial plan to meet the District's specific goals, objectives, and financial needs.

The process of the financial plan started with the current fiscal year, fiscal year 2007. The fiscal year 2007 budget was adjusted to reflect approximately ten months of actual expenditures through March 2007; the remaining two months of the fiscal year were projected based on consultation with the District. Adjustments included those for known and anticipated budget variances by the fiscal year-end, April 30, 2007. From the fiscal year 2007 projected budget, Brown and Caldwell worked with the District to forecast revenues, O&M expenses, debt service requirements, capital expenditures, and cash flows for a ten-year period. Brown and Caldwell used basic assumptions for forecasting, including allowances for system growth, general cost inflation, and other factors discussed later in the report.

## 2.3 Components of the Revenue Requirements

The cash-needs revenue requirements for the test year consist of the projected levels for O&M costs, debt service, and cash-funded capital expenditures. The rates, however, are based on the need for user charges, which include adjustments (deductions from the revenue requirements) for sources of income that are not derived from the rates. Such non-rate revenues include miscellaneous revenues (e.g., penalties and fees), tap fees, and interest earnings. Accordingly, there is a need to separate the total revenue requirements from the user-charge revenue requirements.

- **Total Revenue Requirements**: the total O&M, debt service, and cash-funded capital expenditures required to sustain operations in the test year. The District must recover total revenues from all sources equal to or exceeding the total revenue requirements in order to meet its financial goals and to not draw down its unrestricted cash reserves.
- **User-Charge Revenue Requirements**: the total revenue requirements less any income derived from sources other than the rates charged to the District's retail and wholesale customers. The District must recover the user-charge revenue requirements from the proposed rates.

The following sections summarize the various components of the revenue requirements.

### 2.3.1 O&M Costs

O&M expenses are those costs incurred to operate and maintain treatment plants; wells; lines; and pumping, transmission and distribution facilities and to fund administrative and general expenses. The two main factors used in the projection of O&M expenses were system growth and inflation. Brown and Caldwell used the results of a recent impact fee study conducted for the District by the engineering firm of PBS&J as the basis for our assumed annual system growth rate of 3%. Inflation estimates are based on long-term estimates provided by the Department of Labor, which indicate that a long-term rate of 3.3% is appropriate.

Many of the O&M costs for a water utility are fixed in nature, meaning that the costs do not vary with the amount of water produced and delivered. Salaries, for example, are annual costs that the District pays regardless of whether it delivers any water or no water. Fixed costs tend to increase with inflation, but not necessarily with system growth (i.e., increases in total water demand). Variable costs, which make up a small portion of total costs in a typical water utility, tend to vary directly with both inflation and with system growth. Brown and Caldwell, with the District's assistance, identified fixed and variable costs of the water system and projected those costs accordingly (i.e., using both growth and inflation for variable costs, and only inflation for fixed costs).

In addition to the basic projections of fixed and variable costs, Brown and Caldwell also worked with the District to identify various costs that were expected to increase independently of inflation and system growth. The most significant known items included the addition of water supply contracts with terms beginning in fiscal year 2008 and increases in personnel costs related to expected staffing levels and the costs of employee benefits.

- **Water Supply Contracts**: Identified collectively as the "WECO contract," these costs were added to the projection of O&M expenses based on the contract provisions that were contemplated as of the Report Date. These costs included the following:
  - No expenses in fiscal year 2007
  - Expense of $1.7 million in fiscal year 2008
  - Increase of $3.0 million for fiscal year 2009
  - Increase of $600 thousand for fiscal year 2010
  - Increase of $350 thousand in fiscal year 2011
  - Increase of $260 thousand in fiscal year 2012
- **SAWS Water Purchase Agreement:** The District had been a party to a water purchase agreement with the San Antonio Water System (i.e., SAWS) with an annual purchase amount of approximately $1.2 million in fiscal year 2007. The District advised that it was terminating that agreement, which caused the following impacts to the projected O&M costs:
  - $1.2 million for fiscal year 2007
  - No expense following fiscal year 2007
- **Water Lease Costs:** The District is party to a number of water leases, the costs of which were anticipated as follows:
  - Canyon Regional Water Authority – $130 thousand increase
  - Bexar-Medina-Atascosa Water Control Improvement District No. 1 (BMA) water purchase – $100 thousand decrease
  - Canyon Lake Water Supply Corporation – $50 thousand increase
  - Water Lease – $300 thousand increase to include the Hartman lease agreement
- **Human Resource Costs:** The District expects to increase staffing levels, and expects future costs of employee benefits to increase at a rate above and beyond inflation and system growth (based on recent trends). In most cases, Brown and Caldwell, acting under the District's guidance, projected human resource costs related to salaries and benefits by 12% per year for the fiscal years 2008 through 2010.

Table 6 is a projection of the District's O&M expenses as of the Report Date. The table separates O&M costs by department.

## Table 6. O&M Expenses (April 23, 2007)

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| General Administrative | $3,891,937 | $4,022,572 | $4,157,623 | $4,297,241 | $4,441,583 | $4,590,810 |
| Customer Service | 3,742,979 | 4,169,052 | 4,645,493 | 5,178,319 | 5,774,272 | 5,964,823 |
| HEB Sewer | 8,685 | 8,971 | 9,267 | 9,573 | 9,889 | 10,215 |
| Engineering | 1,969,032 | 2,173,147 | 2,400,888 | 2,654,868 | 2,938,200 | 3,035,160 |
| Construction | 2,105,028 | 2,308,003 | 2,533,696 | 2,784,780 | 3,064,248 | 3,165,368 |
| Excavation & Earth Moving | 122,445 | 136,947 | 153,183 | 171,361 | 191,714 | 198,041 |
| Maintenance | 5,923,853 | 5,503,465 | 5,867,062 | 6,264,495 | 6,699,502 | 6,920,586 |
| Electrical & Scada | 509,577 | 552,452 | 599,868 | 652,351 | 710,489 | 733,935 |
| Production | 18,008,078 | 19,620,014 | 23,477,344 | 24,973,641 | 26,292,060 | 27,232,570 |
| Computer Support | 1,730,105 | 1,848,483 | 1,978,121 | 2,120,274 | 2,276,344 | 2,351,463 |
| Garage | 1,448,460 | 1,532,433 | 1,623,518 | 1,722,470 | 1,830,133 | 1,890,528 |
| Purchasing | 415,977 | 447,103 | 481,343 | 519,052 | 560,624 | 579,125 |
| Human Resources | 492,361 | 543,357 | 600,206 | 663,601 | 734,319 | 758,551 |
| Public Information | 507,301 | 550,931 | 599,228 | 652,733 | 712,051 | 735,549 |
| Accounting | 1,900,980 | 2,070,987 | 2,259,477 | 2,468,604 | 2,700,781 | 2,789,907 |
| Warehouse | 215,095 | 236,863 | 261,110 | 288,129 | 318,248 | 328,750 |
| Executive | 3,831,654 | 4,864,414 | 5,088,012 | 5,326,558 | 5,581,453 | 5,765,641 |
| Non-Operating Costs | 330,805 | 255,000 | 255,000 | 255,000 | 255,000 | 255,000 |
| Total Operating and Maintenance Expenses | $47,154,352 | $50,844,194 | $56,990,439 | $61,003,050 | $65,090,910 | $67,306,022 |
| % Change from Previous Year | | 8% | 12% | 7% | 7% | 3% |

### 2.3.2 Capital Costs

Capital costs are driven by the District's past, present, and future plans for capital improvements. Outstanding debt service is a function of past investments in capital improvements, and projected debt service represents the District's present and future investments. The same is true of any cash-funded capital improvements. The District's capital improvements plan (CIP) is provided in Table 7 and was provided by the District for use in the Study. Table 7 represents the capital improvement costs as planned by the District as of the Report Date.

Table 7. Capital Improvement Plan (Constant 2007 Dollars)

| | Budget Yr. | Projected | | | | |
|---|---|---|---|---|---|---|
| Project Description | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Pumping Improvements | $0 | $1,140,834 | $764,826 | $1,605,333 | $525,000 | $500,000 |
| Water Supply Improvements | 0 | 6,065,265 | 4,879,328 | 1,306,348 | 1,491,348 | 1,014,019 |
| Future Ground Storage | 0 | 10,608,155 | 4,506,404 | 2,994,000 | 100,000 | 966,667 |
| Transmission Improvements | 0 | 6,327,841 | 6,219,094 | 8,692,533 | 7,773,333 | 5,047,600 |
| Elevated Storage Improvements | 0 | 5,753,532 | 8,630,348 | 7,200,000 | 2,258,000 | 1,991,333 |
| Main Relocations | 0 | 0 | 0 | 0 | 2,000,000 | 2,000,000 |
| Misc. Improvements | 10,000,000 | 104,372 | 0 | 0 | 0 | 0 |
| Total | $10,000,000 | $30,000,000 | $25,000,000 | $21,798,215 | $14,147,682 | $11,519,619 |

The capital expenditures shown in Table 7 are in constant 2007 dollars (i.e., real terms) and do not include the effects of inflation. Assumptions for inflation as it relates to capital improvements differed from the inflation assumptions used for other costs. Inflation for construction costs, such as those evident in the District's CIP historically has outpaced general inflation in the economy. Brown and Caldwell assumed a higher inflation rate for capital project costs, leading to the projection shown on Table 8.

Table 8. Capital Improvement Plan (Inflated Dollars)

| Project Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Pumping Improvements | $0 | $1,197,262 | $843,069 | $1,855,524 | $634,580 | $631,875 |
| Water Supply Improvements | 0 | 6,365,264 | 5,378,495 | 1,509,942 | 1,802,627 | 1,281,467 |
| Future Ground Storage | 0 | 11,132,853 | 4,967,419 | 3,460,614 | 120,872 | 1,221,626 |
| Transmission Improvements | 0 | 6,640,827 | 6,855,322 | 10,047,263 | 9,395,807 | 6,378,908 |
| Elevated Storage Improvements | 0 | 6,038,111 | 9,513,252 | 8,322,118 | 2,729,297 | 2,516,549 |
| Main Relocations | 0 | 0 | 0 | 0 | 2,417,446 | 2,527,501 |
| Misc. Improvements | 10,000,000 | 109,535 | 0 | 0 | 0 | 0 |
| Total | $10,000,000 | $31,483,852 | $27,557,557 | $25,195,462 | $17,100,629 | $14,557,926 |
| Annual Inflation Rate | | 4.9% | 5.0% | 4.9% | 4.6% | 4.6% |
| Future Value Factor | | 1.0495 | 1.1023 | 1.1558 | 1.2087 | 1.2638 |

Cash-needs revenue requirements arise from the need to fund the CIP. The District employs both debt (debt service) and equity (cash-funded capital expenditures) to fund its CIP. The following subsections describe the nature and level of that funding.

### 2.3.2.1 Debt Service

The District's debt service for the test year includes outstanding debt issues from past issuances of revenue bonds and commercial paper notes to fund the District's previous investments in capital facilities, including the following:

- Series 1995 Revenue Bonds
- Series 1995A Revenue Bonds
- Series 1998 Revenue Bonds
- Series 1998 BMDC Revenue Bonds – the 1998 BMDC Revenue Bonds are held separately by the Bexar Metropolitan Development Corporation (BMDC). The debt service on the bonds is payable from the system revenues earned by the District and accounted for as an O&M expense in the District's financial plan and revenue requirements.

- Series 2002 Revenue Bonds
- Series 2006 Revenue Bonds
- Commercial Paper Line of Credit

Table 9 summarizes the revenue bonds and required coverage for those bonds for the next five fiscal years (values shown as of the Report Date).

Table 9. Revenue Bonds with Coverage Requirements

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| ***Revenue Bonds w/ Coverage Requirements*** | | | | | | |
| Series 1995 - refunding pending | $2,836,939 | $972,303 | $2,254,401 | $2,798,901 | $2,795,701 | $2,795,401 |
| Water Facility Contract Series 1998 - BMDC Bonds | 0 | 0 | 0 | 0 | 0 | 0 |
| Waterworks System Series 1998 | 3,469,435 | 3,472,475 | 3,467,875 | 3,470,785 | 3,470,665 | 3,467,425 |
| Series 2002 | 2,555,726 | 2,572,231 | 2,578,069 | 2,579,319 | 2,581,404 | 2,590,294 |
| Series 2006 | 2,793,526 | 2,992,438 | 2,995,875 | 2,993,038 | 2,994,138 | 2,993,963 |
| Revenue Notes Series 1995A | 125,000 | 125,000 | 125,000 | 125,000 | 125,000 | 125,000 |
| Commercial Paper | 162,941 | | | | | |
| Total Revenue Bonds w/ Coverage | $11,943,567 | $10,134,447 | $11,421,220 | $11,967,042 | $11,966,907 | $11,972,082 |

In addition to the outstanding issues in Table 9, the District expects to issue additional bonds including a refunding of the Series 1995 Revenue Bonds with debt service impacts affecting the test year revenue requirements and additional projected issues in future years (the refunding of the Series 1995 Revenue Bonds was assumed as part of the outstanding debt service with terms and conditions as expected as of the Report Date). The District expects to use its commercial paper line of credit as short-term financing for its capital improvements; once the commercial paper line is exhausted, the District typically refinances the line issuing long-term bonds to replenish the line and finance any additional funds that might be required at the time. Tables 10 and 11 depict the expected issuance of commercial paper and of new revenue bonds, respectively.

## Table 10. Projected Issuance of Commercial Paper

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Net Proceeds Needed | $0 | $15,200,000 | $31,000,000 | ($46,200,000) | $11,000,000 | $8,000,000 |
| Coupon Rate | 3.4% | 3.4% | 3.4% | 3.4% | 3.4% | 3.4% |
| Month of Issue | 12 | 12 | 12 | 12 | 12 | 12 |
| Issuance Costs (% of Net Proceeds) | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Issuance Cost | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Costs of Issuance | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Debt Proceeds Required | $0 | $15,200,000 | $31,000,000 | ($46,200,000) | $11,000,000 | $8,000,000 |
| Annual Interest (rounded ) | $0 | $516,800 | $1,054,000 | ($1,570,800) | $374,000 | $272,000 |
| Prorated Annual Interest (paid in the current year) | $0 | $189,000 | $386,000 | ($575,000) | $137,000 | $100,000 |
| Annual Debt Service Payment - all projected issues | $0 | $189,000 | $902,800 | $995,800 | $137,000 | $474,000 |

Table 11. Projected Revenue Bond Issues

| Description | Budget Yr 2007 | 2008 | 2009 | Projected 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Net Proceeds Needed | $0 | $0 | $0 | $58,000,000 | $0 | $0 |
| Repayment Term (yrs) | 30 | 30 | 30 | 30 | 30 | 30 |
| Coupon Rate | 5.5% | 5.5% | 5.0% | 4.5% | 4.5% | 4.5% |
| Month of Issue | 5 | 5 | 5 | 5 | 5 | 5 |
| Issuance Costs (% of Net Proceeds) | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| Issuance Cost | 0 | 0 | 0 | 580,000 | 0 | 0 |
| Debt Service Reserve | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Debt Proceeds Required | $0 | $0 | $0 | $58,580,000 | $0 | $0 |
| Annual Debt Service Payment (rounded) | $0 | $0 | $0 | $3,596,000 | $0 | $0 |
| Prorated Debt Service Payment - current series only | $0 | $0 | $0 | $3,596,000 | $0 | $0 |
| Annual Debt Service Payment - all projected issues | $0 | $0 | $0 | $3,596,000 | $3,596,000 | $3,596,000 |

### 2.3.2.2 Debt Service Coverage Requirements

In addition to payment of the annual debt service requirements listed above, the District is required by its various bond covenants to

> *. . . (i) fix and maintain rates and collect charges for the facilities and services afforded by the system which will provide revenues sufficient at all times to (a) pay for all operating expenses; (b) establish and maintain the interest and sinking fund; (c) generate in each year net revenues equal to 1.25 times the maximum annual requirement for the payment of the principal and interest on the parity bonds at the time outstanding during the then-current fiscal year less capitalized interest, if any, in the interest and sinking fund; and (d) pay all indebtedness outstanding against the system, other than*

*the parity bonds, as and when the same become due . . . .*

These additional coverage requirements add to the revenue requirements by requiring the District to recover surplus revenues which, when O&M expenses are deducted, will produce net revenues 25% greater than the total annual debt service. The 1.25 coverage ratio is the minimum allowable coverage required by the bonds' covenants; the District's Board of Directors has also established a higher goal for debt service coverage of 1.40 times. Due to the Board's directive for no revenue increases in fiscal year 2008, the debt service coverage in that year is expected to fall slightly short of 1.40 times coverage at 1.38 times instead. In all other cases, Brown and Caldwell used the Board's established goal of 1.40 times in calculating the revenue requirements. Table 12 reflects this goal and the debt service coverage requirements.

Table 12. Debt Service Coverage Requirements

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Debt Service Subject to Coverage Requirement: | | | | | | |
| Outstanding Debt Subject to Coverage | $11,943,567 | $10,134,447 | $11,421,220 | $11,967,042 | $11,966,907 | $11,972,082 |
| Projected Debt Service - Revenue Bonds | 0 | 0 | 0 | 3,596,000 | 3,596,000 | 3,596,000 |
| Projected Interest Payments - Commercial Paper | 0 | 189,000 | 902,800 | 995,800 | 137,000 | 474,000 |
| Total Debt Service | $11,943,567 | $10,323,447 | $12,324,020 | $16,558,842 | $15,699,907 | $16,042,082 |
| Minimum Required Coverage | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 |
| Net Revenues Required | 16,720,994 | 14,452,825 | 17,253,628 | 23,182,379 | 21,979,870 | 22,458,915 |
| Operating and Maintenance Expenses | 47,154,352 | 50,844,194 | 56,990,439 | 61,003,050 | 65,090,910 | 67,306,022 |
| **Total Gross Revenues Required** | $63,875,346 | $65,297,019 | $74,244,067 | $84,185,429 | $87,070,780 | $89,764,937 |

#### 2.3.2.3 Cash-Funded Capital Expenditures

The second component of the cash-needs revenue requirements related to capital costs is the District's cash-funded capital expenditures. The District currently does not have a policy related to funding of capital projects but historically has used a combination of debt instruments, including commercial paper, and cash received from impact fees and from unrestricted fund balances.

To determine the cash-funded capital expenditures for the test year, Brown and Caldwell worked with the District using the financial planning model to develop a level of cash funding that would have minimal impact on the need for increases in customers' rates. To determine the level of cash funding required, Brown and Caldwell developed a comprehensive calculation of total sources and uses of funds in a projection of the District's cash flow. Matching identified sources with required uses of funds identified any shortfalls in funding that would require additional cash funding. The following subsections describe the identified uses and the matching sources of funds for the District.

##### 2.3.2.3.1 Uses of Funds

Uses of funds in the cash flow projection include all expected cash expenditures. The uses of funds identified for the District include the following:

- **O&M Costs:** as described above, the O&M costs include those costs incurred to operate and maintain treatment plants; wells; lines; and pumping, transmission and distribution facilities and to fund administrative and general expenses.
- **Debt Service:** as a use of funds, debt service includes the annual interest and principal payments on the District's debt. Debt service coverage requirements are not technically defined as a use of funds. However, such requirements do tend to cause a need for additional revenues in order to meet the bond covenant requirements. Debt service reserve funding normally would be included in the use of funds, but the District is not required to make annual reserve deposits. Debt service payments used in the cash flow projection include all outstanding and projected debt service obligations.
- **Commercial Paper Interest:** the District pays interest on any outstanding balance of the commercial paper line. The interest rate for the commercial paper notes is variable; Brown and Caldwell used a rate of 3.4%, which is the level the District has assumed for financial planning purposes.
- **Costs of Issuance:** these are the costs the District is expected to incur as a result of issuing any new bonds. As provided in Table 11 we assumed an issuance cost equal to 1% of the bond proceeds in the years in which the District is expected to issue new bonds.

- **Capital Improvements:** the actual cost of the capital improvements is a use of funds.
- **Increases in Fund Balance:** whenever the District increases its fund balance, it serves as a use of funds (the District uses the cash to accumulate a fund balance which, in turn, is available for use in future periods).
- **Minimum Fund Balance Requirements:** the District's fund balance is constrained in that the District is required to maintain approximately $10.2 million in reserves that are restricted to a Debt Service Reserve ($6.45 million) and a Contingency Fund ($4.5 million). These funds, because of the restrictions as to use, are uses of the total cash available to the District and are accounted for as such in the projection of cash flows.

#### 2.3.2.3.2 Sources of Funds

Sources of funds include all revenues earned, income received, and interest earnings from accumulated fund balance. In addition, a source of funds can include any cash received by the District, such as debt proceeds or an influx of commercial paper proceeds. The total sources of funds identified by the District for the projection of cash flows include the following items:

- **Beginning Fund Balance:** the beginning fund balance is the amount of unrestricted cash on hand that is available for use in meeting the District's funding requirements.
- **Use of Fund Balance:** when the fund balance is drawn down, or spent, it serves as a source of funds for the current period.
- **New Debt Proceeds:** these proceeds are those received from the issuance of new bonds. Once the issues are completed, the funds are deposited with the District and are available for the purposes outlined in the bonds' Official Statement.
- **Commercial Paper Proceeds:** the District uses its commercial paper line to finance capital projects until the line is exhausted and refunded with the issuance of new bonds. The District's commercial paper line was $50 million as of the Report Date.
- **Other Capital Funding:** this broad category of funding includes such items as impact fees, sale of assets and, potentially, grants and similar contributions. Table 13 depicts the expected impact fees and the projection of proceeds earned from the sale of certain of the District's assets. As of the Report Date, the District expected to receive approval from the Texas Commission of Environmental Quality (TCEQ) for an impact fee of $2,200 per equivalent connection. In addition, the District charges a $1,000 fee for development of water supplies for each equivalent connection. Expected growth in the District is assumed at 3% annually based on the results of an impact fee study adopted by the District in 2006. The District has received a number of pre-paid connections, the effects of which are reflected in the 2007 totals shown in Table 13. The projected impact fee income includes the 3% growth rate as adjusted for the pre-paid connections. The District does not

expect to receive any grant funding. In addition, the District expects to sell various real estate holdings in fiscal year 2007 worth approximately $15 million; these funds have been factored into the analysis of revenue requirements.

Table 13. Revenues from Impact Fees and Sale of Assets

| Project Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Impact Fees/Water Development Fees | 8,710,951 | $6,957,011 | $7,164,633 | $7,378,451 | $7,598,650 | $7,825,420 |
| Proceeds from Sale of Assets | 0 | 15,000,000 | 0 | 0 | 0 | 0 |
| Grants | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | $8,710,951 | $21,957,011 | $7,164,633 | $7,378,451 | $7,598,650 | $7,825,420 |

- **Non-Rate Revenues:** these are revenues earned by the District for activities other than the sale of water to customers. Non-rate revenues account for approximately $6 million to $6.5 million per year.
- **Interest Earnings:** the District earns interest on any collected fund balances; a 3% interest rate was assumed for the purposes of financial planning. Balances are projected as average annual balances. Interest earnings are calculated as the average annual fund balance multiplied by 3%.
- **User Charge Revenues:** income from revenues includes all cash received from customers as a result of water sales, including retail and wholesale water sales. Revenues are primarily driven by water demand and the rates for service as approved by the District's Board of Directors. Although the purpose of the Study was to determine the rates for service, the level of revenues required of those rates must first be determined. Required adjustments to revenues are shown in Table 14. These adjustments are made in the financial planning model after identifying all uses of funds and matching them against all other sources of funds (all but the revenues); any shortages in funding are then made up by adjusting revenues as needed. Note that there is no need to increase revenues for the test year.

Table 14. Required Adjustments to Revenues

| Description | Budget Yr. 2007 | 2008 | Projected 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| ***Retail Rates*** | | | | | | |
| Retail Rates Before Adjustments | $49,410,454 | $50,892,768 | $52,419,551 | $53,992,138 | $55,611,902 | $57,280,259 |
| Total Adjustments to Rates | | 0 | 7,338,737 | 15,252,779 | 16,423,585 | 17,658,258 |
| Total Rate Revenues | $49,410,454 | $50,892,768 | $59,758,288 | $69,244,916 | $72,035,487 | $74,938,517 |
| ***Wholesale and Contracts Rates*** | | | | | | |
| Rate Revenue Before Adjustments | $674,600 | $674,600 | $674,600 | $674,600 | $674,600 | $674,600 |
| Total Adjustments to Rates | | $0 | $94,444 | $190,575 | $199,226 | $207,965 |
| Total Revenues | $674,600 | $674,600 | $769,044 | $865,175 | $873,826 | $882,565 |
| ***Total Misc. Revenues*** | $6,751,581 | $6,043,343 | $6,091,508 | $6,141,118 | $6,192,216 | $6,244,847 |
| ***Total Revenues - All Sources*** | $56,836,636 | $57,610,711 | $66,618,840 | $76,251,209 | $79,101,529 | $82,065,929 |
| % Change from Previous Year | | 1% | 16% | 14% | 4% | 4% |

### 2.3.2.3.3 Total Sources and Uses of Funds

The combined sources and uses of funds make up the District's projected cash flows. From that projection of cash flows, Brown and Caldwell was able to determine the cash-funded capital improvement component of the revenue requirement. Table 15 summarizes the District's anticipated sources and uses of cash.

Table 15. Cash Flow Projections

| Project Description | Budget Yr. 2007 | 2008 | Projected 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | $19,738,994 | $16,727,576 | $19,377,377 | $27,988,827 | $21,390,882 | $21,838,472 |
| **Sources of Funds** | | | | | | |
| Retail Rate Revenues | 49,410,454 | 50,892,768 | 59,758,288 | 69,244,916 | 72,035,487 | 74,938,517 |
| Wholesale/Contract Revenues | 674,600 | 674,600 | 769,044 | 865,175 | 873,826 | 882,565 |
| Other Revenues | 6,751,581 | 6,043,343 | 6,091,508 | 6,141,118 | 6,192,216 | 6,244,847 |
| Debt Proceeds | 0 | 0 | 0 | 58,580,000 | 0 | 0 |
| Commercial Paper Proceeds Used | 0 | 15,200,000 | 31,000,000 | (46,200,000) | 11,000,000 | 8,000,000 |
| Total of Other Capital Funding | 8,710,951 | 21,957,011 | 7,164,633 | 7,378,451 | 7,598,650 | 7,825,420 |
| Interest Earnings | 538,915 | 533,571 | 699,993 | 729,749 | 638,857 | 654,934 |
| Total Sources of Funds | $66,086,502 | $95,301,293 | $105,483,466 | $96,739,409 | $98,339,036 | $98,546,283 |
| **Uses of Funds** | | | | | | |
| Operating and Maintenance Expenses | $47,154,352 | $50,844,194 | $56,990,439 | $61,003,050 | $65,090,910 | $67,306,022 |
| Debt Service Payments - Outstanding Bonds | 11,943,567 | 10,134,447 | 11,421,220 | 11,967,042 | 11,966,907 | 11,972,082 |
| Debt Service Payments - Projected Issues | 0 | 0 | 0 | 3,596,000 | 3,596,000 | 3,596,000 |
| Commercial Paper Interest | 0 | 189,000 | 902,800 | 995,800 | 137,000 | 474,000 |
| Capital Project Costs | 10,000,000 | 31,483,852 | 27,557,557 | 25,195,462 | 17,100,629 | 14,557,926 |
| Costs of Bond Issuance | 0 | 0 | 0 | 580,000 | 0 | 0 |
| Total Uses of Funds | $69,097,919 | $92,651,493 | $96,872,016 | $103,337,354 | $97,891,446 | $97,906,031 |
| Total Change in Fund Balance | ($3,011,418) | $2,649,800 | $8,611,450 | ($6,597,945) | $447,590 | $640,252 |
| Ending Fund Balance | $16,727,576 | $19,377,377 | $27,988,827 | $21,390,882 | $21,838,472 | $22,478,724 |

### 2.3.2.3.4 Net Cash-Funded Capital Expenditures

The cash-funded capital improvements can be examined as a function of total cash funding, or cash funding from the user charges themselves. The District's financing policies and actions are guided more directly by the availability of total cash sources, including

revenues from the user charges. To the extent that total cash sources are not adequate, the District typically engages in debt financing before increasing rates to customers. Table 16 demonstrates the calculation of total cash funding with emphasis on user charges. Deducting all debt and cash funding from sources other than the user charges results in the cash-funded capital expenditures that the District would need to recover from the rates charged to customers. Table 16 indicates that the District's debt and other cash sources are adequate for funding of the capital improvements and that there is no need to seek additional cash funding through the user charges.

Table 16. Cash-Funded Capital Improvements

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| **Debt Funding** | | | | | | |
| Commercial Paper | $0 | $15,200,000 | $31,000,000 | ($46,200,000) | $11,000,000 | $8,000,000 |
| Bond Proceeds | 0 | 0 | 0 | 58,580,000 | 0 | 0 |
| Total Debt Funding | $0 | $15,200,000 | $31,000,000 | $12,380,000 | $11,000,000 | $8,000,000 |
| **Cash Funding Other Than Rates** | | | | | | |
| Impact Fees/Water Development Fees | $8,710,951 | $6,957,011 | $7,164,633 | $7,378,451 | $7,598,650 | $7,825,420 |
| Proceeds from Sale of Assets | 0 | 15,000,000 | 0 | 0 | 0 | 0 |
| Grants | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Earnings | 538,915 | 533,571 | 699,993 | 729,749 | 638,857 | 654,934 |
| Use/(Addition) to Fund Balance | $3,011,418 | ($2,649,800) | ($8,611,450) | $6,597,945 | ($447,590) | ($640,252) |
| Total Cash Funding Other Than Rates | $12,261,283 | $19,840,781 | ($746,825) | $14,706,145 | $7,789,917 | $7,840,102 |
| Total Funding Sources | $12,261,283 | $35,040,781 | $30,253,175 | $27,086,145 | $18,789,917 | $15,840,102 |
| Capital Project Costs | $10,000,000 | $31,483,852 | $27,557,557 | $25,195,462 | $17,100,629 | $14,557,926 |
| Surplus/(Deficit) Funding | $2,261,283 | $3,556,929 | $2,695,618 | $1,890,683 | $1,689,288 | $1,282,176 |
| Funding Required from User Charges | $0 | $0 | $0 | $0 | $0 | $0 |

## 2.4 Projected Revenue Requirements

The total revenue requirements for the District are shown in Table 17. The test year selected for the Study was the District's fiscal year 2008 (May 1, 2007 through April 30, 2008). The total revenue requirement for the test year is $95.112 million; the user charge revenue requirement for the test year is $50.703 million.

## Table 17. Projected Revenue Requirements

| Project Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Operating and Maintenance Expenses | $47,154,352 | $50,844,194 | $56,990,439 | $61,003,050 | $65,090,910 | $67,306,022 |
| Annual Debt Service - Outstanding Debt | 11,943,567 | 10,134,447 | 11,421,220 | 11,967,042 | 11,966,907 | 11,972,082 |
| Annual Debt-Service - Projected Issues | 0 | 0 | 0 | 3,596,000 | 3,596,000 | 3,596,000 |
| Commercial Paper Interest | 0 | 189,000 | 902,800 | 995,800 | 137,000 | 474,000 |
| Capital Projects | 10,000,000 | 31,483,852 | 27,557,557 | 25,195,462 | 17,100,629 | 14,557,926 |
| Bond Issuance Costs | 0 | 0 | 0 | 580,000 | 0 | 0 |
| Change in Fund Balance | (3,011,418) | 2,649,800 | 8,611,450 | (6,597,945) | 447,590 | 640,252 |
| Total Revenue Requirement | $66,086,502 | $95,301,293 | $105,483,466 | $96,739,409 | $98,339,036 | $98,546,283 |
| (Less Non-Rate Revenues): | | | | | | |
| Wholesale/Contract Revenues | $674,600 | $674,600 | $769,044 | $865,175 | $873,826 | $882,565 |
| Other Revenues | 6,751,581 | 6,043,343 | 6,091,508 | 6,141,118 | 6,192,216 | 6,244,847 |
| Debt Proceeds | 0 | 0 | 0 | 58,580,000 | 0 | 0 |
| Commercial Paper Proceeds | 0 | 15,200,000 | 31,000,000 | (46,200,000) | 11,000,000 | 8,000,000 |
| Total of Other Capital Funding | 8,710,951 | 21,957,011 | 7,164,633 | 7,378,451 | 7,598,650 | 7,825,420 |
| Interest Earnings | 538,915 | 533,571 | 699,993 | 729,749 | 638,857 | 654,934 |
| Total Non-Rate Related Revenue/Income | $16,676,047 | $44,408,525 | $45,725,178 | $27,494,493 | $26,303,550 | $23,607,766 |
| Required User Charge Revenue | $49,410,454 | $50,892,768 | $59,758,288 | $69,244,916 | $72,035,487 | $74,938,517 |
| Expected Revenues at Present Rates | $49,410,454 | $50,892,768 | $52,419,551 | $53,992,138 | $55,611,902 | $57,280,259 |
| Expected Revenues from Sum of Prior Year Increases | n/a | n/a | - | 7,558,899 | 15,710,362 | 16,916,292 |
| Subtotal Expected Revenues | 49,410,454 | 50,892,768 | 52,419,551 | 61,551,037 | 71,322,264 | 74,196,551 |
| Revenue Increase Required | n/a | $0 | $7,338,737 | $7,693,880 | $713,223 | $741,966 |
| % Revenue Increase Required | n/a | 0.0% | 14.0% | 12.5% | 1.0% | 1.0% |

## 2.5 Findings Related to the Revenue Requirements

During the course of the Study and the calculation of the revenue requirements, Brown and Caldwell made several key findings. These findings are listed below in no particular order.

- The District currently has adequate funding and revenues to avoid an increase in user charges (i.e., rates) for fiscal year 2008. However, there is a need for significant rate increases in both fiscal years 2009 and 2010 which, as of the Report Date, were estimated at 14% and 12.5%, respectively.
- The District's debt service coverage for fiscal year 2008 may fall below the Board of Director's established minimum of 1.40 times depending on financial performance during the year. It is not expected, however, that the District's debt service coverage would fall below the statutory minimum of 1.25 times. As of the Report Date, the expected coverage for the test year was 1.38 times.
- The District's ability to meet debt service coverage requirements is heavily influenced by the recovery of impact fees in the amounts shown and projected in this report. An unexpected material decrease in impact fees would likely result in the District's failure to meet the Board of Directors' goal of 1.40 times coverage. A 50% drop in impact fees would result, all else being equal, in the District's failure to meet the minimum coverage of 1.25 times as required by the bond covenants. Should such events actually occur, the District would be forced to increase its rates in order to avoid legal action by the bondholders.
- The revenue requirements described in this report assume a refinancing of the District's outstanding 1995 Series Revenue Bonds. This assumption was made using the anticipated terms and conditions for the refinancing as of the Report Date. However, because of the timing of HB1565, the District was unsuccessful in completing the refinancing and expected to complete the refinancing on or about July 10, 2007 as of the Report Date. The terms and conditions for the refinancing may change materially from the assumptions made as of the Report Date, and those changes could alter the results discussed in this report.
- Although revenues from all sources are adequate to meet the District's needs, the District's revenue from operations currently is not adequate to recover its O&M expenses and total debt service requirements. This means that the District is dependent on non-operating revenues and other sources to meet these needs. Future rate increases in fiscal years 2009 and 2010 should alleviate this concern, as shown in Table 18.

Table 18. Projected Revenue Surplus and Deficit

| Description | Budget Yr. 2007 | Projected 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| Water Sales | $50,085,054 | $51,567,368 | $60,527,332 | $70,110,091 | $72,909,313 | $75,821,081 |
| Other Operating Revenues | 6,751,581 | 6,043,343 | 6,091,508 | 6,141,118 | 6,192,216 | 6,244,847 |
| (Less) O&M Expenses | (47,154,352) | (50,844,194) | (56,990,439) | (61,003,050) | (65,090,910) | (67,306,022) |
| (Less) Total Debt Service | (11,943,567) | (10,134,447) | (11,421,220) | (11,967,042) | (11,966,907) | (11,972,082) |
| Revenue Surplus/(Deficit) | ($2,261,283) | ($3,367,929) | ($1,792,818) | $3,281,117 | $2,043,712 | $2,787,824 |

- The District's available cash reserves include approximately 60 days of O&M expenses. This level of reserves should be sufficient to meet operating needs (i.e., working capital) but does not provide for any level of capital reserve for funding of capital projects. The District instead depends on its commercial paper line as a ready and relatively inexpensive source of funding for capital projects. The availability of commercial paper is tied to the District's ability to continue to meet its bond covenants, including its debt service coverage requirements.
- As of the Report Date, the requirements for the District under HB1565 were under debate by the Texas Legislature. No impacts from the enacted version of HB1565 have been included in the revenue requirements as discussed in this report, and those impacts may be material.

# SECTION 3: THE PROPOSED RATES

The proposed rates address the charges for retail water service within the District's existing service areas. The Study did not address rates for wholesale service because those rates are determined using contractual formulae, and the District's ability to alter the rates for wholesale service is limited to the individual contract terms. Prior to the Study, the District's retail ratepayers were served under 4 separate rate schedules; the rate schedule applicable to any particular customer depended on the customer's location within the District's 49 service areas and the administrative grouping of those areas into 1 of 4 rate schedules (the 4 schedules are the result of previous rate consolidation efforts that reduced the number of applicable rate schedules, which had included as many as 23 at one time).

The District's Board of Directors established four objectives related to the rate structure:

- Consolidate rates to a single rate schedule applicable to all of the District's customers
- Make the rates more affordable for low-use customers
- Make the rates more competitive with SAWS'
- Strengthen the conservation pricing signals for high-use customers

In addition to the above goals, the proposed rates are designed to recover the District's test year revenue requirements. The proposed rate schedule as adopted by the Board of Directors is provided in the Appendix.

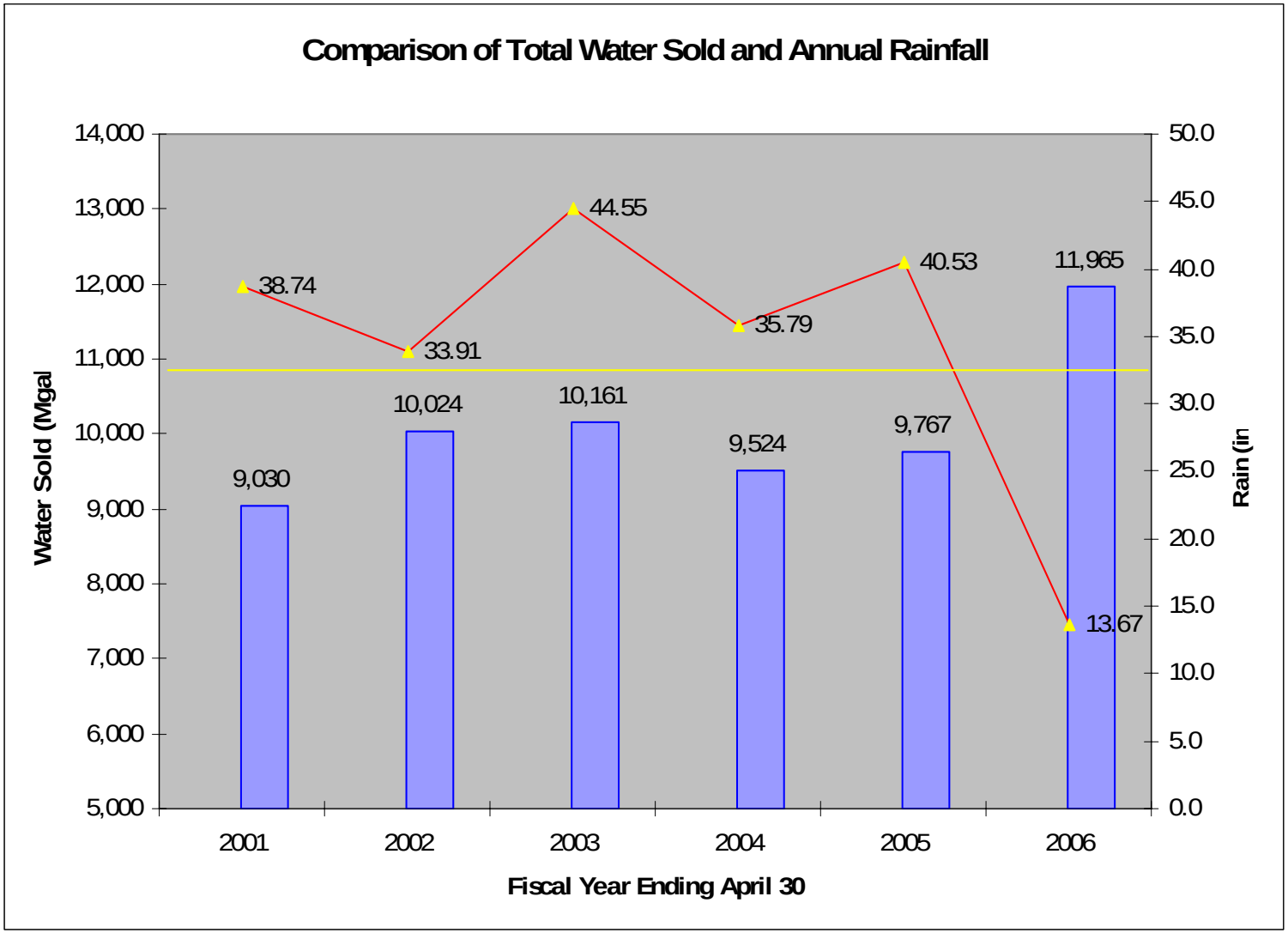
## 3.1 Rate Design Approach

Brown and Caldwell used statistical analyses and Monte Carlo simulation modeling to calculate the proposed rates. We followed a three-step iterative process for designing the rates that required us to (1) normalize and statistically define water demands, (2) set up and run the simulation model, and (3) test the simulation results against the goals and objectives. The latter two steps were repeated if necessary until the rates are judged to meet the goals and objectives. The following subsections of the report describe these three steps in more detail.

### 3.1.1 Normalization of Water Demands

Like most water utilities, the District experiences cycles of high and low per capita water demand. For the District, these cycles tend to correlate to the timing and amount of annual rainfall and, to a certain degree, the severity of drought periods which bring with them requirements to force curtailments of service in order to preserve water resources. Figure 1 demonstrates the variation in water demand (measured in aggregate at the system level) as it relates to annual rainfall totals.

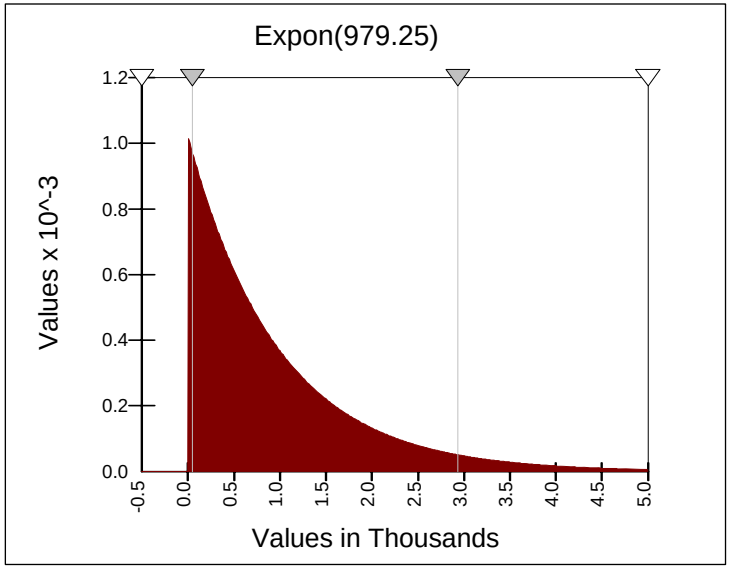
**Figure 1. Comparison of Total Water Sold and Annual Rainfall**



To normalize water demands, Brown and Caldwell analyzed the District's individual billing records over a five-year period. A statistical profile was developed from the data for each of the District's existing customer classes in each of the existing rate groups (Groups 1 through 4), for each month and for each meter size. The results of these analyses produced what is called *probability distribution function* applicable for one month (e.g., January), for one customer class (e.g., Residential), for one meter size (e.g., 5/8-inch meter), in each existing rate group (e.g., Group 2). In this manner, Brown and Caldwell created a probability function like the one shown in Figure 2, to describe expected water usage for all of the District's nearly 86,000 customers.

The probability function provides an understanding of the average usage occurring in each month, for each type of customer. Water usage for a 5/8-inch metered residential customer in January, for example, is much different than water usage for 2-inch metered commercial customer in July. The statistical analysis allows quantification of these differences and, because of the long time frame used, smoothes the highs and lows that come from changes in weather and/or climate. Because the existing rate group was included in the analysis, it was determined that usage varies significantly by geographic location within the District's service areas. During summer months especially, residential usage in Group 2 is significantly lower than usage in Group 4.

**Figure 2. Probability Function (Residential, 5/8-inch Meter, January, Group 1)**



### 3.1.2 Simulation Modeling

Brown and Caldwell used Monte Carlo techniques to analyze the proposed rates. Monte Carlo methods are widely acknowledged approaches which use statistical computer programs to simulate the behavior of systems. In this case, we were interested in the District's system for billing customers for water usage. Starting from the probability functions discussed above that define customers' monthly water usage, the simulation calculated expected monthly bills based on inputs that defined the proposed rate schedule(s).

The simulation was "run" thousands of times. For each iteration, a data point was randomly selected from each probability function (all data points fall within the defined limits of the probability function) in the simulation model and a monthly bill was calculated for that data point. Thus, the model produced a monthly bill (January through December) for each class (commercial, and residential), based on the customers' meter sizes and grouping within the District's current rate schedule. There were 684 such calculations for each iteration; we ran 10,000 iterations, resulting in 6.8 million monthly bill calculations.

As the simulation was run, each monthly bill was tabulated, and the results were summarized to show the expected revenues as compared to the revenue requirements. In addition, the simulation model captured additional statistical information that allowed quantification of the expected results within a 95% confidence interval. This means that based on the five-year data sample used in the analysis, the proposed rates will fall within a defined range with a confidence level of 95% (meaning there is a maximum of a 5% chance — all else being equal — that the revenues would fall outside the indicated range, either higher or lower). Figure 3 shows the expected revenues from the proposed rate schedule. The left column shows the expected revenue; the middle column shows the high end of the range (the +95% interval); the right column shows the lower end of the expected revenues (the -95% interval). The tabular information from this figure is provided in Table 19.

**Figure 3. Expected Revenues at Proposed Rates (Compared to Test Year Revenue Requirement)**

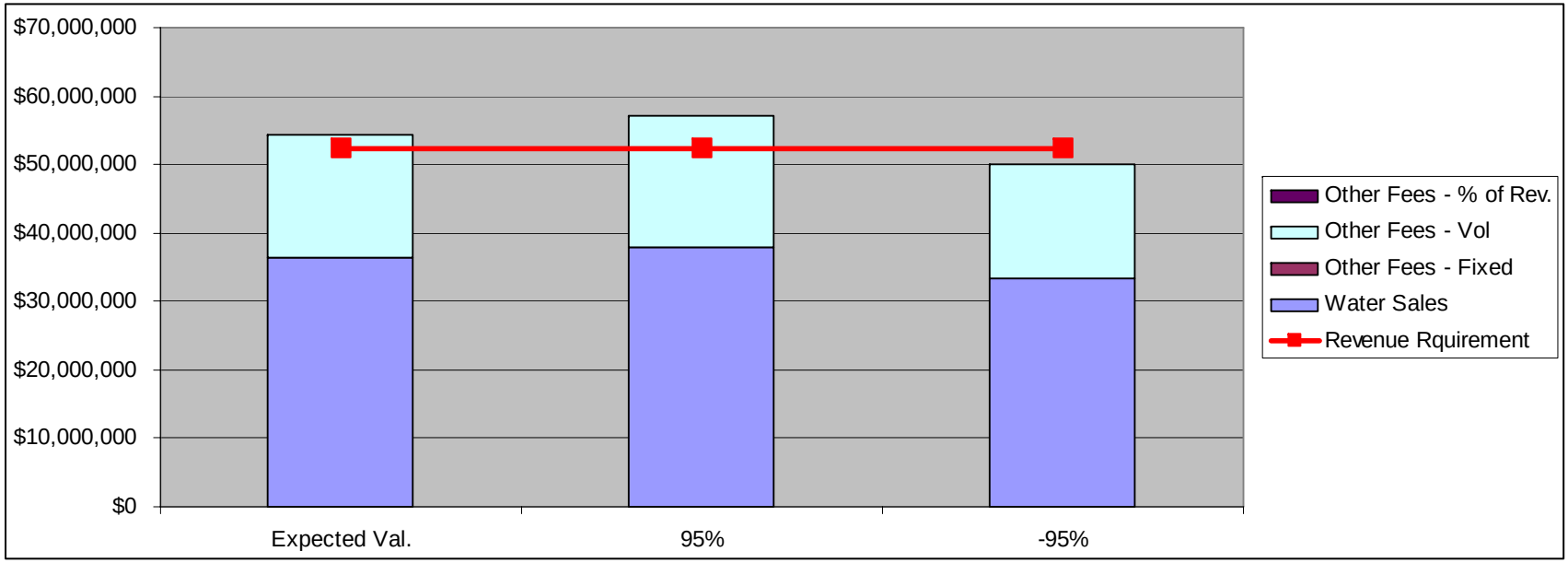


Table 19. Expected Revenues from Proposed Rates

| Rate Component | Expected Val. | 95% | -95% |
|---|---|---|---|
| Water Sales | $36,368,961 | $37,910,708 | $33,479,714 |
| Other Fees - Fixed | 0 | 0 | 0 |
| Other Fees - Vol | 17,875,850 | 19,232,685 | 16,519,016 |
| Other Fees - % of Rev. | 0 | 0 | 0 |
| Totals | $54,244,811 | $57,143,393 | $49,998,730 |
| Test Year Revenue Req. (Incl. EAA Fees) | $52,310,000 | $52,310,000 | $52,310,000 |
| Surplus/(Deficit) | $1,934,811 | $4,833,393 | ($2,311,270) |

Brown and Caldwell used the simulation model to analyze several rate design alternatives for the District. Rate structures that would not reasonably recover the revenue requirement and/or failed to meet the District's objectives were eliminated from further consideration. In analyzing Table 19 it is important to understand that the expected revenue falls *within the 95% confidence interval*. What this means is that, under normalized conditions, there is an equal likelihood that the revenues will fall at the lower end of the range as they may the higher end of the range. The indicated expected value is merely the middle of the interval. Thus, what the simulation model has allowed is to provide a quantification of the relative risk inherent in the proposed rate structure; the indicated spread in revenues within the interval of over $7 million indicates a 14% expected variance in revenues to the District under normal demand conditions (again, normal conditions are defined by analysis of customer usage data from the preceding five-year period).

### 3.1.3 Comparing Results to Board Objectives

The proposed rates were the result of a number of simulation runs using the Monte Carlo method described in the report. The District's staff and members of the Board evaluated the earlier alternatives in terms of how well each alternative achieved the Board's objectives. Ultimately, the Board adopted the proposed rates as shown in Tables 1 through 4. The proposed rate structure compares favorably to the Board's established objectives.

#### 3.1.3.1 Consolidation of Rates from Four Rate Schedules to One

As described earlier in the report, the District historically has used as many as 23 separate rate schedules, and currently uses 4 (see Tables 20 through 23 for the distribution of service areas to the 4 groups). One of the primary goals of the Study was to consolidate the four rate schedules to one single schedule applicable to the entire District. The proposed rates constitute a single rate schedule, thus meeting the District's goal.

Table 20. Group 1 Service Areas

| | | |
|---|---|---|
| • Hidden Springs | • Timber Oaks | • Tameron |
| • Timberwood | • Country Oaks | • Pleasant Oaks |
| • Elm Valley | • Legend Oaks | • Water Service 3 |
| • Windy's Water | • Remuda Ranch | • Meadow Wood Acres |
| • Westview | • Oakland Estates | • Becker Ranch Estates |
| • Hickory Water | • Chaparral | • Savannah Heights |
| • Silver Mountain | • Geronimo Forest | • North San Antonio Hills |
| • Waterwood | • Oliver Ranch | |

| Table 21. Group 2 Service Areas | | |
|---|---|---|
| • Castle Hills | • Northeast | • Sara Martinez Creek 1 |
| • Northwest | • Sal Saltillo Creek | • VOS Water Company |
| • Southside | • Sara Martinez Creek 2 | • Texas Research |
| • Somerset | • Garden Valley | • East Kelly |
| • Briggs Ranch | • North San Antonio | • Anaqua Spring Ranch |

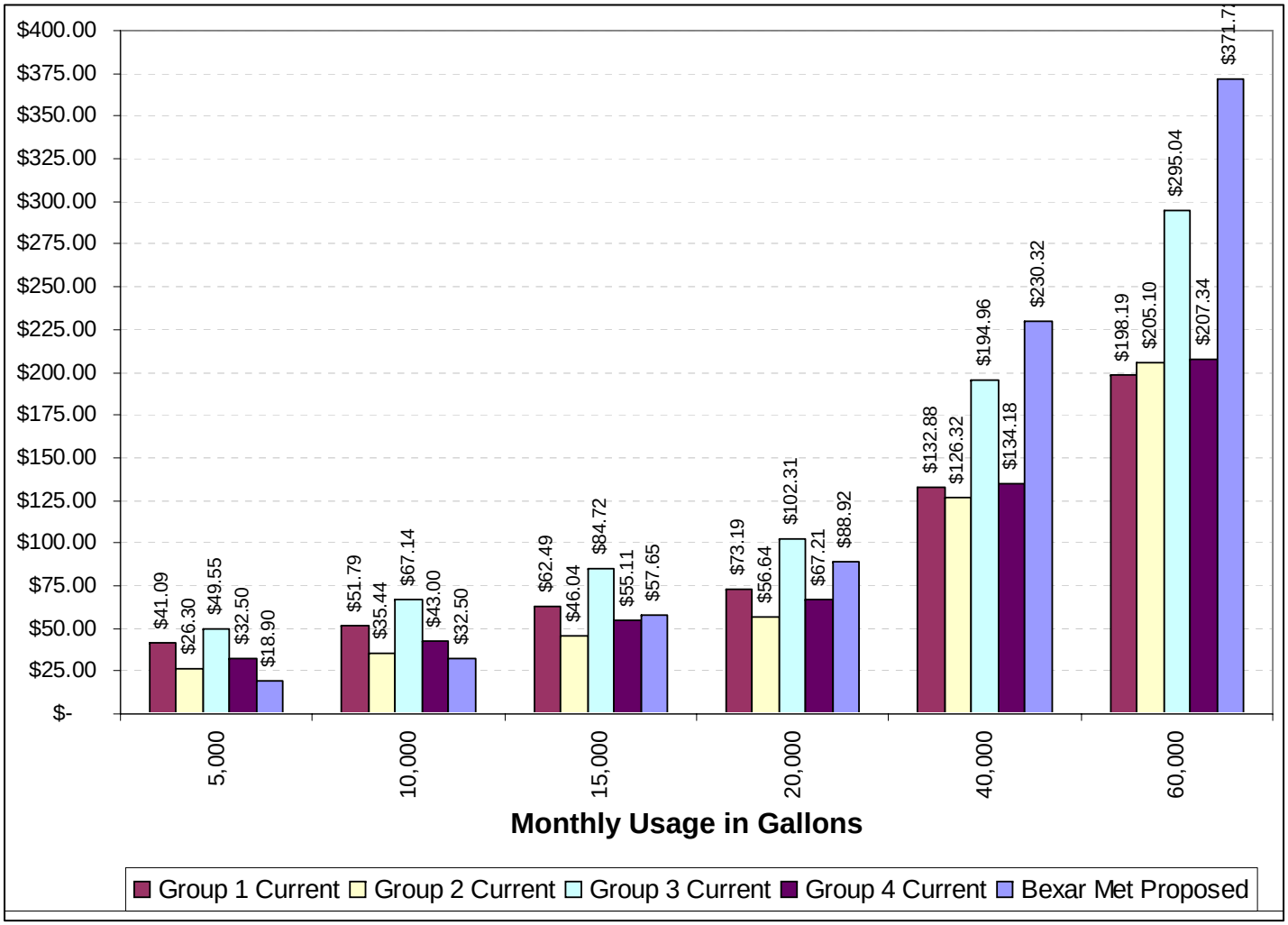
| Table 22. Group 3 Service Areas | | |
|---|---|---|
| • Village Green | • Woods of Fair Oaks | • Woods of Spring Branch |
| • Leon Springs | • Mobile City | • Bulverde Hills |
| • HEB-Retail Center | | |

| Table 23. Group 4 Service Areas | | |
|---|---|---|
| • Embassy North | • Hill Country Village | • Hollywood Park |
| • Stone Oak | | |

### 3.1.3.2 Affordability for Low-Use Customers

Historically, the District has used a relatively high fixed monthly service charge as a significant component of the rate structure. Apart from providing stable and predictable revenues, the service charge has the effect of increasing the average cost of water for customers who use a relatively small amount per month. One of the District's goals for the Study was to move away from dependence on fixed service charges and to rely more on volume-based charges that would result in a net decrease in monthly bills for the smallest water users in the District – those using less than 10,000 gallons per month on average. The proposed rates have reduced monthly service charges significantly and have resulted in a projected decrease in monthly bills for all typical residential customers (5/8-inch meters) using less than 10,000 gallons per month. Projected savings for the smallest of water users, those using less than 5,000 gallons per month, are substantial as depicted in Figure 4.

**Figure 4. Comparison of Proposed Bexar Metropolitan Rates to Existing Rates (Groups 1-4, Residential Customers, 5/8-inch Meters)**



Approximately 75% of the District's residential customers use less than 10,000 gallons per month on average. As a result, the proposed rates are expected to amount to a decrease in monthly bills for a large percentage of the District's customers under normal conditions.

### 3.1.3.3 Increased Comparability and Competitiveness with SAWS

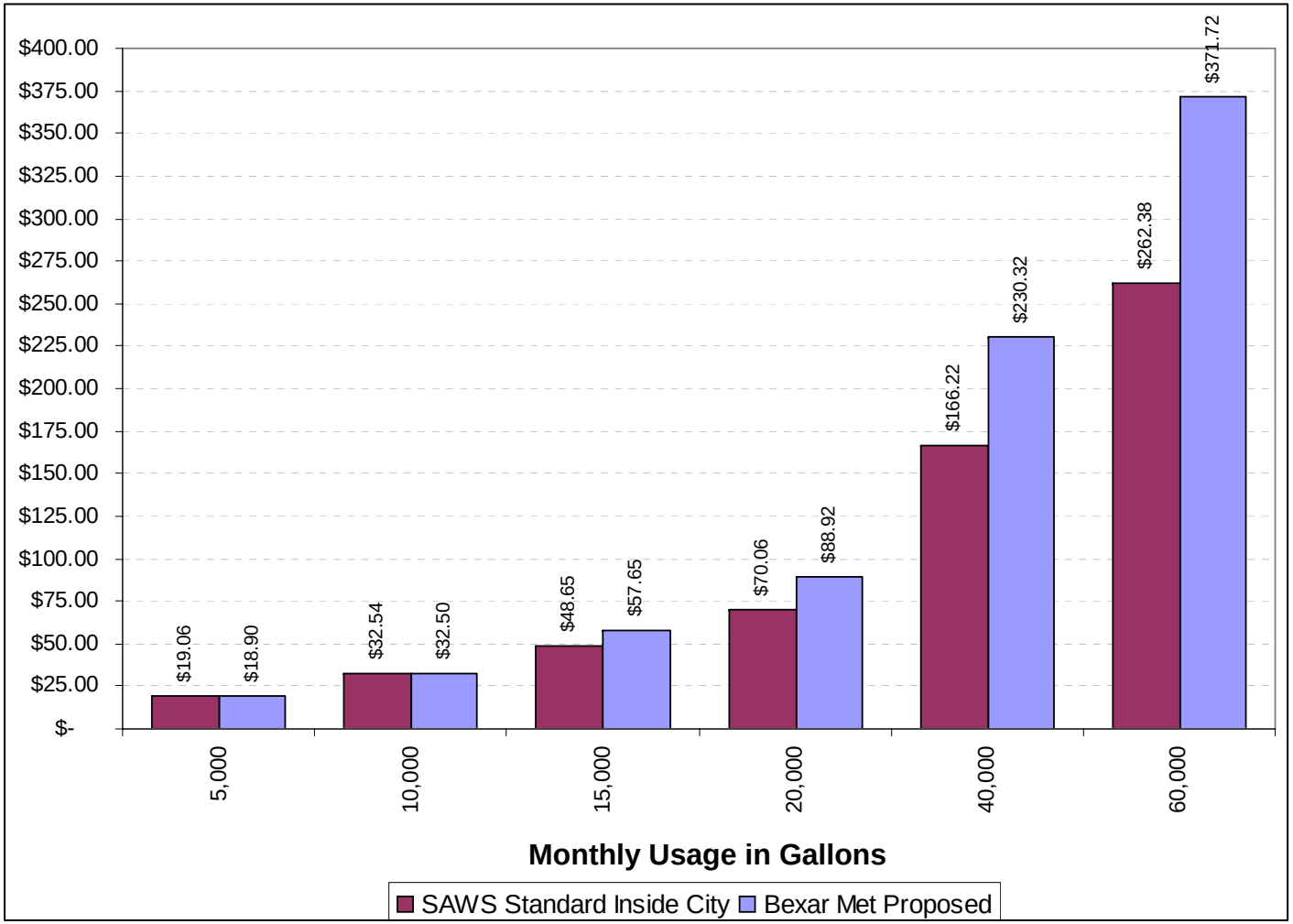
The proposed rates contain two provisions aimed at making the District's rates more comparable and competitive with SAWS: the restructured usage blocks closely mimic the SAWS rate structure; and the pricing for monthly service charges, the water supply fee, and the volume charges for usage below 10,000 gallons are set at a point at or below those charged by SAWS.

As illustrated in Table 24, the most notable differences between the two rate schedules are that the District's second usage block ends at 10,000 gallons while SAWS' schedule allows for nearly 13,000 gallons in the second block. In addition, the District's rates are only competitive with SAWS for up to 10,000 gallons of usage, at which point the District's rates become much higher than SAWS'. The difference in rates in the third and fourth blocks is necessary in order for the District to recover its revenue requirement and in order to encourage water conservation. Figure 5 demonstrates the difference in expected residential (5/8-inch meters) bills between the District's proposed rates and the SAWS (standard) rates. Appendix B includes graphs that illustrate the difference between the District's proposed rates and SAWS seasonal and standard outside city rates.

Table 24. Proposed Rates Compared to SAWS (Residential Rates Shown)

| District's Proposed Rates | | SAWS Rates | | |
|---|---|---|---|---|
| Usage Level | Rate | Standard Rate | Sesonal Rate | Usage Level |
| 0 - 7,000 gallons | $ 0.85 | $ 0.87 | $ 0.87 | 0 - 7,481 gallons |
| 7,001 - 10,000 gallons | $ 1.25 | $ 1.27 | $ 1.38 | 7,482 - 12,767 gallons |
| 10,001 - 17,000 gallons | $ 3.40 | $ 1.99 | $ 2.15 | 12,768 - 17,205 gallons |
| > 17,000 gallons | $ 5.44 | $ 3.19 | $ 4.11 | > 17,205 gallons |

**Figure 5. Comparison of Proposed Bexar Metropolitan Rates to SAWS Standard Inside City Rate**



#### 3.1.3.4 Increased Conservation Pricing for High-Use Customers

The decrease in monthly service charges and restructuring of the usage blocks to bring the District's rates into closer parity with SAWS result in substantially higher pricing for water use above 10,000 gallons per month. The rate schedule clearly provides a preference for average residential usage at or below 10,000 gallons per month; usage above this level is charged at increasingly higher rates, with the highest rate at $5.44 per thousand gallons. As a general rule, conservation-based pricing is said to occur when there is a higher price for increasing levels of usage. The District's adopted rate schedule is an example of such a rate schedule.

## 3.2 Findings Related to the Proposed Rate Structure

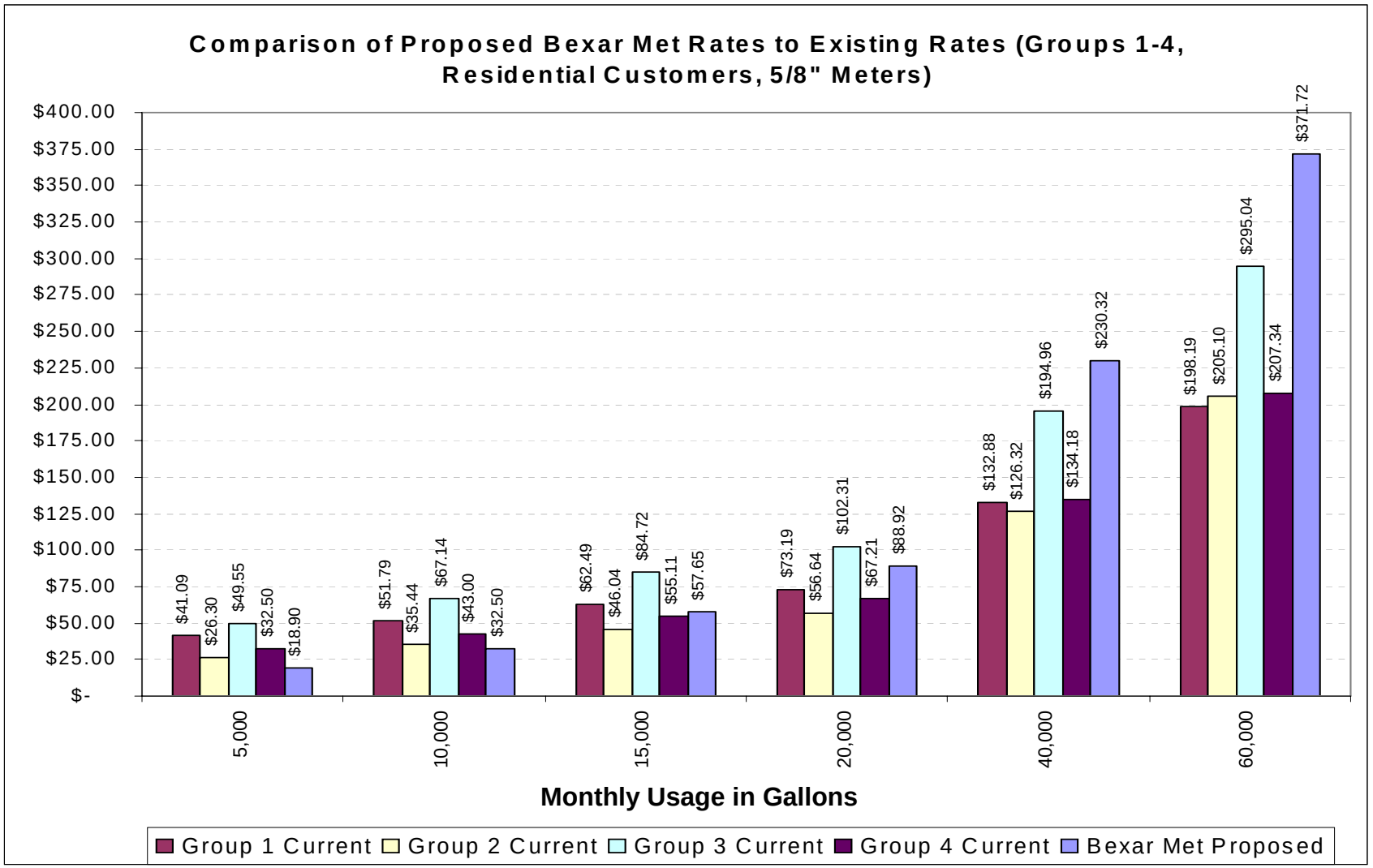
There are a number of key findings related to the proposed rate structure, as follows:

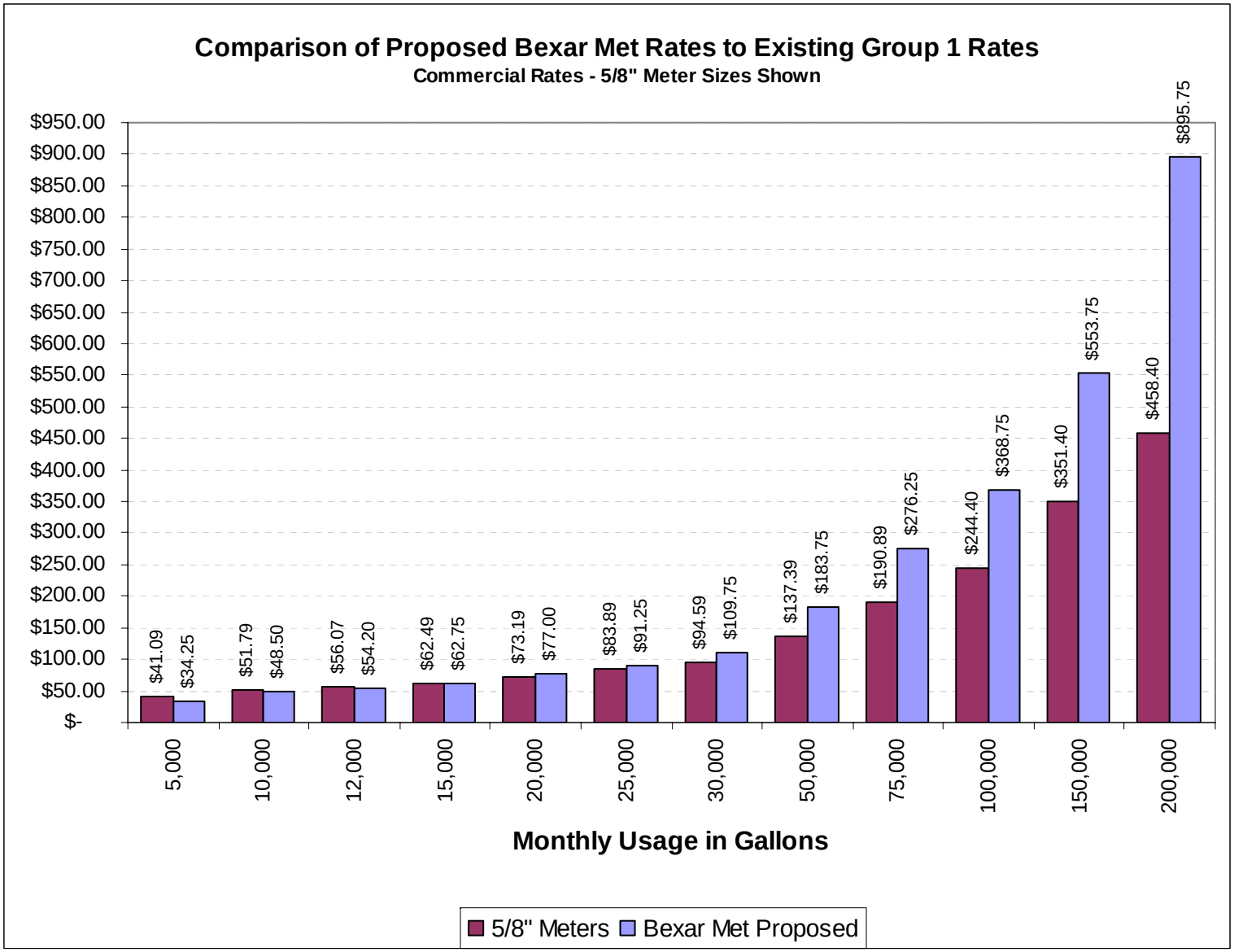
- The proposed rates represent a substantial change in risk compared to the District's existing rate structure. Because the District has relied in the past on a large portion of its revenue being derived from fixed monthly service charges, the new rates with their heavy emphasis on volumetric charges will increase the risk of revenue recovery for the District. In very wet years, for example, revenues can be expected to fall well below historic levels. Meanwhile, dry years may push revenues well above historic levels. Under normal demand expectations, the rates are expected to produce a 14% variance in water sales revenue; this is a systematic risk associated with the rate schedule itself, and it is twice the range produced under the current rates.
- Price elasticity response to the proposed rates is unknown as of the Report Date. When presented with higher prices for water, it is expected that consumers will alter their usage characteristics over time, generally decreasing their demand in order to pay less overall. Demand for water generally is price inelastic, meaning that changes in prices tend to have a relatively small effect on water demand. However, some degree of elasticity does exist, particularly for discretionary water usage. Irrigation use and other outdoor uses tend to be discretionary to a point, and it is these demands — generally demand in the third and fourth blocks under the proposed rates — that are now being relied on more heavily in order to produce the revenue necessary to recover the District's revenue requirements. The degree of consumer response to the new rates could have a material effect on the District's ability to recover its revenue requirements, which may result in the need for rate increases in the future.

- The proposed rates are similar to rates charged by most Texas water utilities. Brown and Caldwell conducted a survey of water utilities in Texas and found that most rate structures resemble that of the proposed rates. That is, most rate structures are heavily dependent on volumetric charges as opposed to fixed monthly fees, and most rate structures resemble an "inclining block" conservation rate such as the proposed rates.
- Cash reserves may not be adequate to absorb short-term variations in revenue recovery. Based on the risk associated with the rate structure, the level of unrestricted reserves available for the District's use may not be adequate to sustain the District through abnormally wet seasons, or any other decrease in normal water demands. With available reserves between $7 million and $8 million, the District has just enough cash to account for the expected variance in revenues resulting from the new rates under normal conditions for a single year. Abnormal conditions could easily push the revenue variance either up (dry years) or down (in wet years). Sustained downward trends in demand may cause the District to pursue additional rate increases to ensure recovery of revenue requirements and/or maintenance of debt service coverage requirements.

# APPENDIX A

## COMPARISON OF BEXAR METROPOLITAN WATER DISTRICT PROPOSED RATES TO EXISTING RATES


Comparison of Proposed Bexar Met Rates to Existing Rates (Groups 1-4, Residential Customers, 5/8" Meters)
$400.00
$375.00
$350.00
$325.00
$300.00
$275.00
$250.00
$225.00
$200.00
$175.00
$150.00
$125.00
$100.00
$75.00
$50.00
$25.00
$-
$41.09
$26.30
$49.55
$32.50
$18.90
$51.79
$35.44
$67.14
$43.00
$32.50
$62.49
$46.04
$84.72
$55.11
$57.65
$73.19
$56.64
$102.31
$67.21
$88.92
$132.88
$126.32
$194.96
$134.18
$230.32
$198.19
$205.10
$295.04
$207.34
$371.72
5,000
10,000
15,000
20,000
40,000
60,000
Monthly Usage in Gallons
Group 1 Current
Group 2 Current
Group 3 Current
Group 4 Current
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 1 Rates
Commercial Rates - 5/8" Meter Sizes Shown
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
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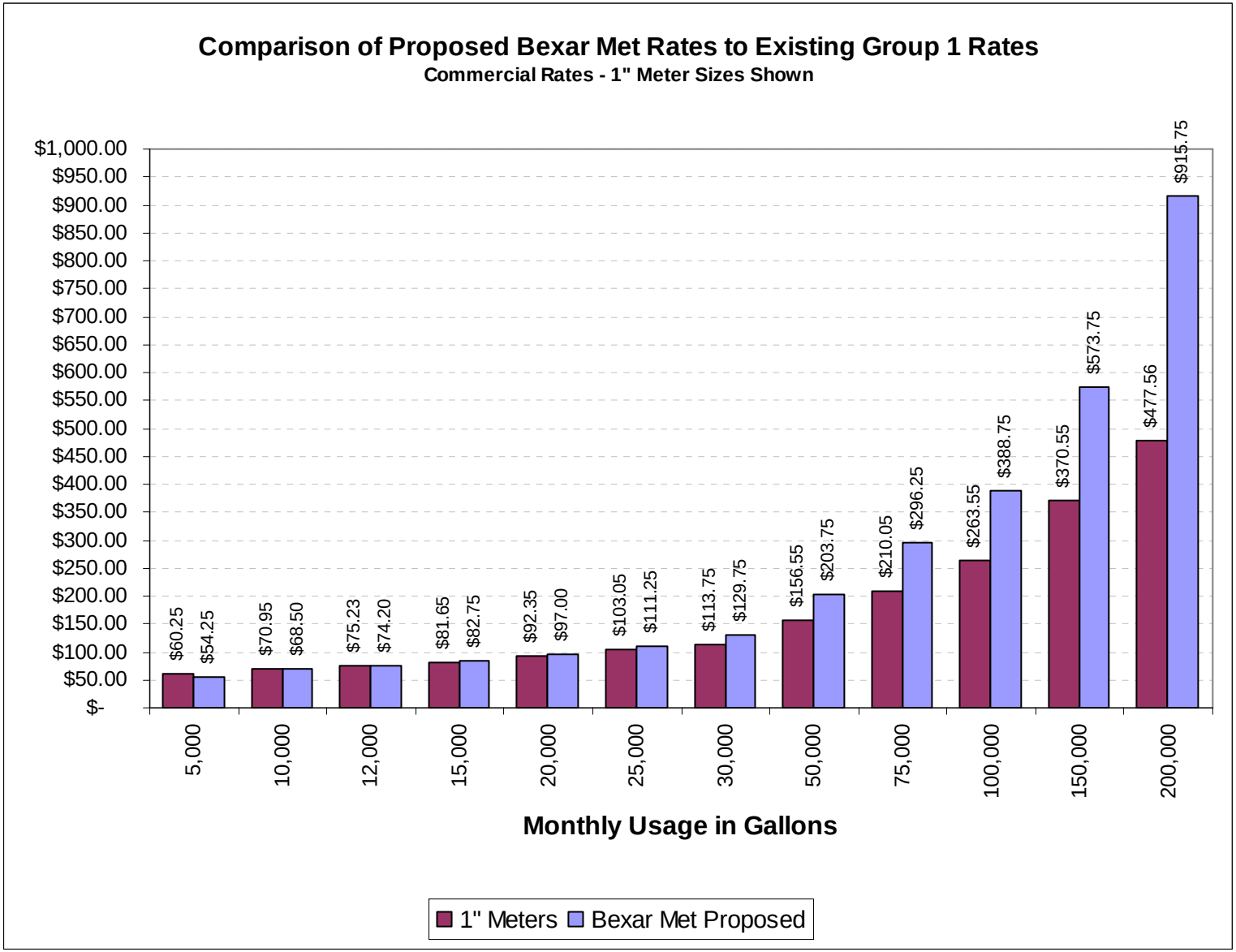
$51.79
$48.50
$56.07
$54.20
$62.49
$62.75
$73.19
$77.00
$83.89
$91.25
$94.59
$109.75
$137.39
$183.75
$190.89
$276.25
$244.40
$368.75
$351.40
$553.75
$458.40
$895.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
5/8" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 1 Rates
Commercial Rates - 1" Meter Sizes Shown
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
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$250.00
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$100.00
$50.00
$-
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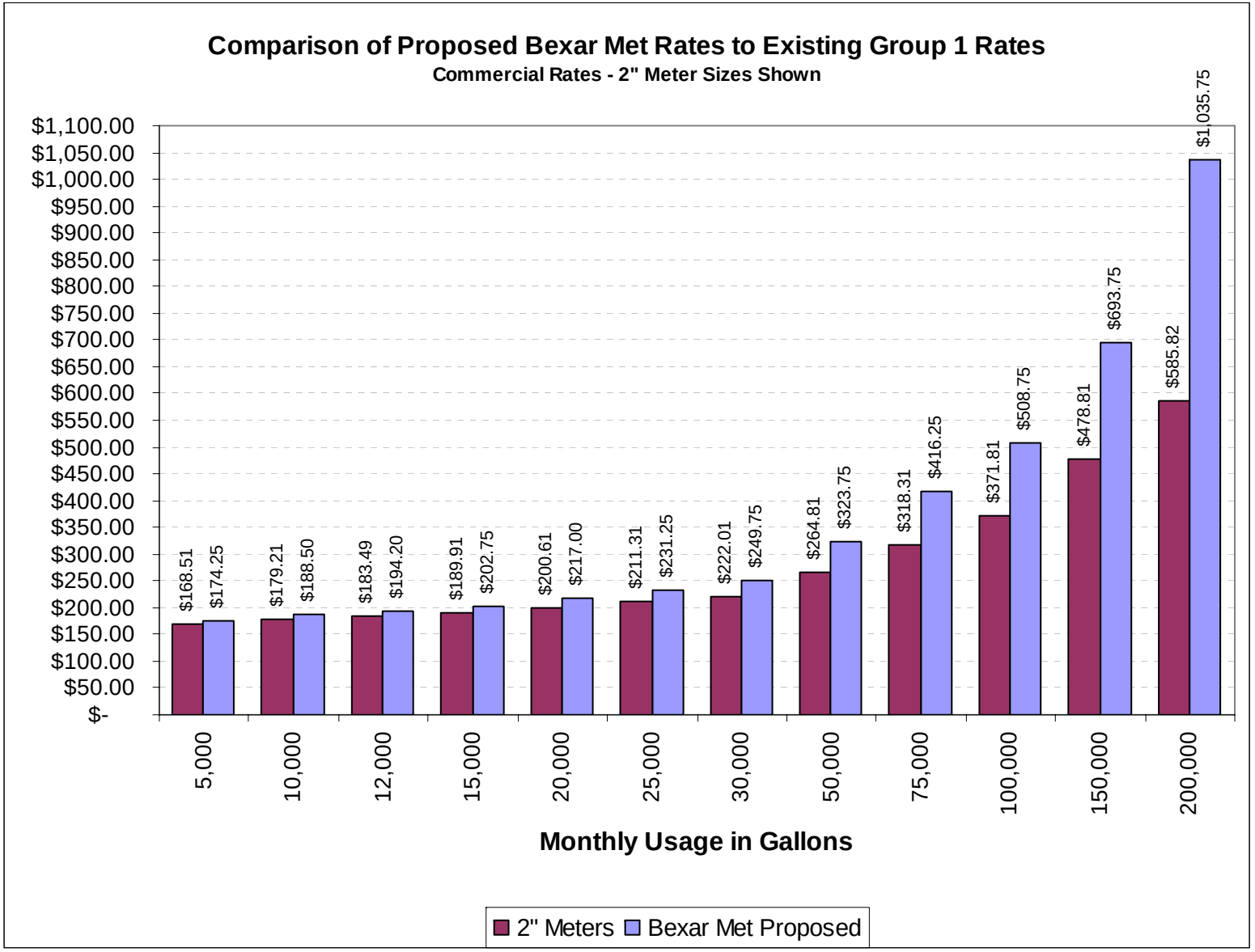
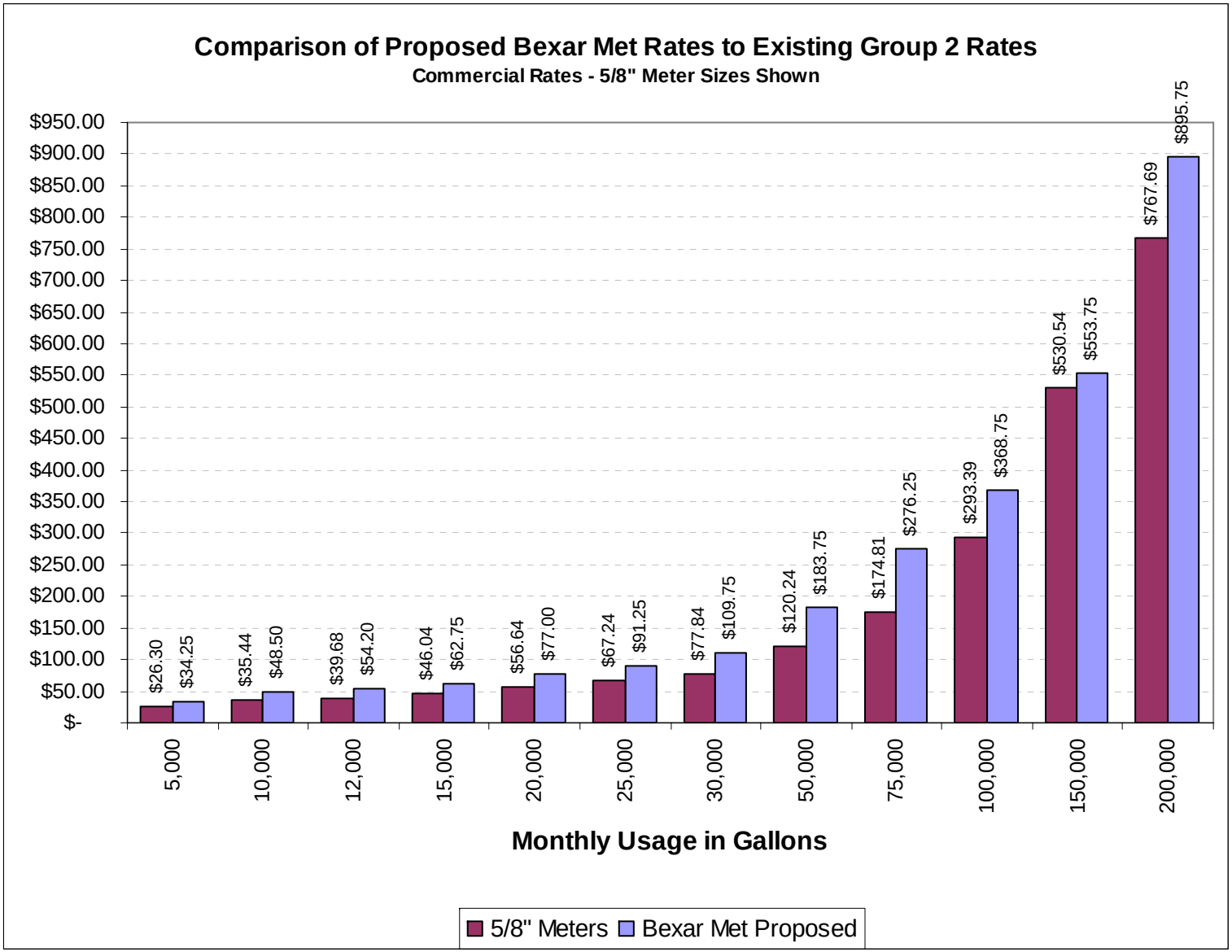
$54.25
$70.95
$68.50
$75.23
$74.20
$81.65
$82.75
$92.35
$97.00
$103.05
$111.25
$113.75
$129.75
$156.55
$203.75
$210.05
$296.25
$263.55
$388.75
$370.55
$573.75
$477.56
$915.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
1" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 1 Rates
Commercial Rates - 2" Meter Sizes Shown
$1,100.00
$1,050.00
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$168.51
$174.25
$179.21
$188.50
$183.49
$194.20
$189.91
$202.75
$200.61
$217.00
$211.31
$231.25
$222.01
$249.75
$264.81
$323.75
$318.31
$416.25
$371.81
$508.75
$478.81
$693.75
$585.82
$1,035.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
2" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 2 Rates
Commercial Rates - 5/8" Meter Sizes Shown
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$26.30
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$35.44
$48.50
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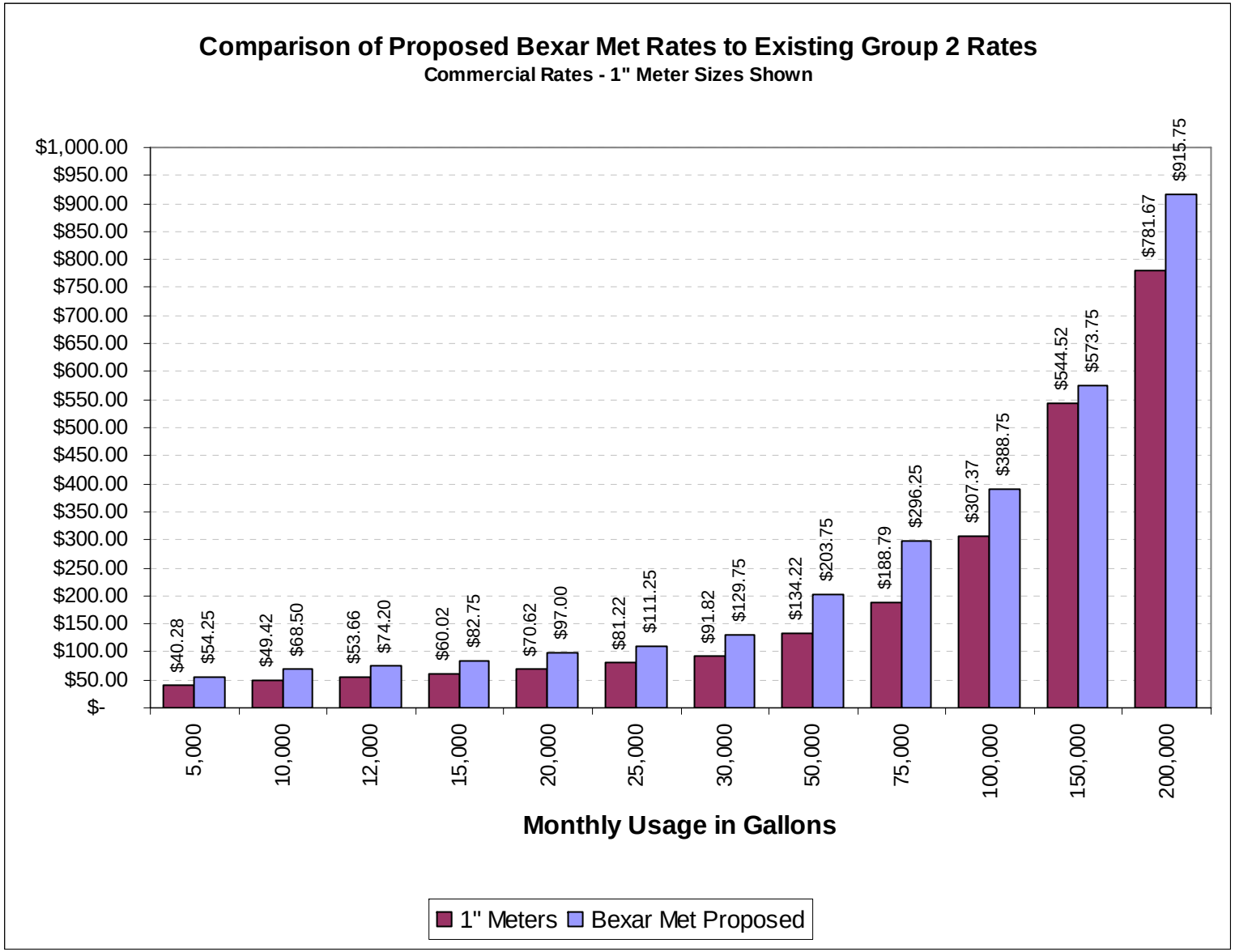
$54.20
$46.04
$62.75
$56.64
$77.00
$67.24
$91.25
$77.84
$109.75
$120.24
$183.75
$174.81
$276.25
$293.39
$368.75
$530.54
$553.75
$767.69
$895.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
5/8" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 2 Rates
Commercial Rates - 1" Meter Sizes Shown
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
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$49.42
$68.50
$53.66
$74.20
$60.02
$82.75
$70.62
$97.00
$81.22
$111.25
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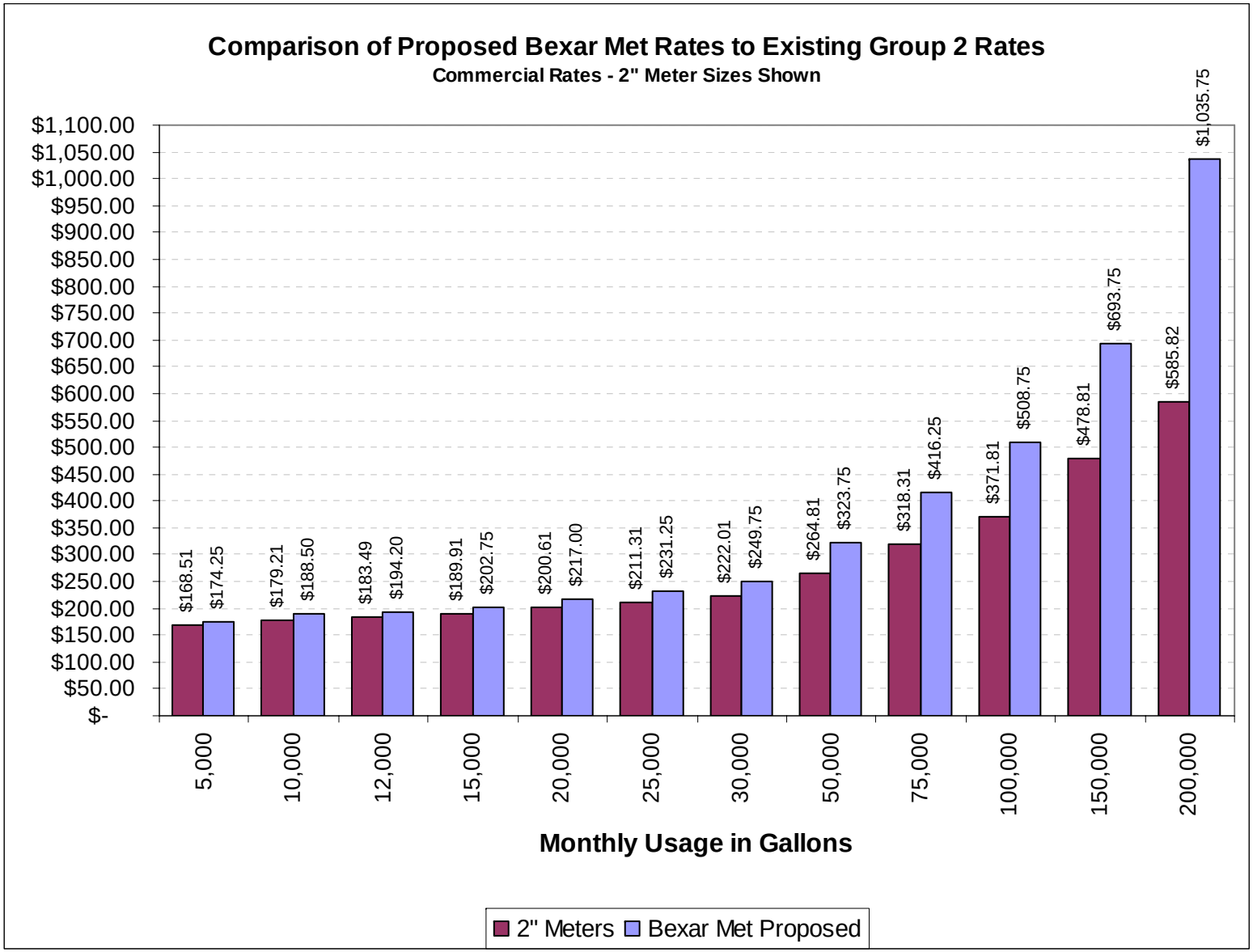
$129.75
$134.22
$203.75
$188.79
$296.25
$307.37
$388.75
$544.52
$573.75
$781.67
$915.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
1" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 2 Rates
Commercial Rates - 2" Meter Sizes Shown
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$1,050.00
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$168.51
$174.25
$179.21
$188.50
$183.49
$194.20
$189.91
$202.75
$200.61
$217.00
$211.31
$231.25
$222.01
$249.75
$264.81
$323.75
$318.31
$416.25
$371.81
$508.75
$478.81
$693.75
$585.82
$1,035.75
5,000
10,000
12,000
15,000
20,000
25,000
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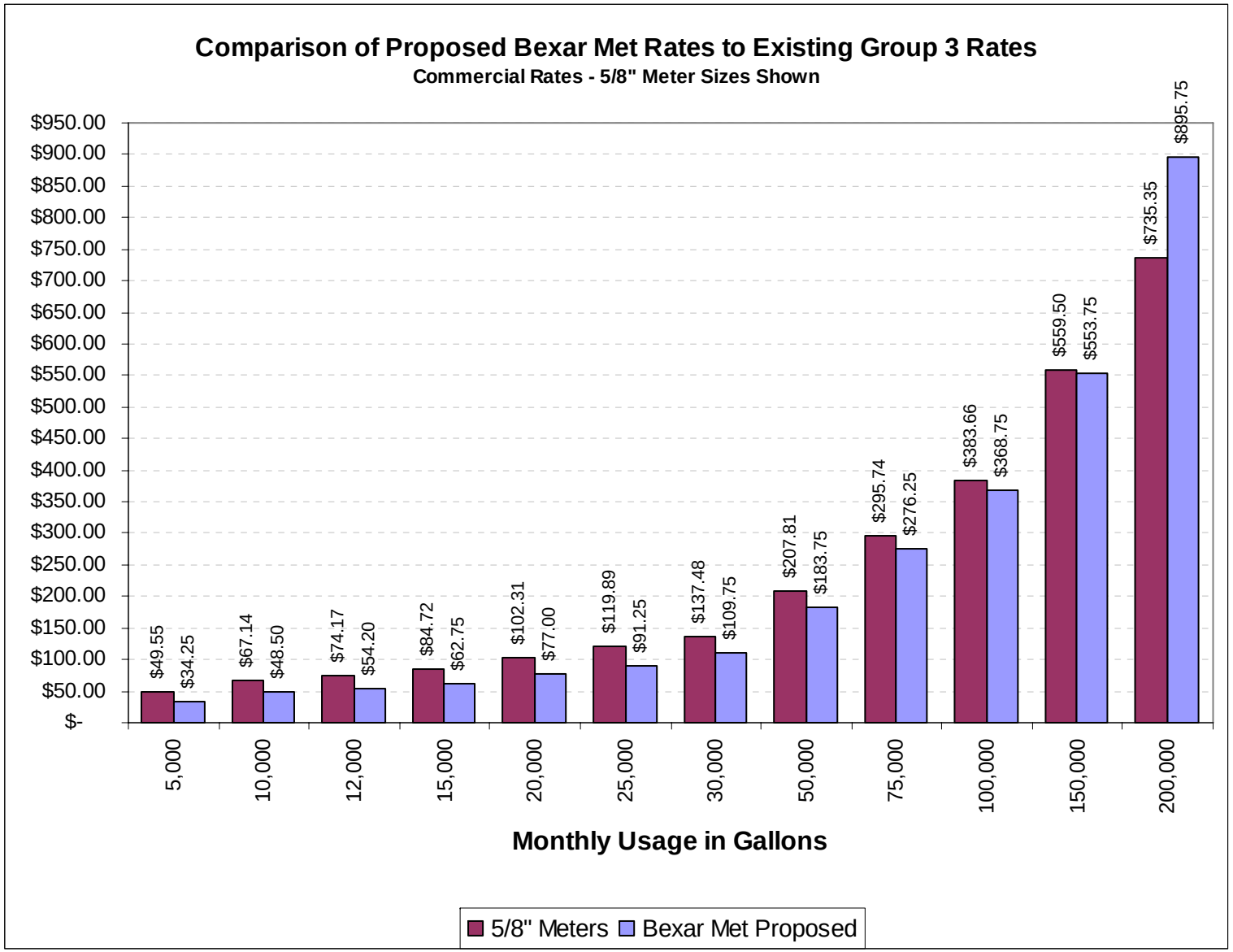
150,000
200,000
Monthly Usage in Gallons
2" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 3 Rates
Commercial Rates - 5/8" Meter Sizes Shown
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
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$200.00
$150.00
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$50.00
$-
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$34.25
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$183.75
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$368.75
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$553.75
$735.35
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5,000
10,000
12,000
15,000
20,000
25,000
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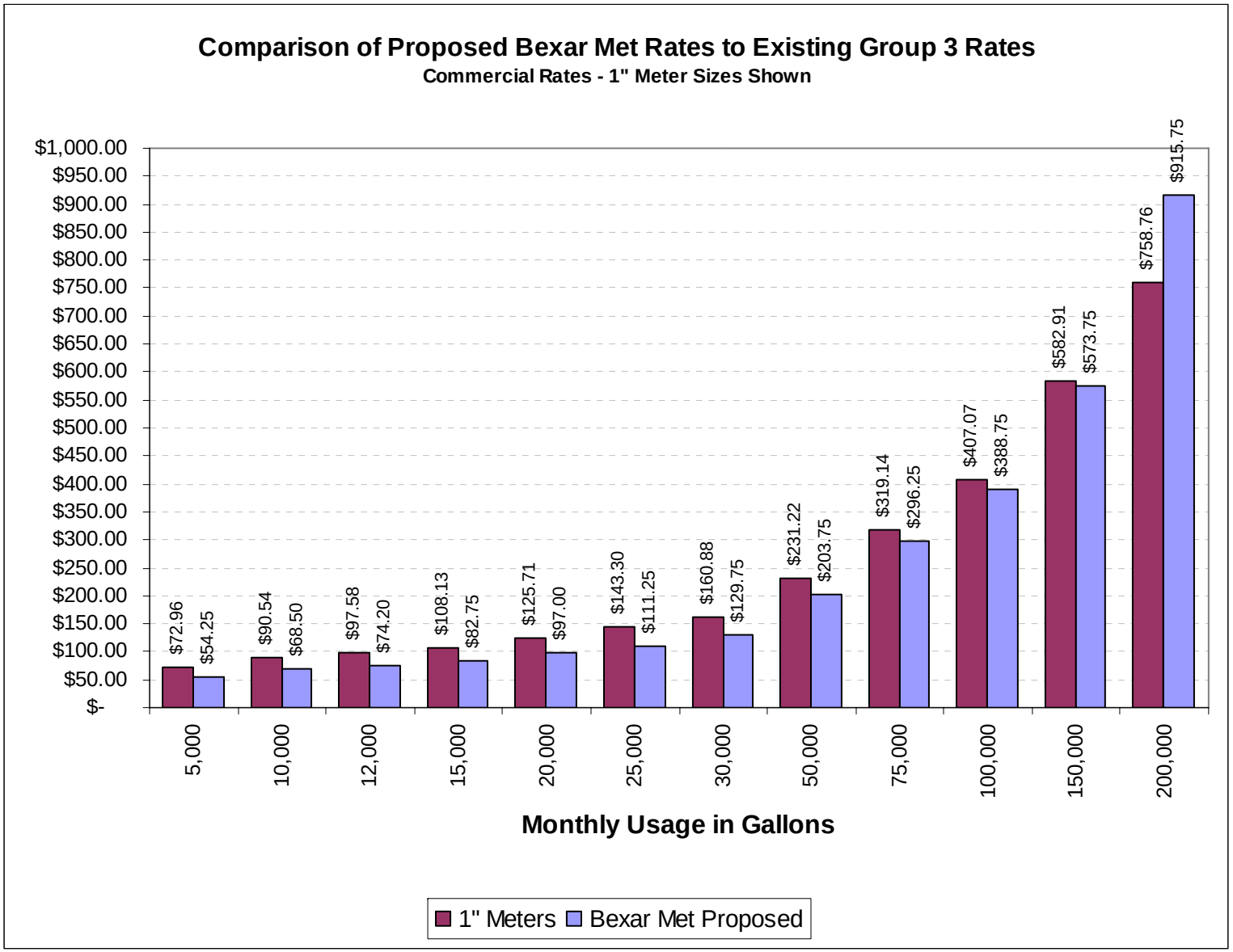
200,000
Monthly Usage in Gallons
5/8" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 3 Rates
Commercial Rates - 1" Meter Sizes Shown
$1,000.00
$950.00
$900.00
$850.00
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$750.00
$700.00
$650.00
$600.00
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$500.00
$450.00
$400.00
$350.00
$300.00
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$200.00
$150.00
$100.00
$50.00
$-
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$54.25
$90.54
$68.50
$97.58
$74.20
$108.13
$82.75
$125.71
$97.00
$143.30
$111.25
$160.88
$129.75
$231.22
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$758.76
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10,000
12,000
15,000
20,000
25,000
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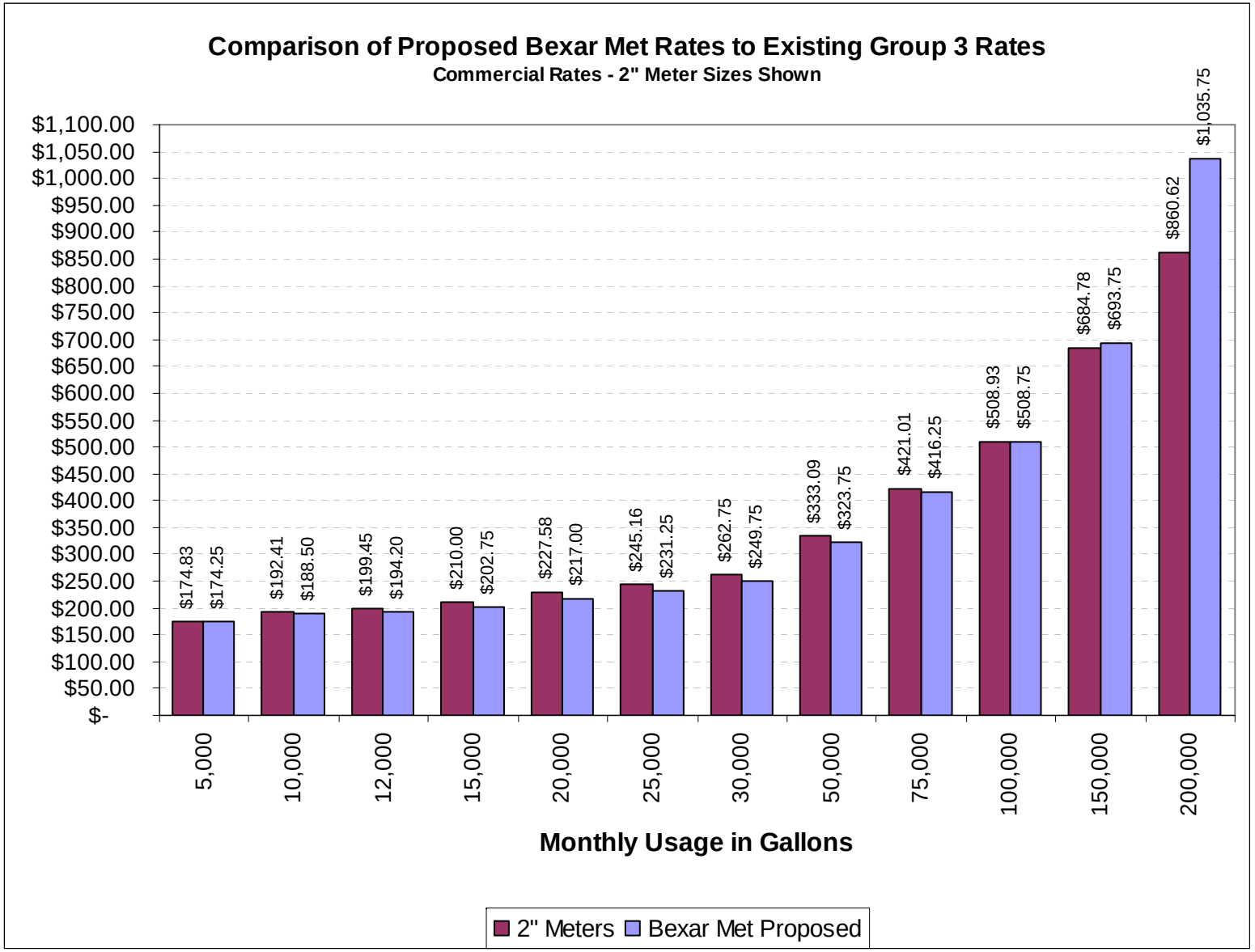
100,000
150,000
200,000
Monthly Usage in Gallons
1" Meters
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to Existing Group 3 Rates
Commercial Rates - 2" Meter Sizes Shown
$1,100.00
$1,050.00
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
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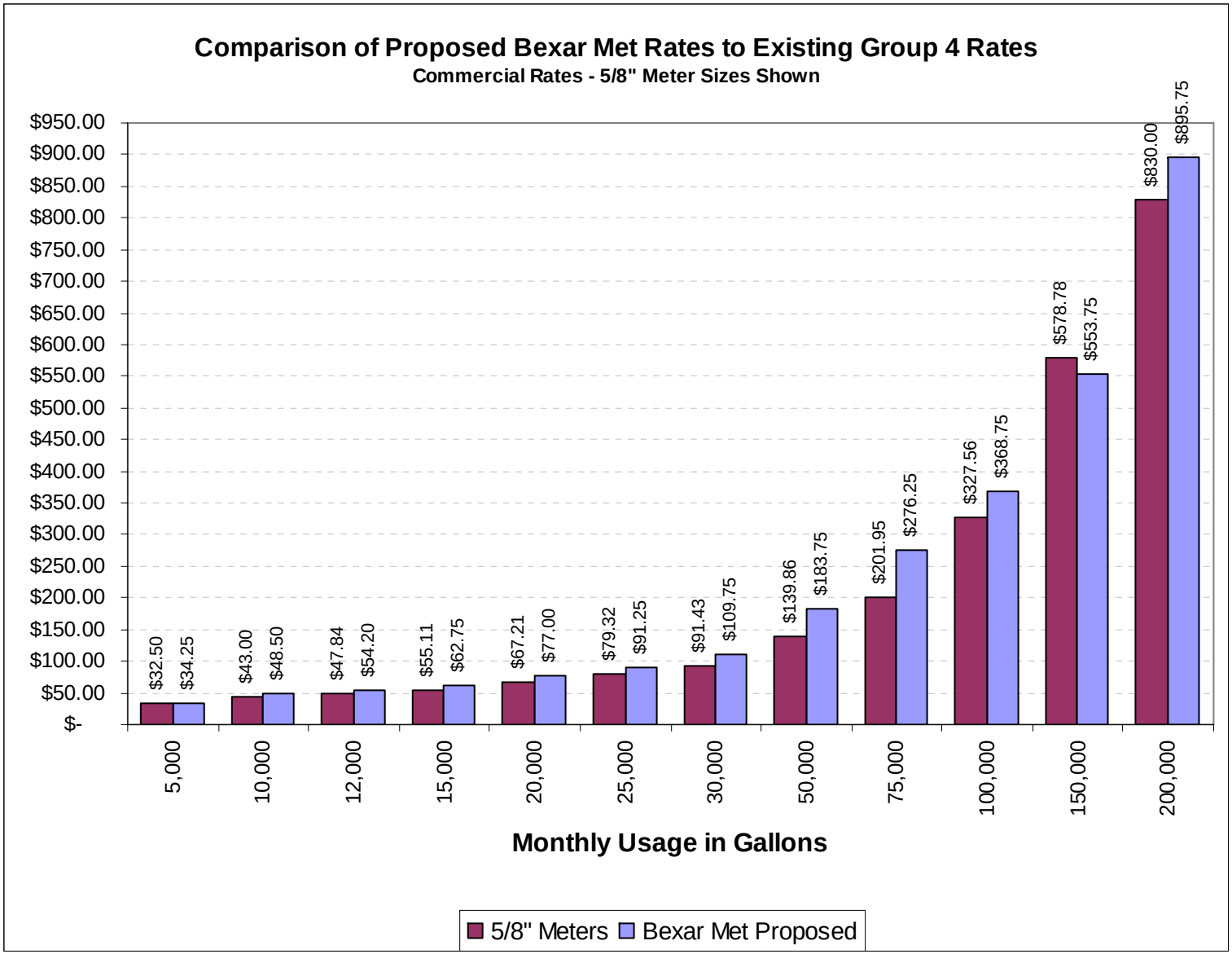
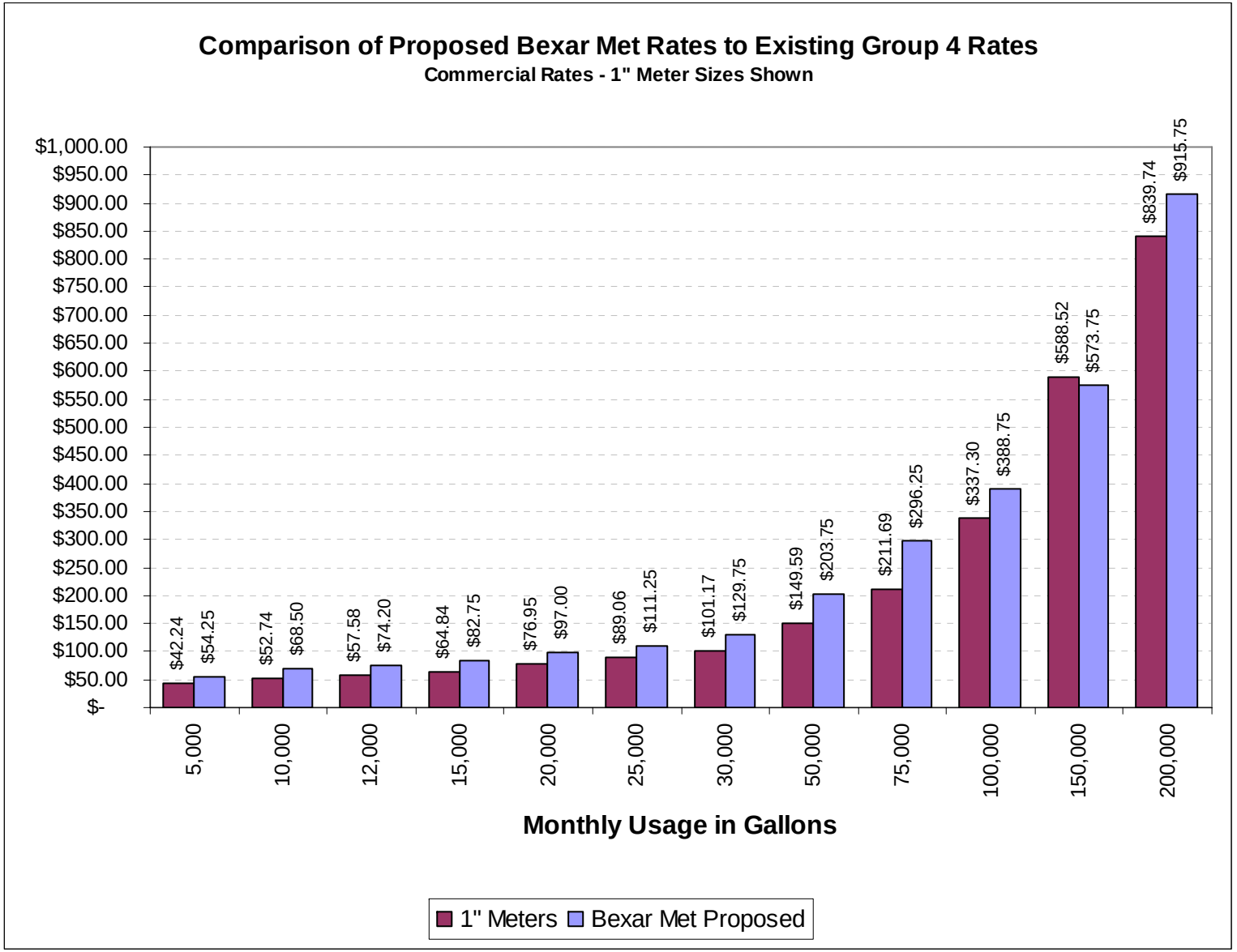
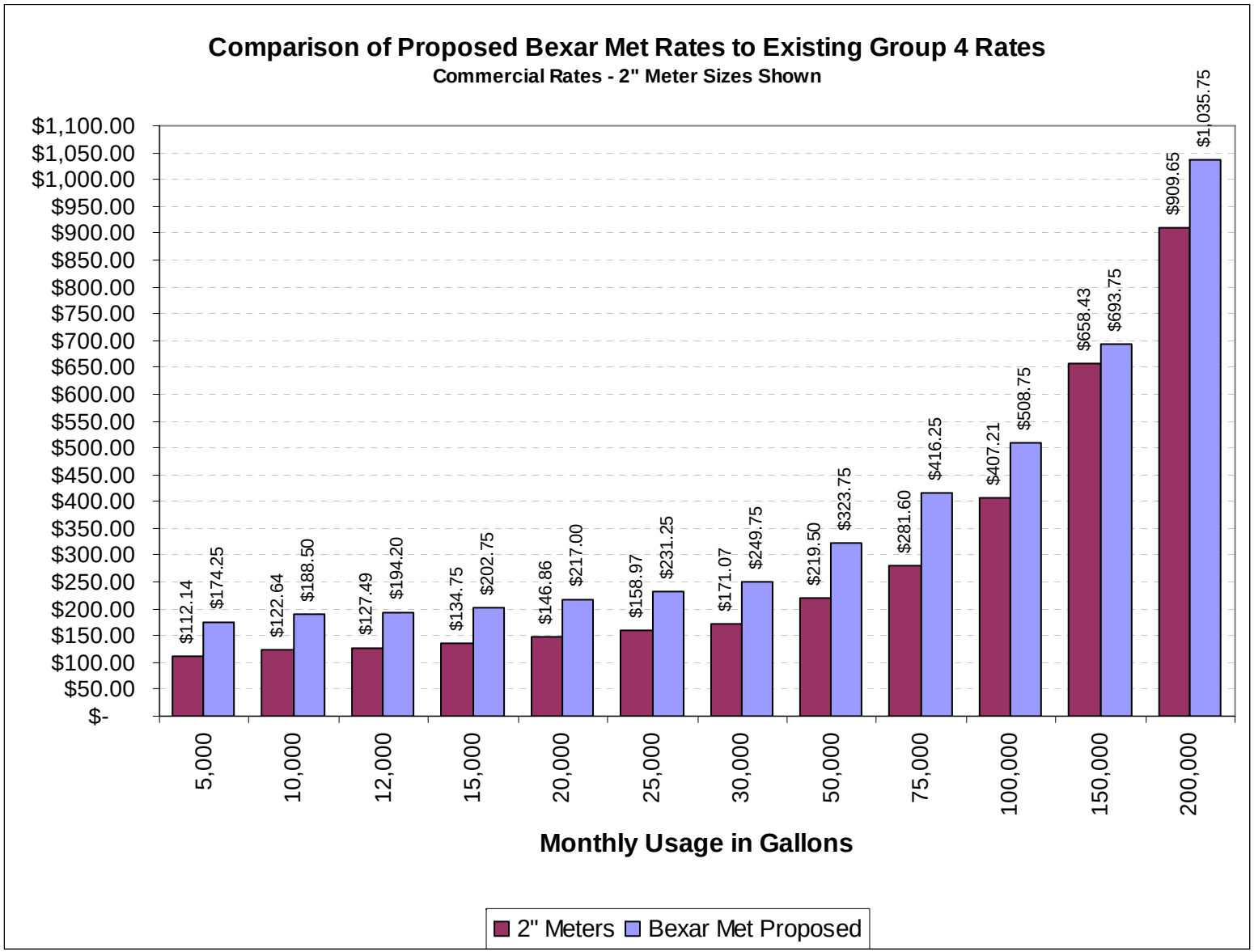
$174.83
$174.25
$192.41
$188.50
$199.45
$194.20
$210.00
$202.75
$227.58
$217.00
$245.16
$231.25
$262.75
$249.75
$333.09
$323.75
$421.01
$416.25
$508.93
$508.75
$684.78
$693.75
$860.62
$1,035.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
2" Meters
Bexar Met Proposed

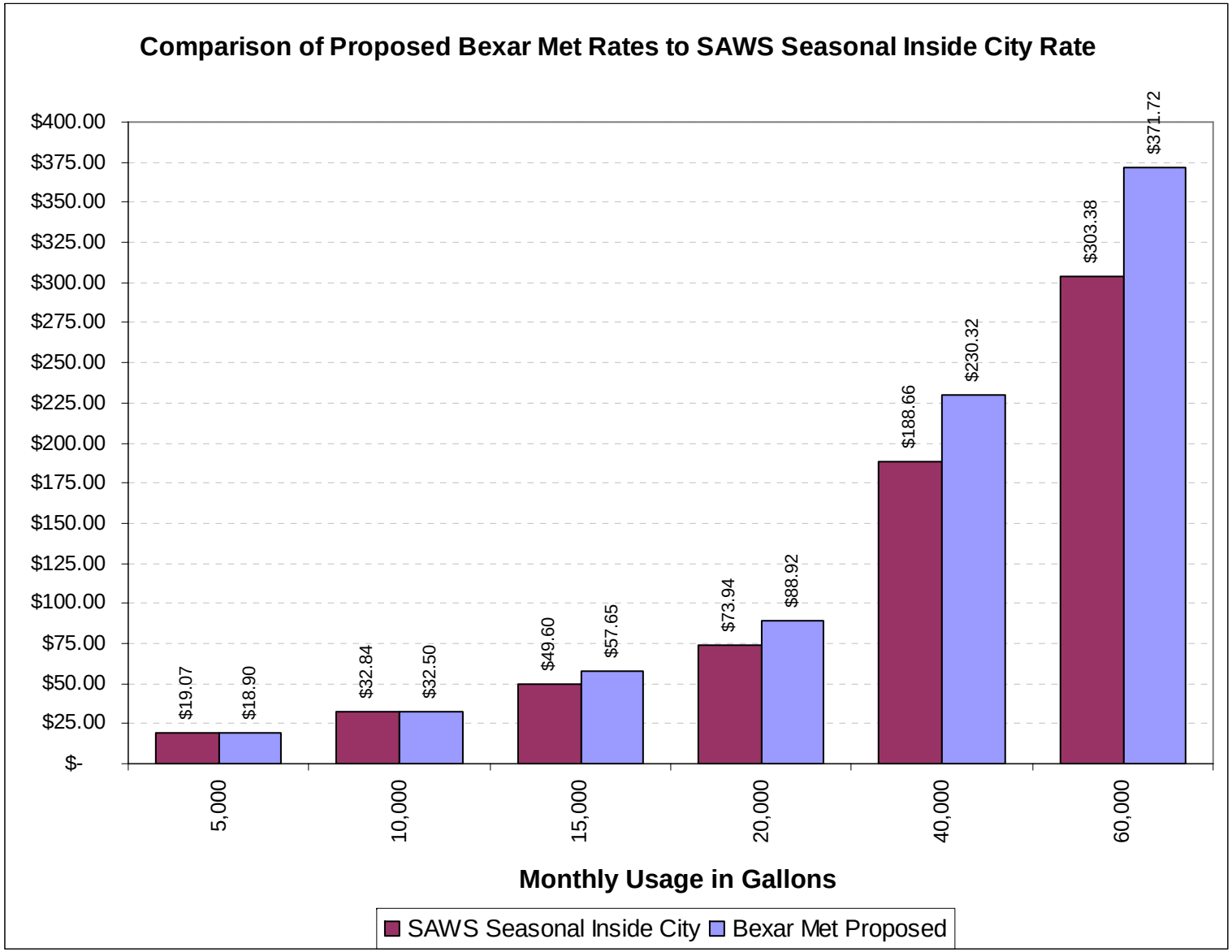

Comparison of Proposed Bexar Met Rates to Existing Group 4 Rates
Commercial Rates - 5/8" Meter Sizes Shown
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$32.50
$34.25
$43.00
$48.50
$47.84
$54.20
$55.11
$62.75
$67.21
$77.00
$79.32
$91.25
$91.43
$109.75
$139.86
$183.75
$201.95
$276.25
$327.56
$368.75
$578.78
$553.75
$830.00
$895.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
5/8" Meters
Bexar Met Proposed

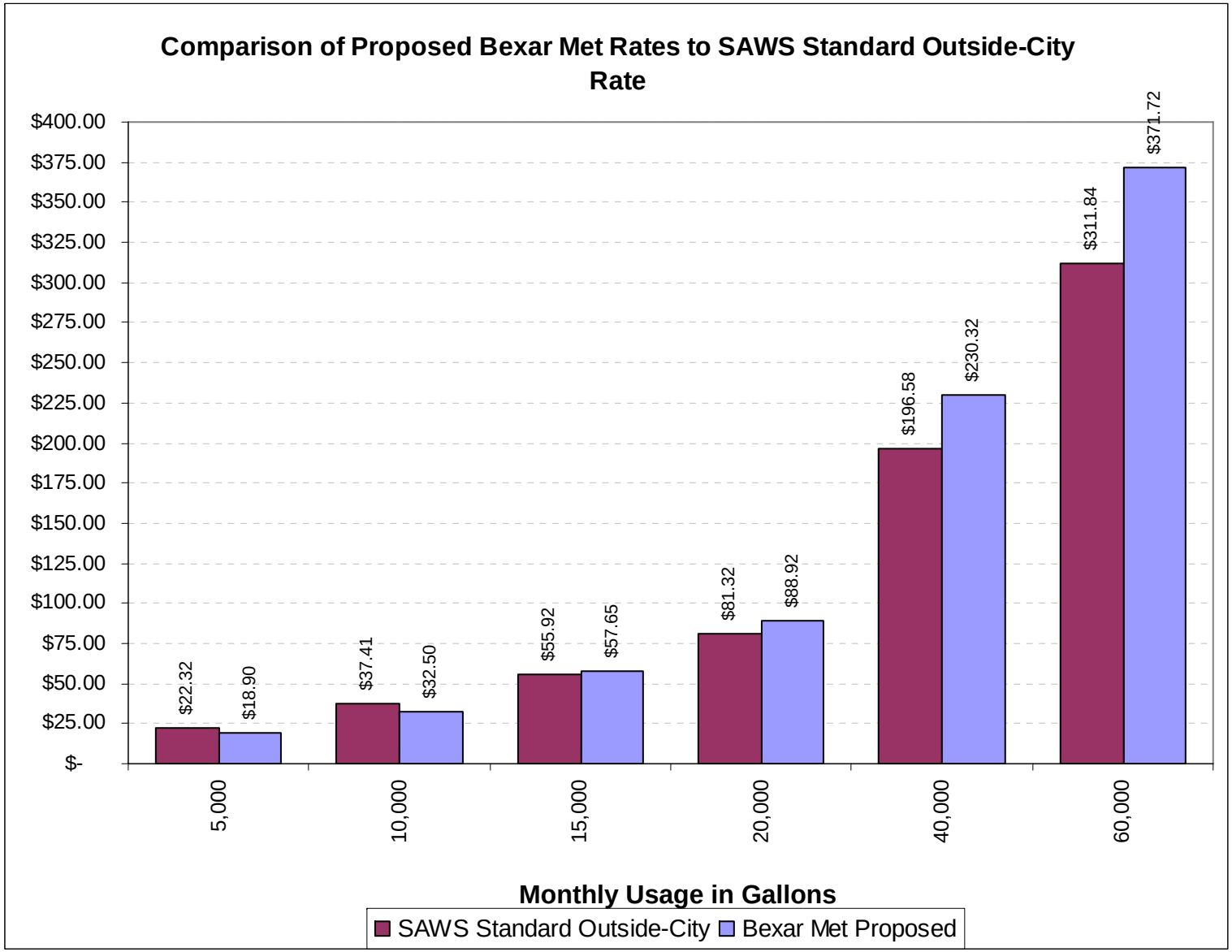

Comparison of Proposed Bexar Met Rates to Existing Group 4 Rates
Commercial Rates - 1" Meter Sizes Shown
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$42.24
$54.25
$52.74
$68.50
$57.58
$74.20
$64.84
$82.75
$76.95
$97.00
$89.06
$111.25
$101.17
$129.75
$149.59
$203.75
$211.69
$296.25
$337.30
$388.75
$588.52
$573.75
$839.74
$915.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
1" Meters
Bexar Met Proposed

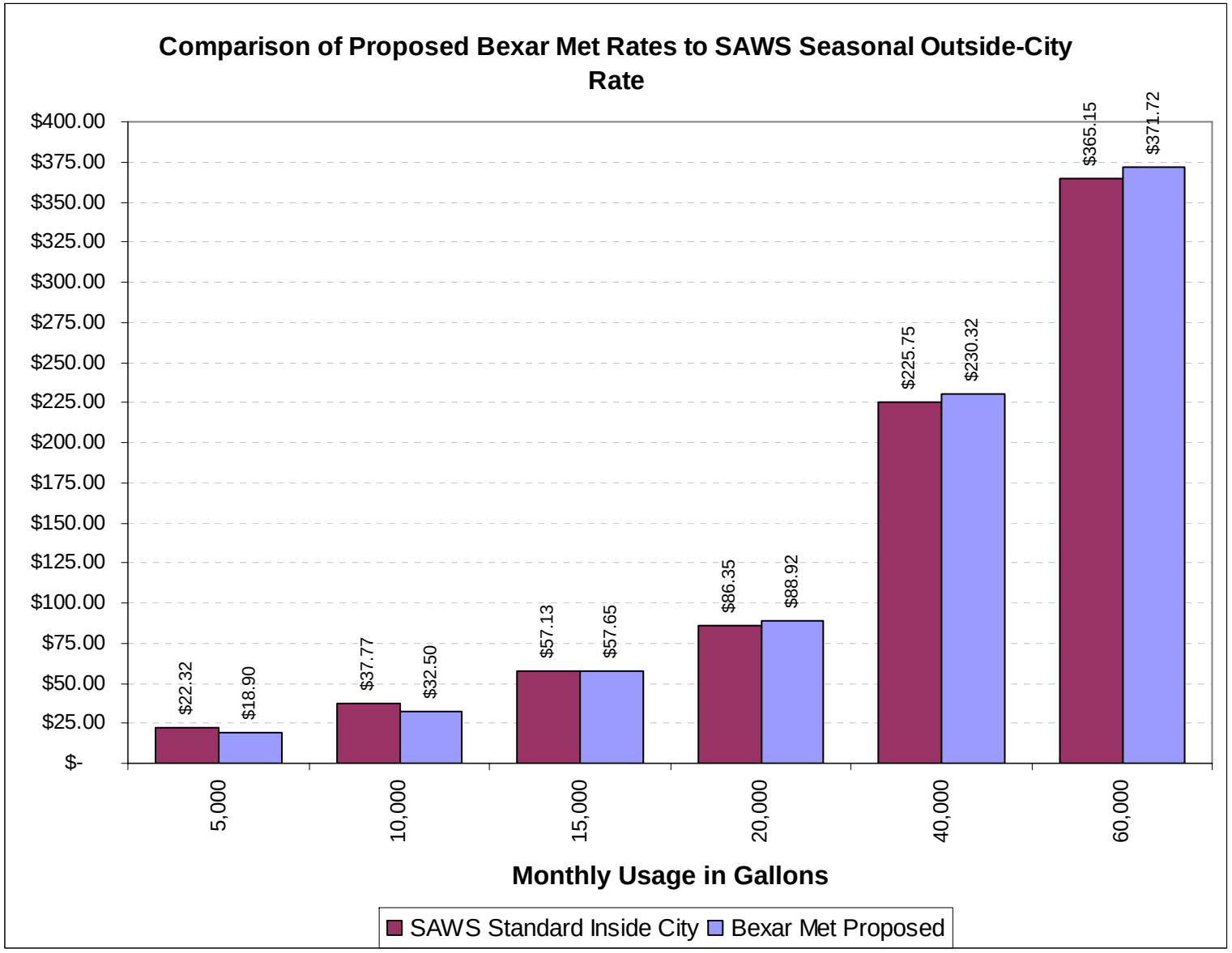

Comparison of Proposed Bexar Met Rates to Existing Group 4 Rates
Commercial Rates - 2" Meter Sizes Shown
$1,100.00
$1,050.00
$1,000.00
$950.00
$900.00
$850.00
$800.00
$750.00
$700.00
$650.00
$600.00
$550.00
$500.00
$450.00
$400.00
$350.00
$300.00
$250.00
$200.00
$150.00
$100.00
$50.00
$-
$112.14
$174.25
$122.64
$188.50
$127.49
$194.20
$134.75
$202.75
$146.86
$217.00
$158.97
$231.25
$171.07
$249.75
$219.50
$323.75
$281.60
$416.25
$407.21
$508.75
$658.43
$693.75
$909.65
$1,035.75
5,000
10,000
12,000
15,000
20,000
25,000
30,000
50,000
75,000
100,000
150,000
200,000
Monthly Usage in Gallons
2" Meters
Bexar Met Proposed

# APPENDIX B

## COMPARISON OF BEXAR METROPOLITAN WATER DISTRICT PROPOSED RATES TO SAWS SEASONAL AND OUTSIDE CITY RATES


Comparison of Proposed Bexar Met Rates to SAWS Seasonal Inside City Rate
$400.00
$375.00
$350.00
$325.00
$300.00
$275.00
$250.00
$225.00
$200.00
$175.00
$150.00
$125.00
$100.00
$75.00
$50.00
$25.00
$-
$19.07
$18.90
$32.84
$32.50
$49.60
$57.65
$73.94
$88.92
$188.66
$230.32
$303.38
$371.72
5,000
10,000
15,000
20,000
40,000
60,000
Monthly Usage in Gallons
SAWS Seasonal Inside City
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to SAWS Standard Outside-City Rate
$400.00
$375.00
$350.00
$325.00
$300.00
$275.00
$250.00
$225.00
$200.00
$175.00
$150.00
$125.00
$100.00
$75.00
$50.00
$25.00
$-
$22.32
$18.90
$37.41
$32.50
$55.92
$57.65
$81.32
$88.92
$196.58
$230.32
$311.84
$371.72
5,000
10,000
15,000
20,000
40,000
60,000
Monthly Usage in Gallons
SAWS Standard Outside-City
Bexar Met Proposed


Comparison of Proposed Bexar Met Rates to SAWS Seasonal Outside-City Rate
$400.00
$375.00
$350.00
$325.00
$300.00
$275.00
$250.00
$225.00
$200.00
$175.00
$150.00
$125.00
$100.00
$75.00
$50.00
$25.00
$-
$22.32
$18.90
$37.77
$32.50
$57.13
$57.65
$86.35
$88.92
$225.75
$230.32
$365.15
$371.72
5,000
10,000
15,000
20,000
40,000
60,000
Monthly Usage in Gallons
SAWS Standard Inside City
Bexar Met Proposed