

# DEVELOPMENT IMPACT FEE STUDY

City of Marble Falls, Texas  
September 2008



Prepared By:



**DEVELOPMENT IMPACT FEE STUDY**  
**FOR THE**  
**CITY OF MARBLE FALLS, TEXAS**

**Prepared For:**



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# CAPITAL IMPROVEMENT PLAN FOR IMPACT FEES

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# DEVELOPMENT IMPACT FEE STUDY FOR THE CITY OF MARBLE FALLS, TEXAS September 2008

The City of Marble Falls, Texas retained Wilbur Smith Associates for the purpose of developing Impact Fees for Water and Wastewater system improvements required to serve new development over the 10-year period, 2009-2018. This study has been conducted in accordance with Chapter 395 of Texas Local Government Code (the "statute") which required a jurisdiction imposing impact fees to develop a set of Land Use Assumptions and a Capital Improvements Plan upon which the fees are calculated. This document is intended to fulfill the requirements of the statute to develop Land Use Assumption, a Capital Improvement Plan and calculation of maximum allowable impact fees that may be assessed new development occurring within the defined Study Area.

## 1.0 INTRODUCTION

Chapter 395 of the Texas Local Government Code provides statutory requirements for the development and imposition of Impact Fees by municipalities and counties in Texas. There are three main components required by the statute and these are:

Development of **Land Use Assumptions** which include a description of the service area and projections of changes in land uses, densities, intensities, and population in the service area over at least a 10-year period. [Section 395.001(5)]

Development of a **Capital Improvement Plan** which identifies capital improvements or facility expansions for which impact fees are to be assessed [Sections 395.001(2) and 395.0411]

Calculation of an **Impact Fee** which is a charge or assessment imposed by the political subdivision against new development in order to generate revenue for funding or recouping the costs of improvements necessitated by and attributable to the new development. [Section 395.001(4)]

This document reports the results of the processes to develop:

- Land Use Assumptions
- A Capital Improvements Plan
- Impact Fess

### Advisory Committee

The statute requires that the municipality appoint a capital improvements Advisory Committee whose primary duties during the development of impact fees is to:

- (1) Advise and assist the City in adopting land use assumptions
- (2) Review the capital improvements plan and file written comments

(3) Monitor and evaluate implementation of the capital improvements plan. The Advisory Committee is a permanent entity as long as the City imposes impact fees under Section 395 and has additional continuing obligations concerning the implementation of the program and periodic update of the assumptions and capital improvements that are the basis of impact fees.

The City Council of Marble Falls officially appointed the Advisory Committee on April 28, 2008. The City Council appointed the existing Planning and Zoning Commission augmented by a representative of the extraterritorial jurisdiction in conformance with the statute [Section 395.058]. Members of the Advisory Committee are:

**Impact Fee Advisory Committee**

- Committee Chairperson – Steve Reitz
- Committee Vice-Chairperson – Bailey Sutherland
- Committee Member – Fred Zagst
- Committee Member – Thomas Barr
- Committee Member – Dale Klingsporn
- Committee Member – Darlene Oostermeyer
- Committee Member – Jane Marie Hurst
- Committee Member – John Kemper (ETJ)

## 2.0 LAND USE ASSUMPTIONS

The primary purpose of land use assumptions is to forecast growth over the 10-year period in order to apportion costs of capital improvements and determine actual impact fee rates that will be necessitated by the new development.

The following sections describe the process and results that comprise **Land Use Assumptions** for the future 10-year period, 2009 through 2018.

### Definition of the Service Area

The statute [Section 395.001(9)] defines the service area as:

“...the area within the corporate boundaries or extraterritorial jurisdiction, as determined under Chapter 42, of the political subdivision to be served by the capital improvements or facilities expansions specified in the capital improvements plan, except roadway facilities and storm water, drainage, and flood control facilities. The service area, for the purposes of this chapter, may include all or part of the land within the political subdivision or its extraterritorial jurisdiction, except for roadway facilities and storm water, drainage, and flood control facilities. For roadway facilities, the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six miles. For storm water, drainage, and flood control facilities, the service area may include all or part of the land within the political subdivision or its extraterritorial jurisdiction, but shall not exceed the area actually served by the storm water, drainage, and flood control facilities designated in the capital improvements plan and shall not extend across watershed boundaries.”

The City of Marble Falls has entered the development impact fee process with the goal of including the extraterritorial jurisdiction (ETJ) in the area for consideration of imposition of impact fees. **Figure 1** illustrates the current Municipal Boundary and resulting ETJ for Marble Falls. The existing city boundary comprises approximately 10.24 square miles of area. The ETJ, representing an area within one mile of the existing municipal boundaries includes an additional 32.41 square miles of area.

An issue identified during discussion of the impact fee Service Area and the existing ETJ was that of the City's existing application for a Certificates of Convenience and Necessity (CCN) to the Texas Commission on Environmental Quality (TCEQ) for its water and wastewater system. The current application includes most of the existing ETJ but excludes ten separate areas located within the existing ETJ for various reasons. The Advisory Committee, in consultation with the City's attorney in a public forum, reviewed each of the excluded areas of the CCN applications to determine whether or not the individual areas should be included or excluded from the Service Area for impact fees.

As a result, three (3) areas within the ETJ were excluded from the Service Area for impact fees. These were:

- Area served by the Channel Oaks Water System
- Area served by the Capstone MUD
- Area described as the Huber Mine

One area was included that is scheduled for annexation during the period before impact fees are expected to be adopted. The ETJ resulting from this annexation was also included. The annexation is described as the Flatrock Springs.

**Figure 2** illustrates the resulting service area adopted by the Advisory Committee as recommended to the City Council.

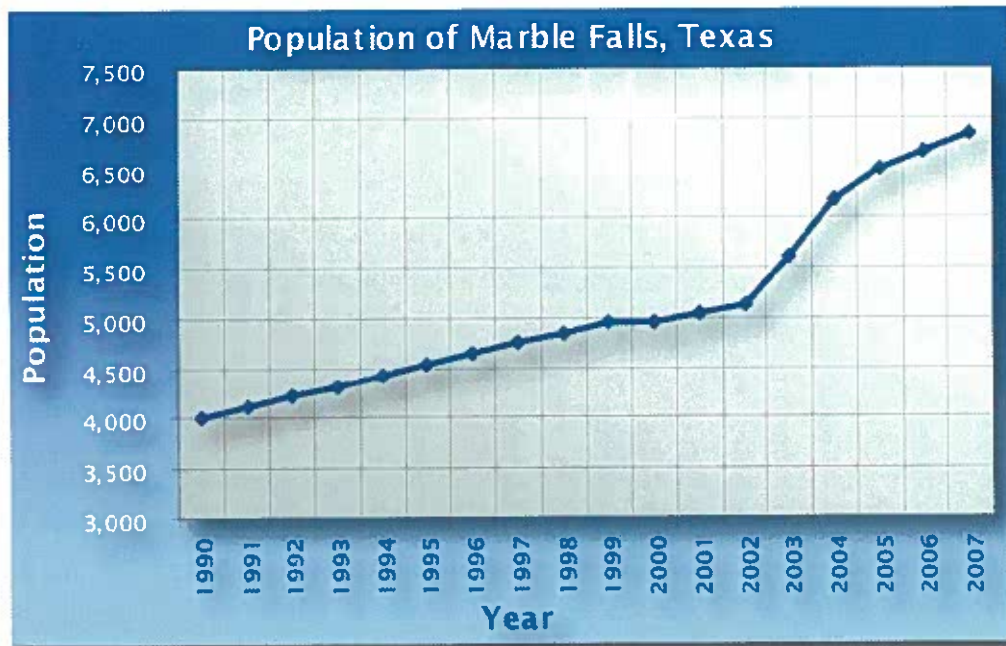
### Forecast Land Use Changes

Land use and population changes have been forecasted for the future 10-year period 2009-2018. These forecasts and the resulting expected absorption of land are presented in the following portions of this section.

#### Population Projections

The development impact fee process requires the development of "land use assumptions" (LUA) that include forecast of population for the future 10-year period. Historical population figures were available from U.S. Census data and supplemented by mid-census estimates from the Capital Area Council of Governments (CAPCOG) and actual residential absorption available from the City of Marble Falls for the period 2000-2007.

**Figure 3** illustrates the historical population trends from 1990 through 2007 for the City. Significant increases in growth have occurred since 2002.



**Figure 3 – Historical Population, 1990-2007**

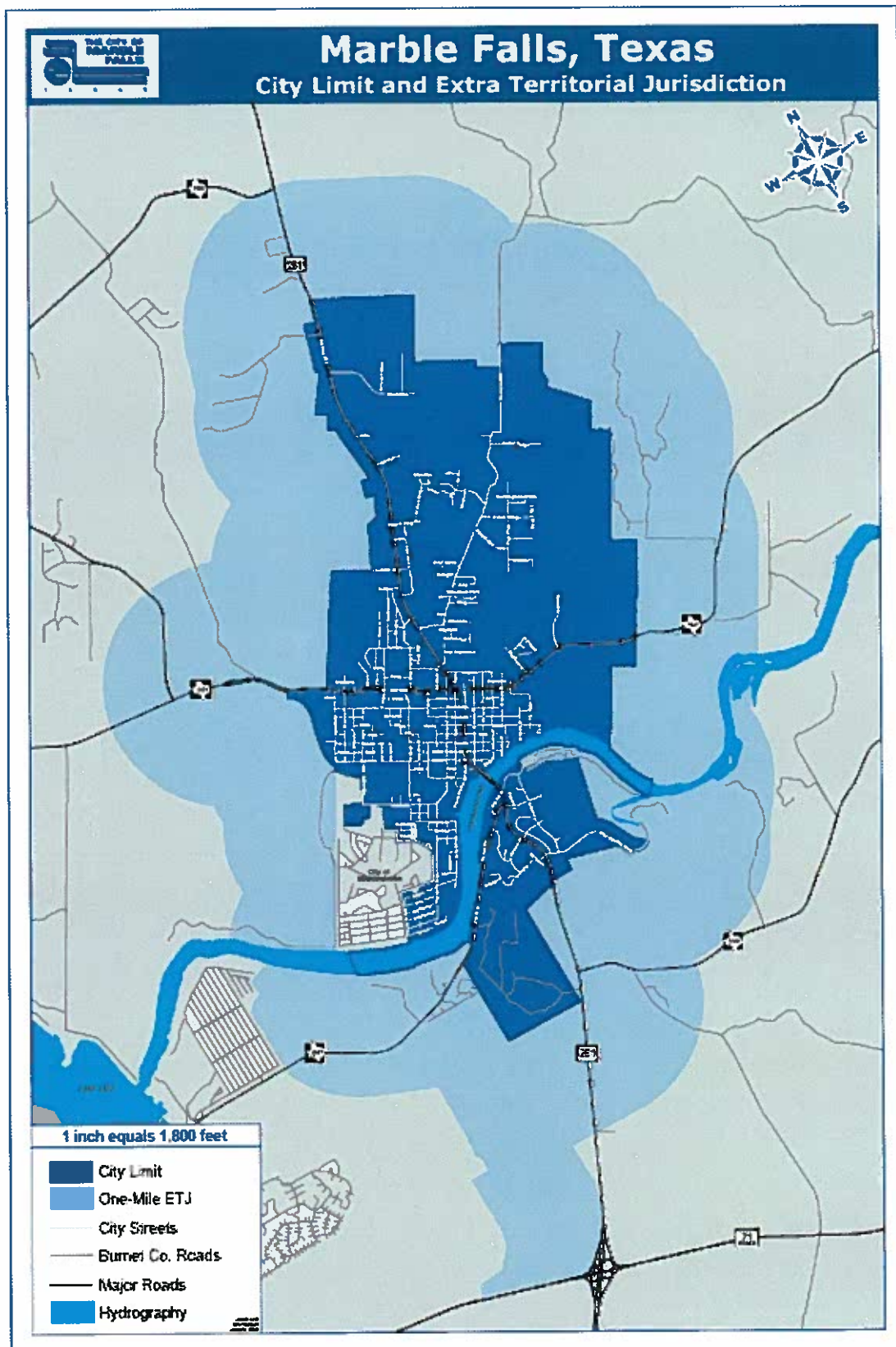
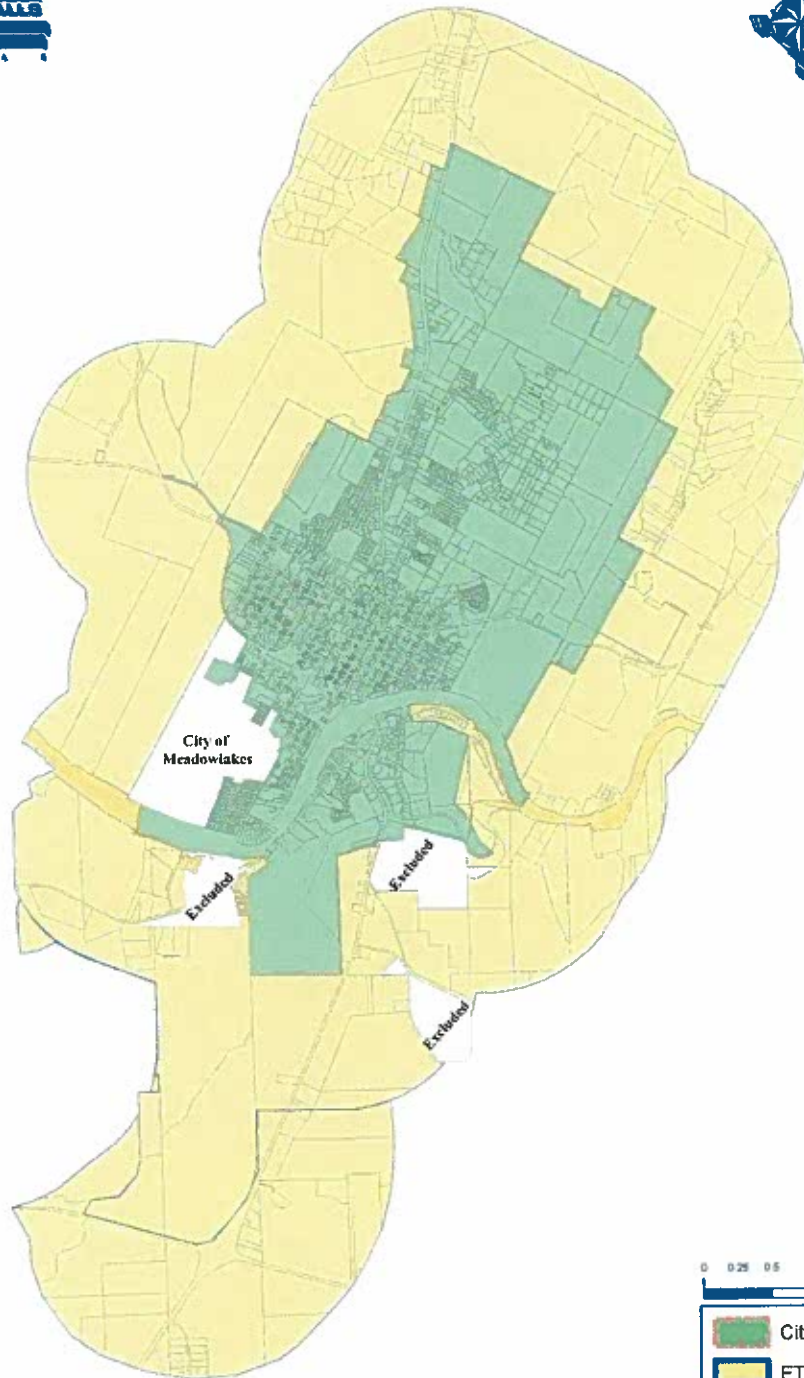


Figure 1 – City Limit and ETJ of Marble Falls, Texas

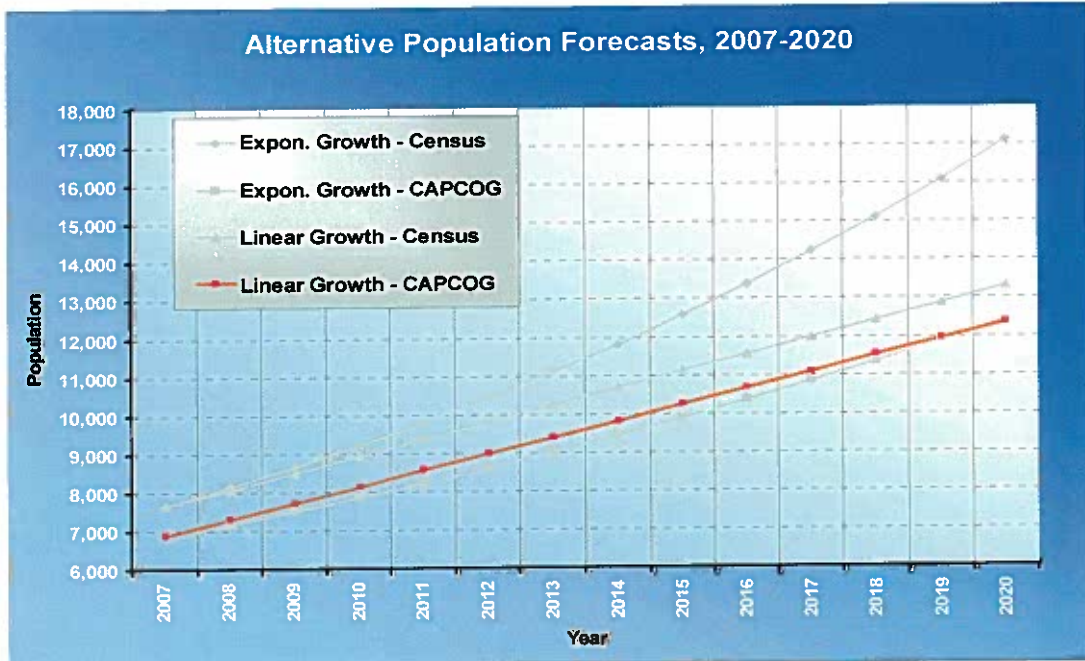
# Development Impact Fees Study Adopted Service Area June 2008



Rev: July 15, 2008

Figure 2 – Adopted Service Area for Impact Fees

The Advisory Committee was presented these historical population figures and 2000-2007 population estimates based on U.S. Census and Capital Area Council of Governments (CAPCOG) data. Alternative methods of forecasting future population was presented including use of U.S. Census and CAPCOG estimates with both linear and exponential extrapolations. Following explanation and discussion between the consultant, City staff and the Advisory Committee, it was decided to use the CAPCOG linear extrapolation for population estimates through the target year 2020. The alternative forecast is shown in **Figure 4** and the selected forecast, by year, is shown in **Table 1**. Year 2018 population estimates are 11,502 persons.



**Figure 4 – Population Projection, 2007-2020**

**Table 1 - Annual Forecast Population, 2008-2020**

*Linear Growth Forecast-- CAPCOG	
Assumes a linear growth pattern based on CAPCOG 2007 population estimates (an annual increment of 423 people).	
Year	Population
2006	6,668
2007	6,849
2008	7,272
2009	7,695
2010	8,118
2011	8,541
2012	8,964
2013	9,387
2014	9,810
2015	10,233
2016	10,656
2017	11,079
2018	11,502
2019	11,925
2020	12,348

### Land Use Categories and Intensities

The procedures for the development of impact fees require a forecast and "...projection of changes in land use...." for the defined service area. The city is comprised of a number of disparate land uses including residential uses of varying intensities, non-residential uses and vacant land and local infrastructure. The 1998 Comprehensive Plan for the City of Marble Falls conducted an intensive inventory of land uses and established definitive characteristics that were examined to help determine what is likely to occur in the future.

As a result of City staff and Advisory Committee discussion, seven distinct categories of land uses were adopted for the purposes of this study. Additionally, typical intensities of these land uses were determined that could be directly related to the requirements for public infrastructure such as water and wastewater services. The land use categories adopted for the Land Use Assumptions are comprised of the following:

- **Single-Family:**  
Residential structures including one-family detached units, duplexes, and mobile/manufactured homes
- **Multi-Family**  
Residential structures including tri-plexes, four-plexes, apartments with five or more units per building, rooming houses, group quarters, and related accessory buildings
- **Light Commercial**  
Shopping and service facilities for the retail sale of goods and services as well as low-intensity office uses for the conduct of general business activities
- **Heavy Commercial**  
Heavy retail, wholesale, and service uses which may involve some outdoor activity or areas of storage such as building yards, sales lots, and automobile repair
- **Industrial**  
Heavy and light manufacturing, processing, storage, repair, fabrication, or distribution of products
- **Parks/Open Space**  
Public Parks, outdoor recreation areas, golf courses, trails and natural preserves
- **Public/Semi-Public**  
Institutional and non-government facilities where people frequently gather including government offices, schools, churches, community centers, hospitals, and meeting halls

The following **Table 2** presents the typical densities at which the categories are expected to be absorbed during the future 10-year period, 2009-2018.

**Table 2 – Typical Land Use Densities by Category**

Land Use Category	Typical Development Intensity
Single-Family	2.9 units/acre
Multi-Family	7.4 units/acre
Light Commercial	0.25 : 1 FAR
Heavy Commercial	0.25 : 1 FAR
Industrial	0.30 : 1 FAR
Parks/Open Space	0.10 : 1 FAR
Public/Semi-Public	0.25 : 1 FAR

**Forecast Land Use Absorption, 2009-2018**

Forecast of future land use absorption was accomplished by review of past trends and current land uses. Data sources utilized include:

- 1998 Comprehensive Plan (1996 data)
- U.S. Census – 2000
- Housing Absorption, 2000-2007, City of Marble Falls

The background data, assumptions and methodology for the determination of land use absorption for the next 10-years was considered by the Advisory Committee as presented by the staff. As a result, it is forecast that a total of 1,197 additional acres of land will be absorbed over the next 10 years. This represents an overall 58 percent increase over the estimated area of land that is used in 2008 for the previously presented categories of land use. Total forecast Land Use in 2018 and the increase by land use category is shown in the following **Table 3**.

**Table 3 - Forecast Absorption of Land by Category**

Category	2008 Estimated (Acres)	2018 Projected (Acres)	Increase 2008 - 2018 (Acres)
Single-Family	950	1,503	553
Multi-Family	64	102	37
Light Commercial	151	239	88
Heavy Commercial	358	567	208
Industrial	21	33	12
Parks/Open Space	146	230	85
Public/Semi-Public	368	582	214
<b>TOTAL</b>	<b>2,058</b>	<b>3,255</b>	<b>1,197</b>

## Summary of Land Use Assumptions

Based on historical and current trends provided by US Census data and projections of the Capital Area Council of Governments for the Burnet County area, Marble Falls and its ETJ is expected to reach a population of **11,502 persons** by the year 2018. In order to support this growth, an additional **1,197 acres** of land is expected to be absorbed.

### 3.0 CAPITAL IMPROVEMENTS PLAN

This document presents the Capital Improvement Plan for Development Impact Fees being considered by the City. The following sections describe the process and results that comprise the **Capital Improvement Plan** for the future 10-year period, 2009 through 2018.

#### Service Area

The service area considered for impact fees included the current (2008) jurisdictional limits of Marble Falls including areas to be annexed during this calendar year as well as the extraterritorial jurisdiction (ETJ) of the City. It is planned that new capital facilities implemented by the City will extend water and sewer services to areas outside the existing city limits, into the area of the ETJ. The proposed service area is illustrated in **Figure 2**.

#### Capital Facilities

##### New Facilities

The City of Marble Falls has been active in the development of local infrastructure to include new Water and Wastewater facilities to serve continued growth in existing and newly annexed areas. The focus of development impact fees at this time is on Water and Wastewater Facilities to include the following types of new facilities

- Water Distribution Lines – Major water lines of 10 inch diameter or larger that supply water to customers of the Marble Falls Water System
- Water Storage – Elevated water storage as a source to distribution lines
- Water Treatment – New water treatment facilities to prepare water for distribution supplied by the Lower Colorado River Authority (LCRA)
- Wastewater Collection Lines – Major sewer lines of 10 inch diameter or greater for gravity flow lines and 8 inch diameter or greater for pressure (“force”) mains.

The City’s Consulting Engineering firm (KC Engineering) has assisted the City to develop a list of water and wastewater facilities planned for construction within the 10-year time frame of this development impact fee study (2009-2018). A list of Water Facilities and Wastewater Facilities is included as **Table 4** and **Table 5**, respectively.

Location maps of Water Facilities and Wastewater Facilities is included as **Figure 5** and **Figure 6**, respectively.

**TABLE 4 - PROPOSED WATER FACILITIES FOR IMPACT FEES**

Item ID	Item	Diameter	Description	Length (Ft.)	Opinion of Capital Cost	20-Year Debt Service (@ 4.75%)	Total 20-Year Project Cost	% Utilized 10-Year Period (2009-2018)	10-Year Cost Portion
<b>WATER LINES</b>									
W01	12" Water Line	12	Hospital Phase 1	23,000	\$2,949,000	\$1,546,927	\$4,495,927	19.25%	\$865,459
W03	16" Water	16	East Arterial	7,130	\$750,000	\$393,420	\$1,143,420	19.25%	\$220,107
W04	16" Water	16	Mormon Mill Road Phase IIIa	3,550	\$350,000	\$183,596	\$533,596	19.25%	\$102,716
W06	16" Water	16	Annexation Svcs East RM 1431	11,900	\$1,500,000	\$786,840	\$2,286,840	19.25%	\$440,213
W07	12" Water	12	Annexation Svcs East RM 1431	6,100	\$600,000	\$314,736	\$914,736	19.25%	\$176,085
W08	16" Water	16	Annexation Svcs US 281N	3,650	\$585,000	\$306,868	\$891,868	19.25%	\$171,683
W10	16" Water	16	Annexation Svcs 321.74 ac. E. of Flatrock	15,650	\$840,000	\$440,630	\$1,280,630	19.25%	\$246,519
W16	12" Water	12	Mormon Mill East Arterial to Resource	4,000	\$451,000	\$236,577	\$687,577	19.25%	\$132,357
W18	12" Water	12	Mormon Mill to Resource	3,840	\$535,000	\$280,640	\$815,640	19.25%	\$157,009
W20	12" Water	12	Nature Heights	3,450	\$400,000	\$209,824	\$609,824	19.25%	\$117,390
W22	12" Water	12	Second Street Ave N to Industrial	3,100	\$298,000	\$156,319	\$454,319	19.25%	\$87,456
W24	12" Water	12	Industrial RM 1431 to Colt	4,880	\$495,000	\$259,657	\$754,657	19.25%	\$145,270
W26	12" Water	12	Industrial Colt to Coach	4,740	\$600,000	\$314,736	\$914,736	19.25%	\$176,085
W28	12" Water	12	Industrial Coach to Resource	5,400	\$682,000	\$357,750	\$1,039,750	19.25%	\$200,150
<b>WATER TREATMENT</b>									
WP12	3.0 MGD	-	Water Treatment Plant and intake	n/a	\$10,220,000	\$5,361,003	\$15,581,003	19.25%	\$2,999,320
<b>WATER STORAGE</b>									
W15	MG	-	Elevated Storage-Flatrock	n/a	\$2,300,000	\$1,206,488	\$3,506,488	19.25%	\$674,994
<b>TOTALS</b>					<b>\$23,555,000</b>	<b>\$12,356,011</b>	<b>\$35,911,011</b>		<b>\$6,912,816</b>

**TABLE 5 - PROPOSED WASTEWATER FACILITIES FOR IMPACT FEES**

Item ID	Item	Description	Length (Ft.)	Opinion of Capital Cost	20-Year Debt Service (@ 4.75%)	Total 20-Year Project Cost	% Utilized 10-Year Period (2009-2018)	10-Year Cost Portion
<b>WASTEWATER LINES</b>								
WW02	8" Pressure Wastewater Line	Hospital Phase 1	23,000	\$1,862,000	\$976,731	\$2,838,731	6.08%	\$172,595
WW03	12" Wastewater	East Arterial	1,800	\$500,000	\$262,280	\$762,280	6.08%	\$46,347
WW05	8" Pressure Wastewater Line	Mormon Mill Road Phase IIIa	4,100	\$750,000	\$393,420	\$1,143,420	6.08%	\$69,520
WW06	15" Wastewater	Annexation Svcs East RM 1431	10,433	\$2,946,667	\$1,545,703	\$4,492,370	6.08%	\$273,136
WW07	8" Pressure Wastewater Line	Annexation Svcs East RM 1431	20,867	\$1,473,333	\$772,852	\$2,246,185	6.08%	\$136,568
WW09	15" Wastewater	Annexation Svcs US 281N	2,500	\$575,000	\$301,622	\$876,622	6.08%	\$53,299
WW11	15" Wastewater	Annexation Svcs 321.74 ac. E. of Flatrock	5,300	\$840,000	\$440,630	\$1,280,630	6.08%	\$77,862
WW14	15" Wastewater	Mustang to Lift Station	8,000	\$1,200,000	\$629,472	\$1,829,472	6.08%	\$111,232
WW17	15" Wastewater	Mormon Mill East Arterial to Resource	4,000	\$451,000	\$236,577	\$687,577	6.08%	\$41,805
WW19	15" Wastewater	Mormon Mill to Resource	3,840	\$535,000	\$280,640	\$815,640	6.08%	\$49,591
WW21	15" Wastewater	Nature Heights	2,850	\$450,000	\$236,052	\$686,052	6.08%	\$41,712
WW23	15" Wastewater	Second Street Ave N to Industrial	3,100	\$298,000	\$156,319	\$454,319	6.08%	\$27,623
WW25	15" Wastewater	Industrial RM 1431 to Colt	4,880	\$495,000	\$259,657	\$754,657	6.08%	\$45,883
WW27	15" Wastewater	Industrial Colt to Coach	4,740	\$600,000	\$314,736	\$914,736	6.08%	\$55,616
WW29	15" Wastewater	Industrial Coach to Resource	5,400	\$682,000	\$357,750	\$1,039,750	6.08%	\$63,217
<b>WASTEWATER TREATMENT</b>								
WWP13	Wastewater Plant 1.0 MGD	Wastewater Treatment Plant	n/a	\$7,069,000	\$3,708,115	\$10,777,115	6.08%	\$655,249
<b>Subtotal Wastewater Lines</b>				<b>\$13,658,000</b>	<b>\$7,164,440</b>	<b>\$20,822,440</b>		<b>\$1,266,004</b>
<b>Subtotal Wastewater Treatment</b>				<b>\$7,069,000</b>	<b>\$3,708,115</b>	<b>\$10,777,115</b>		<b>\$655,249</b>
<b>TOTALS</b>				<b>\$20,727,000</b>	<b>\$10,872,555</b>	<b>\$31,599,555</b>		<b>\$1,921,253</b>

Based on the absorption of population and land use over the next ten-year period (2009-2018) it has been calculated that this new development will utilize approximately 19 percent of the additional water facilities capacity. Similar to the analysis conducted for water facilities, it is estimated that new development over the forecast ten-year period will utilize approximately six percent of the additional wastewater facilities capacity.



CAPITAL IMPROVEMENT PLAN, 2009-2018  
Development Impact Fee Study - City of Marble Falls, TX

PROPOSED WATER FACILITIES

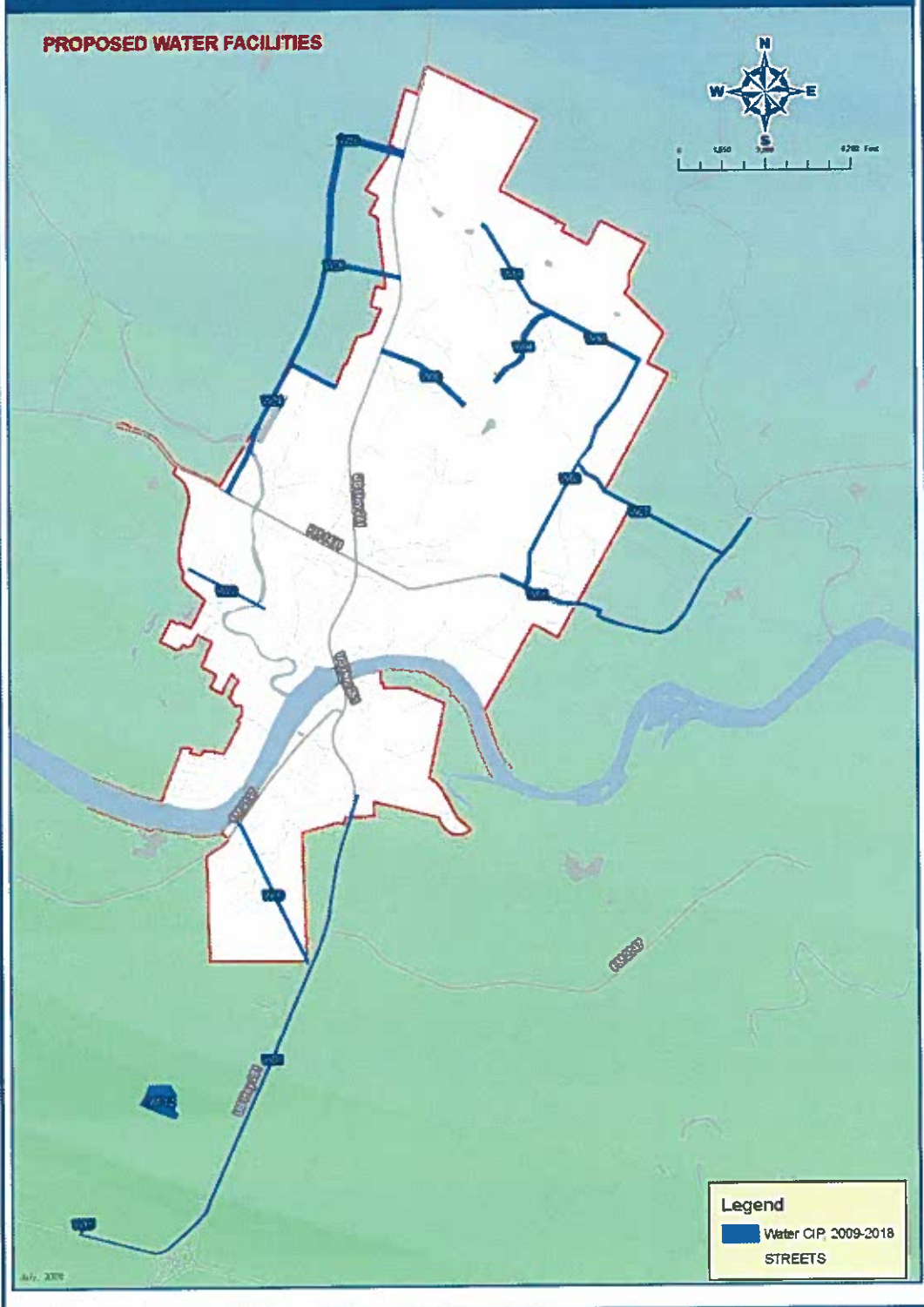


FIGURE 5 – PROPOSED WATER FACILITIES





CAPITAL IMPROVEMENT PLAN, 2009-2018  
Development Impact Fee Study - City of Marble Falls, TX

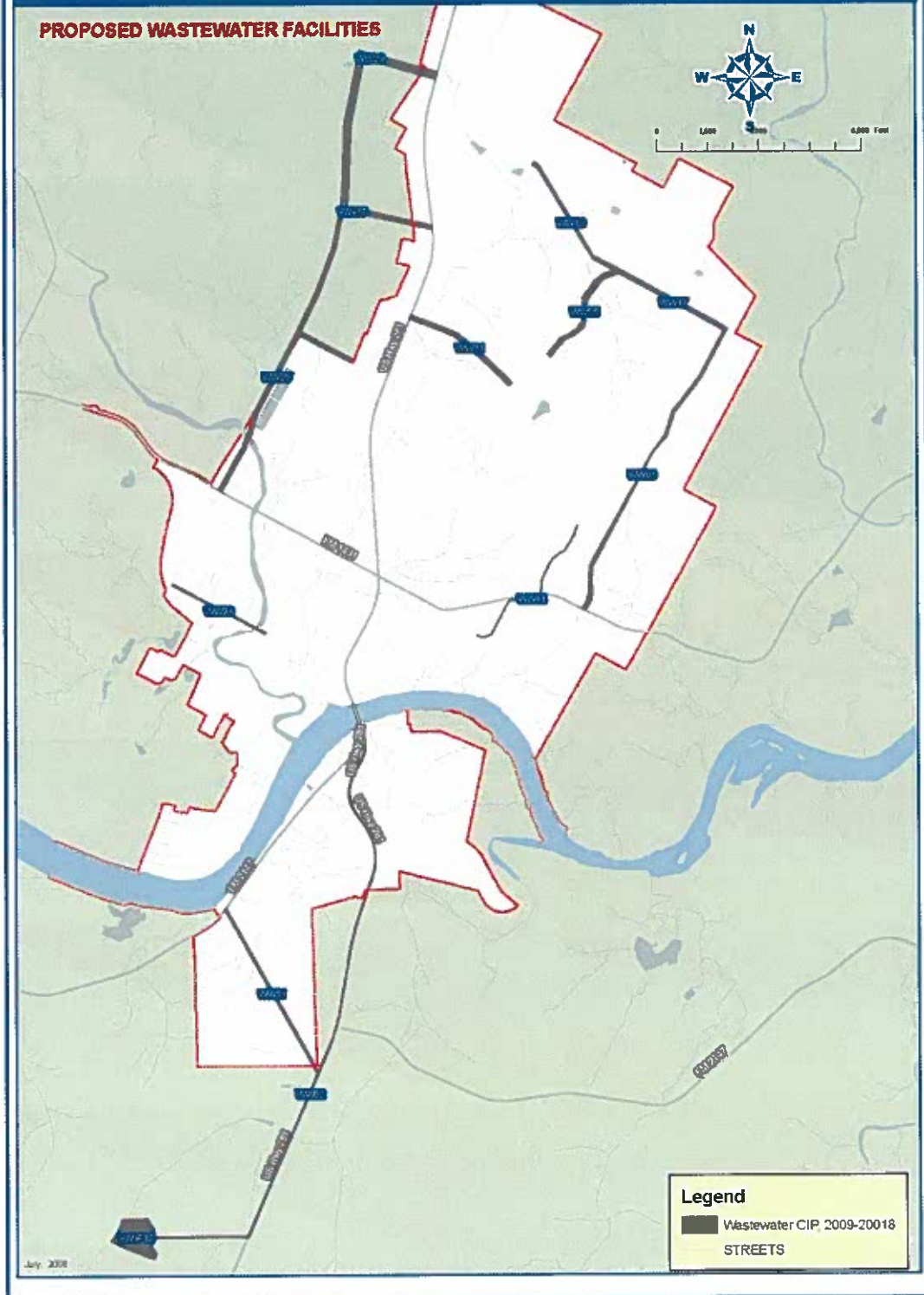


FIGURE 6 – PROPOSED WASTEWATER FACILITIES

### Existing Facilities

In accordance with the requirements of the statute, existing water and wastewater facilities have been identified as to location, size, capacity and utilization. The City's Engineer has provided current utilization of both water and wastewater facilities identified based on daily rates and peak rates of consumption (water) and discharge (wastewater). Existing water and wastewater facilities are identified in **Table 6** and **Table 7**, respectively at the end of this document. **Figure 7** and **Figure 8** illustrate the location of these facilities.

Current estimates of demand and capacity have determined that approximately 56 percent of 2008 water system capacity is utilized on a system-wide basis while approximately nine percent of the wastewater system capacity is utilized. It is estimated that development forecast to occur over the ten-year period will utilize an additional 21 percent of existing water system capacity and six percent of the wastewater system capacity.

### **Costs and Allocated Costs of Facilities**

#### New Facilities

**Tables 4 and 5** provide the estimated costs for new water and wastewater facilities included in the ten-year period. These are shown to include the following elements:

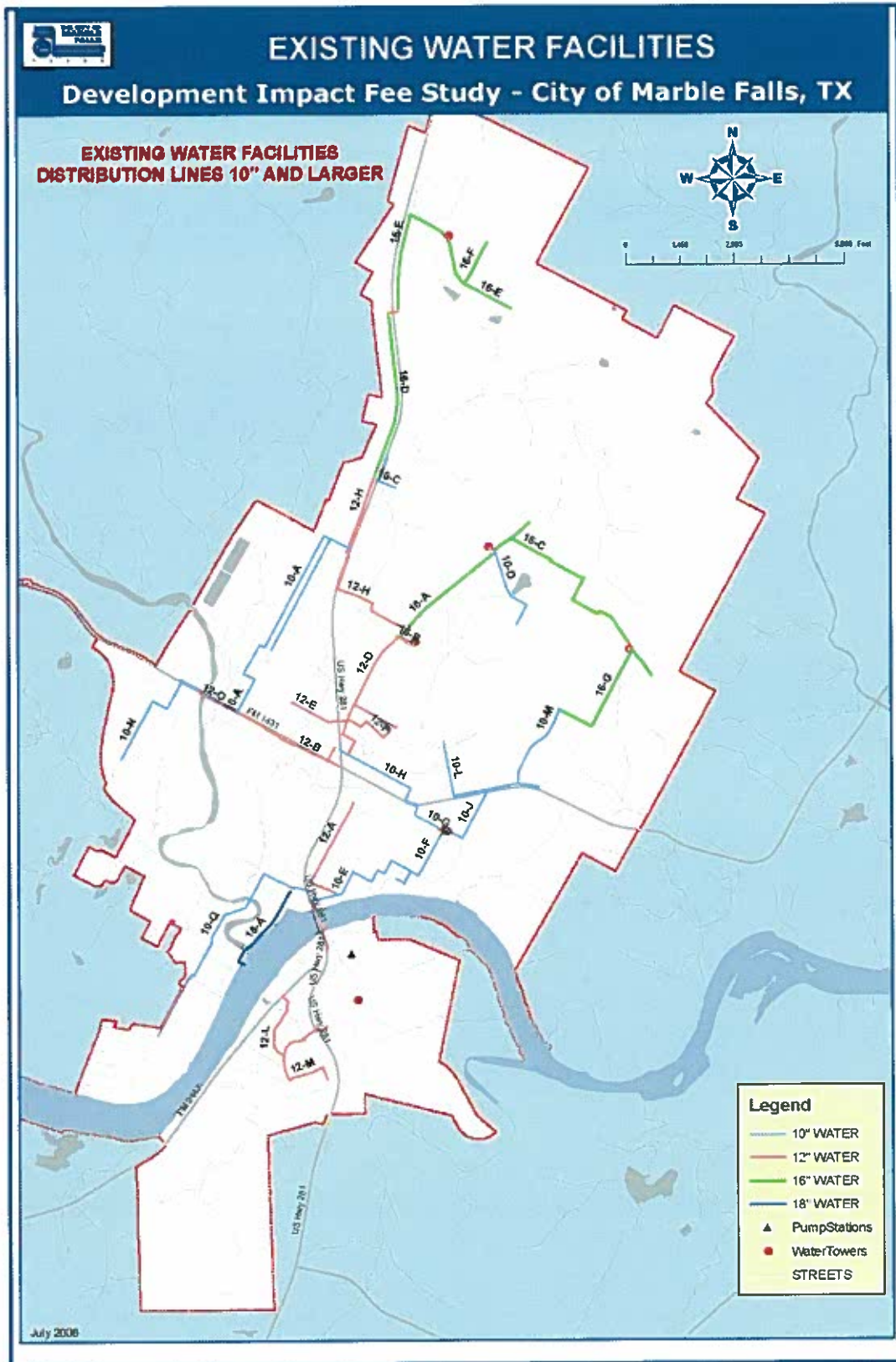
- Opinion of capital cost – the estimated construction cost provided by the City's Engineer for construction of the facility including pipe, fittings, manholes, valves, reservoirs, pumping, easements and engineering design.
- Cost of Debt Service – financing costs for construction of the respective utilities from revenue bond or other financing mechanisms at an estimated interest rate of 4.75 percent (crf= 0.076228) over 20 years of bonded indebtedness.
- Total 20-Year project cost – the sum of the capital and debt costs over 20 years of bonded indebtedness.

Total project costs for new water facilities are \$35.9 million and \$31.7 million for wastewater facilities.

#### Existing Facilities

Historical information to determine actual costs of water and wastewater facilities constructed over the past 100 years since Marble Falls was first incorporated were not sufficiently available. Therefore, estimates were derived by using 1997 as the "average" year of facility construction with 1997 unit prices keyed to the Construction Price Index for Texas.

The "value" of existing water and wastewater facilities are shown in **Table 6** and **Table 7**. The total project costs for the identified facilities are \$8.9 million for water and \$3.2 million for wastewater.

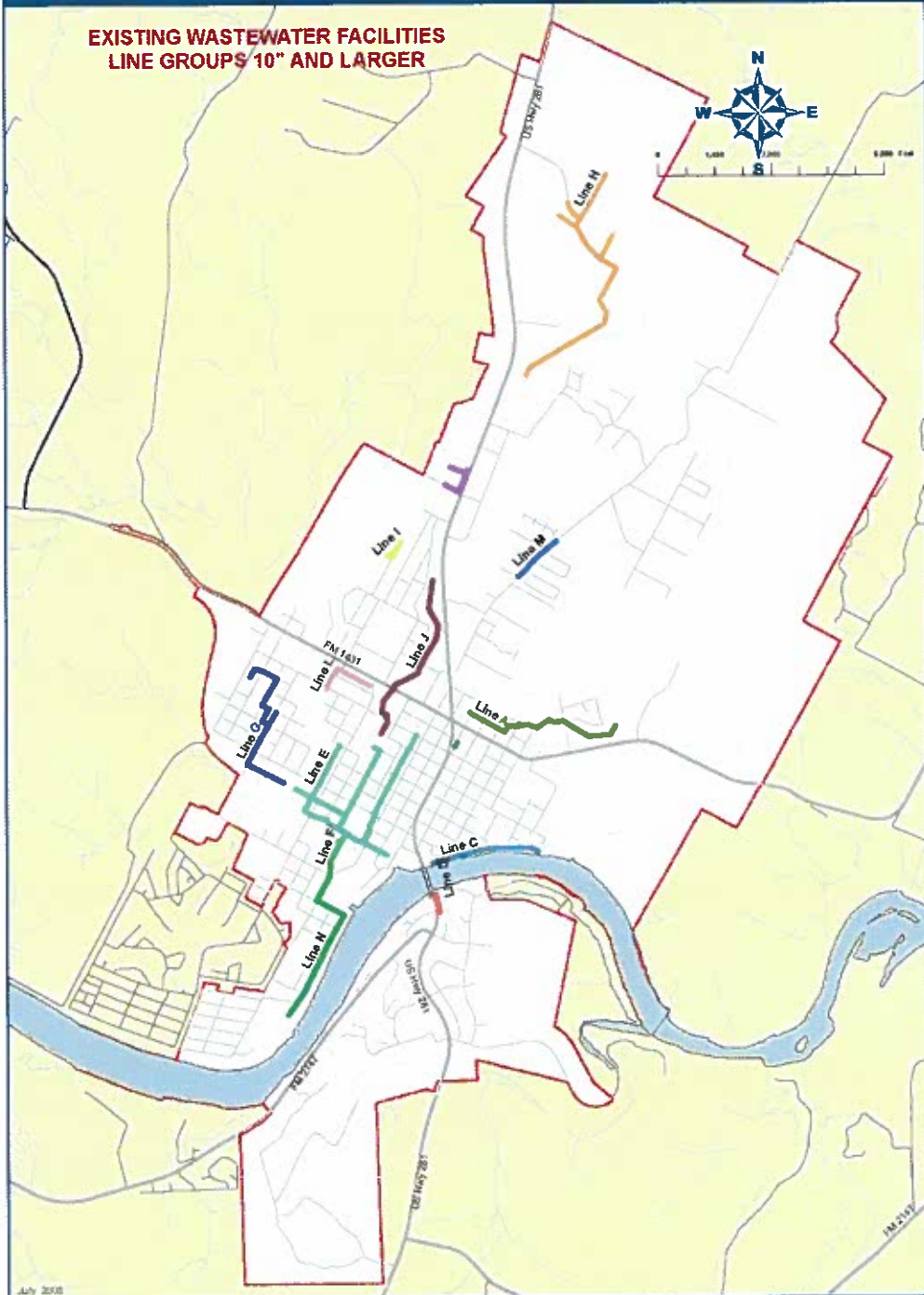


**FIGURE 7 – EXISTING WATER FACILITIES**



# EXISTING WASTEWATER FACILITIES

## Development Impact Fee Study - City of Marble Falls, TX



**FIGURE 8 – EXISTING WASTEWATER FACILITIES**

## Projected New 'Service Units'

The statute requires that the capital improvement plan include "the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;" In addition, it requires "a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, and industrial;"

Service Units are defined as "a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years." The purpose of this requirement is to establish a relative measure of water consumption and wastewater discharge across the range of land uses that are expected to be absorbed over the next ten years.

Historical data and trends have been used to determine standardized rates of consumption (water) and discharge (wastewater) over the past 10 years. **Table 8**, below, illustrates actual water demand and wastewater discharge during the period 1998-2007 as provided by City of Marble Falls records. Population and the number of residential units is based on the Land Use Assumptions of this study.

**TABLE 8 - WATER AND WASTEWATER CONSUMPTION/DISCHARGE DATA, 1998-2007**

Year	Population (1)	Residential Units (2)	WATER			WASTEWATER	
			No. Water Connection Customers (3)	Water Usage Average Day Demand (MG) (4)	Consumption per Resid. Unit (gpd) (5)	WW Discharge Avg. Day (MG) (6)	Discharge per Resid. Unit (gpd) (7)
1998	4,769	1,900	2,189	0.822	432	0.6716	354
1999	4,864	1,938	2,332	1.016	524	0.5803	299
2000	4,959	1,976	1,826	0.575	291	0.5418	274
2001	5,040	2,008	2,463	0.877	437	0.7026	350
2002	5,129	2,043	2,508	0.976	477	0.7381	361
2003	5,619	2,239	2,580	0.983	439	0.7129	318
2004	6,183	2,463	2,658	0.939	381	0.7075	287
2005	6,487	2,584	2,712	1.129	437	0.6788	263
2006	6,668	2,657	2,827	1.231	464	0.6243	235
2007	6,849	2,729	2,968	0.984	361	0.7849	288
Average Daily, 1998-2007					<b>424</b>		<b>303</b>

Therefore the standardized rate of consumption or discharge per single-family Living Unit over the past ten years is 424 gallons per day for water consumption and 303 gallons per day discharge for wastewater. This can be compared to "usual" facility design capacities of 500 gpd and 300 gpd for water and wastewater respectively.

The methodology to determine existing and future service units is based on the calculated average rates of consumption/discharge and the forecast absorption of land use over the 10-year period. The following Table 9 shows the calculations to arrive at the number of existing (2008) and projected (2018) service units and the resulting 10-year additional Service Units.

**TABLE 9 - 10-YEAR ADDITIONAL SERVICE UNIT CALCULATION**

Year	WATER			WASTEWATER		
	Average Day Demand (MG)	Service Unit Demand (gpd)	Service Units	Average Day Flow (MG)	Service Unit Demand (gpd)	Service Units
2008	1.115	424	2,630	0.696	303	2,297
2018	1.764	424	4,159	1.101	303	3,633
<b>10-Year Additional Service Units:</b>			<b>1,530</b>			<b>1,336</b>

This impact fee defines a water and wastewater “service unit” as a ¾-inch water meter which is the equivalent of a single-family *Living Unit Equivalent (LUE)*. This is the typical meter used for a single-family detached dwelling, and therefore is considered to be equivalent to one “living unit.” Other meter sizes can be compared to the ¾-inch meter by the ratio of water flows for various meter sizes as published by the American Water Works Association (AWWA) as show in the following Table 10:

**TABLE 10 - SERVICE UNIT EQUIVALENCY TABLE**

Meter Size (1)	Maximum Continuous Operating Capacity (GPM) (2)	Service Unit Equivalent
¾" PD (3)	15	1.0
1" PD	25	1.7
1 1/2" PD	50	3.3
2" PD	80	5.3
2" Compound	80	5.3
2" Turbine	100	6.7
3" Compound	160	10.7
3" Turbine	240	16.0
4" Compound	250	16.7
4" Turbine	420	28.0
6" Compound	500	33.3
6" Turbine	920	61.3
8" Compound	800	53.3
8" Turbine	1,600	106.7
10" Turbine	2,500	166.7

(1) PD = Positive Displacement Meter

(2) Operating Capacities per American Water works Association C-700-02

(3) Typical SF Residential Meter, City of Marble Falls

Therefore, the impact fee rate will be established by dividing total allowable capital costs per single family living unit (Service Unit) by the number of new service units determined by this study. The Impact Fee will then be the equivalent single-family living unit rate multiplied by the Service Unit Equivalent as determined by the meter size required for any particular development at the time of issuance of the building permit.

### **Summary of 10-Year Capital Improvement Plan**

New water system facilities planned for the ten-year period are identified in **Table 4** and have a total 20-year project cost of \$35,911,011. Of this total cost, \$6,912,816 has been determined to be that utilized by new development over the ten-year period. Existing water facilities (**Table 6**) will be utilized during the ten-year period at an amount calculated to be \$1,910,936. Total eligible costs for water system facilities applied to the ten-year period are \$8,823,752.

New wastewater system facilities planned for the ten-year period are identified in **Table 5** and have a total 20-year project cost of \$31,599,555. Of this total cost, \$1,921,253 has been determined to be that utilized by new development over the ten-year period. Existing wastewater facilities (**Table 7**) will be utilized during the ten-year period at an amount calculated to be \$184,574. Total eligible costs for wastewater system facilities applied to the ten-year period are \$2,105,827.

It is calculated that in the 10-year period (2009-2018), an additional 1,530 water service units and 1,336 wastewater service units will be absorbed by new development. The "service unit" for the purposes of impact fees is defined as a ¾-inch water meter. Service Unit Equivalency is determined by the ratio of the flow capacity of any particular sized meter and the flow capacity of the standard ¾-inch meter.

## 4.0 Calculation of Impact Fees

### Calculation of Maximum Allowable Impact Fee Rate

The statute requires calculation of the maximum impact fee per service unit include the costs of the capital improvements less the amount equal to the portion of ad valorem tax and utility service revenues generated by new development that is used for the payment of improvements (including debt) or, as an alternative, a credit equal to 50 percent of the total projected costs of implementing the CIP. The resulting calculation, individually for water and wastewater facilities is then divided by the respective 10-year additional service units to arrive at the impact fee rate (\$ per Service Unit). This calculation is as follows:

$$\begin{aligned} \text{WATER FACILITIES} &= \frac{(\text{Eligible Existing} + \text{Proposed Facility Costs}) \times 50\%}{\text{Number of New Service Units over 10-Year Period}} \\ &= \frac{(\$1,910,936 + \$6,912,816) \times 50\%}{1,530} = \frac{\$4,411,876}{1,530} \\ &= \underline{\underline{\$ 2,883.58}} \end{aligned}$$

$$\begin{aligned} \text{WASTEWATER FACILITIES} &= \frac{(\text{Eligible Existing} + \text{Proposed Facility Costs}) \times 50\%}{\text{Number of New Service Units over 10-Year Period}} \\ &= \frac{(\$184,574 + \$1,921,253) \times 50\%}{1,336} = \frac{\$1,052,914}{1,336} \\ &= \underline{\underline{\$ 788.11}} \end{aligned}$$

Therefore, the Maximum Allowable Impact Fee rate that may be assessed are:

- **\$ 2,883.58 for Water Facilities**
- **\$ 788.11 for Wastewater Facilities**

### Calculation of Maximum Allowable Impact Fees

The Impact Fee actually assessed is a simple calculation of the Impact Fee Rate times the Service Unit Equivalent based on the size of water meter required for a particular building permit. The following **Table 10** illustrates the Maximum Assessable Water, Wastewater and Combined Water/Wastewater Impact Fees based on the calculated rate.

**Table 11 - Maximum Assessable Impact Fees**

Meter Size (1)	Maximum Continuous Operating Capacity (GPM) (2)	Service Unit Equivalent	Water Facilities	Wastewater Facilities	Combined Total
3/4" PD (3)	15	1.0	\$2,883.58	\$788.11	\$3,671.69
1" PD	25	1.7	\$4,805.97	\$1,313.52	\$6,119.48
1 1/2" PD	50	3.3	\$9,611.93	\$2,627.03	\$12,238.97
2" PD	80	5.3	\$15,379.09	\$4,203.25	\$19,582.35
2" Compound	80	5.3	\$15,379.09	\$4,203.25	\$19,582.35
2" Turbine	100	6.7	\$19,223.87	\$5,254.07	\$24,477.93
3" Compound	160	10.7	\$30,758.19	\$8,406.51	\$39,164.69
3" Turbine	240	16.0	\$46,137.28	\$12,609.76	\$58,747.04
4" Compound	250	16.7	\$48,059.67	\$13,135.17	\$61,194.83
4" Turbine	420	28.0	\$80,740.24	\$22,067.08	\$102,807.32
6" Compound	500	33.3	\$96,119.33	\$26,270.33	\$122,389.67
6" Turbine	920	61.3	\$176,859.57	\$48,337.41	\$225,196.99
8" Compound	800	53.3	\$153,790.93	\$42,032.53	\$195,823.47
8" Turbine	1,600	106.7	\$307,581.87	\$84,065.07	\$391,646.93
10" Turbine	2,500	166.7	\$480,596.67	\$131,351.67	\$611,948.33

(1) PD = Positive Displacement Meter

(2) Operating Capacities per American Water works Association C-700-02

(3) Typical SF Residential Meter, City of Marble Falls

**TABLE 6  
EXISTING IMPACT FEE WATER LINES**

Segment ID	Dia.	LINE GROUP	Dia.	Segment Length (Ft)	Total Capital Cost	20-Year Debt Service (@5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
								2008	2018	10-Yr Period	2008	2018	10-Yr Period
288	10"	A	10"	574	\$33,751	\$17,704	\$51,455	82.2%	129.9%	17.8%	\$42,318	\$51,455	\$9,137
554	10"	A	10"	442	\$26,003	\$13,640	\$39,644	82.2%	129.9%	17.8%	\$32,604	\$39,644	\$7,040
557	10"	A	10"	142	\$8,335	\$4,372	\$12,708	74.7%	118.0%	25.3%	\$9,493	\$12,708	\$3,214
558	10"	A	10"	35	\$2,086	\$1,094	\$3,180	78.4%	123.8%	21.6%	\$2,493	\$3,180	\$688
559	10"	A	10"	48	\$2,823	\$1,481	\$4,304	78.4%	123.8%	21.6%	\$3,374	\$4,304	\$931
560	10"	A	10"	340	\$19,997	\$10,490	\$30,487	78.4%	123.8%	21.6%	\$23,896	\$30,487	\$6,591
564	10"	A	10"	533	\$31,359	\$16,450	\$47,809	78.4%	123.8%	21.6%	\$32,375	\$47,809	\$15,434
571	10"	A	10"	321	\$18,876	\$9,902	\$28,778	78.4%	123.8%	21.6%	\$22,566	\$28,778	\$6,221
575	10"	A	10"	484	\$26,449	\$14,923	\$43,372	78.4%	123.8%	21.6%	\$33,996	\$43,372	\$9,376
591	10"	A	10"	2,758	\$182,221	\$85,084	\$247,315	66.8%	105.5%	33.2%	\$165,204	\$247,315	\$82,111
592	10"	A	10"	604	\$35,522	\$18,633	\$54,155	66.8%	105.5%	33.2%	\$36,175	\$54,155	\$17,980
594	10"	A	10"	165	\$9,692	\$5,084	\$14,776	73.2%	115.7%	26.8%	\$10,821	\$14,776	\$3,955
595	10"	A	10"	25	\$1,471	\$772	\$2,243	73.2%	115.7%	26.8%	\$1,643	\$2,243	\$600
597	10"	A	10"	426	\$25,057	\$13,144	\$38,200	74.7%	118.0%	25.3%	\$28,537	\$38,200	\$9,663
599	10"	A	10"	424	\$24,917	\$13,070	\$37,987	74.7%	118.0%	25.3%	\$28,378	\$37,987	\$9,609
608	10"	A	10"	952	\$56,001	\$29,376	\$85,377	74.7%	118.0%	25.3%	\$63,760	\$85,377	\$21,596
617	10"	A	10"	718	\$42,249	\$22,162	\$64,412	74.7%	118.0%	25.3%	\$48,119	\$64,412	\$16,293
618	10"	A	10"	863	\$50,787	\$26,641	\$77,428	74.7%	118.0%	25.3%	\$57,842	\$77,428	\$19,586
797	10"	C	10"	688	\$40,463	\$21,225	\$61,688	65.1%	102.9%	34.9%	\$40,187	\$61,688	\$21,502
1096	10"	C	10"	483	\$28,420	\$14,908	\$43,328	66.3%	104.8%	33.7%	\$28,744	\$43,328	\$14,585
1097	10"	C	10"	15	\$873	\$458	\$1,330	66.3%	104.8%	33.7%	\$882	\$1,330	\$448
186	10"	D	10"	1,780	\$104,708	\$54,926	\$159,634	62.7%	99.0%	36.3%	\$100,030	\$158,048	\$58,018
187	10"	D	10"	584	\$34,389	\$18,029	\$52,398	62.7%	99.0%	36.3%	\$32,834	\$51,877	\$19,044
1	10"	E	10"	654	\$38,474	\$20,182	\$58,656	66.1%	104.4%	33.9%	\$38,771	\$58,656	\$19,684
11	10"	E	10"	29	\$1,684	\$889	\$2,582	66.4%	105.0%	33.6%	\$1,715	\$2,582	\$867
171	10"	E	10"	992	\$58,330	\$30,598	\$88,927	65.7%	103.8%	34.3%	\$58,422	\$88,927	\$30,506
176	10"	E	10"	257	\$15,138	\$7,941	\$23,079	63.5%	100.3%	36.5%	\$14,653	\$23,079	\$8,426
184	10"	E	10"	561	\$33,004	\$17,312	\$50,316	62.8%	99.2%	36.4%	\$31,576	\$49,889	\$18,314
192	10"	E	10"	236	\$13,874	\$7,278	\$21,152	62.8%	99.2%	36.4%	\$13,284	\$20,988	\$7,705
214	10"	E	10"	42	\$2,463	\$1,292	\$3,754	62.8%	99.2%	36.4%	\$2,356	\$3,722	\$1,366
215	10"	E	10"	307	\$18,054	\$9,470	\$27,524	62.8%	99.2%	36.4%	\$17,273	\$27,291	\$10,018
907	10"	E	10"	57	\$3,343	\$1,754	\$5,097	65.7%	103.8%	34.3%	\$3,349	\$5,097	\$1,749
930	10"	E	10"	30	\$1,752	\$919	\$2,671	65.0%	102.6%	35.0%	\$1,735	\$2,671	\$936
931	10"	E	10"	638	\$37,536	\$19,690	\$57,226	66.4%	105.0%	33.6%	\$38,016	\$57,226	\$19,210
1256	10"	E	10"	401	\$23,599	\$12,379	\$35,978	62.8%	99.2%	36.4%	\$22,578	\$35,673	\$13,095
1257	10"	E	10"	203	\$11,930	\$6,258	\$18,187	62.8%	99.2%	36.4%	\$11,413	\$18,033	\$6,620
179	10"	F	10"	224	\$13,198	\$6,923	\$20,122	65.7%	103.8%	34.3%	\$13,219	\$20,122	\$6,903
908	10"	F	10"	1,261	\$74,196	\$38,920	\$113,116	65.7%	103.8%	34.3%	\$74,313	\$113,116	\$38,803
44	10"	G	10"	597	\$35,138	\$18,432	\$53,570	154.9%	154.9%	0.0%	\$82,960	\$53,570	\$0
142	10"	G	10"	22	\$1,323	\$694	\$2,016	154.9%	154.9%	0.0%	\$3,123	\$2,016	\$0
143	10"	G	10"	487	\$28,647	\$15,027	\$43,674	154.9%	154.9%	0.0%	\$67,636	\$43,674	\$0
145	10"	G	10"	66	\$3,892	\$2,042	\$5,934	154.9%	154.9%	0.0%	\$9,189	\$5,934	\$0
146	10"	G	10"	52	\$3,043	\$1,596	\$4,639	154.9%	154.9%	0.0%	\$7,155	\$4,639	\$0
147	10"	G	10"	29	\$1,684	\$883	\$2,567	154.9%	154.9%	0.0%	\$3,977	\$2,567	\$0
151	10"	H	10"	292	\$17,196	\$9,020	\$26,216	154.9%	154.9%	0.0%	\$40,599	\$26,216	\$0
152	10"	H	10"	23	\$1,324	\$694	\$2,018	154.9%	154.9%	0.0%	\$3,126	\$2,018	\$0
153	10"	H	10"	30	\$1,772	\$929	\$2,701	154.9%	154.9%	0.0%	\$4,184	\$2,701	\$0
155	10"	H	10"	400	\$23,507	\$12,331	\$35,837	154.9%	154.9%	0.0%	\$55,499	\$35,837	\$0
256	10"	H	10"	358	\$21,039	\$11,036	\$32,075	154.9%	154.9%	0.0%	\$49,672	\$32,075	\$0
256	10"	H	10"	30	\$1,764	\$925	\$2,689	154.9%	154.9%	0.0%	\$4,164	\$2,689	\$0
351	10"	H	10"	335	\$19,719	\$10,344	\$30,062	154.9%	154.9%	0.0%	\$46,556	\$30,062	\$0
354	10"	H	10"	16	\$947	\$497	\$1,444	112.9%	112.9%	0.0%	\$1,631	\$1,444	\$0
356	10"	H	10"	221	\$12,987	\$6,812	\$19,799	112.9%	112.9%	0.0%	\$22,362	\$19,799	\$0
527	10"	H	10"	414	\$24,370	\$12,783	\$37,153	154.9%	154.9%	0.0%	\$57,536	\$37,153	\$0
980	10"	H	10"	56	\$3,323	\$1,743	\$5,065	154.9%	154.9%	0.0%	\$7,844	\$5,065	\$0
989	10"	H	10"	218	\$12,809	\$6,719	\$19,528	154.9%	154.9%	0.0%	\$30,241	\$19,528	\$0
990	10"	H	10"	77	\$4,524	\$2,373	\$6,897	154.9%	154.9%	0.0%	\$10,681	\$6,897	\$0
1007	10"	H	10"	26	\$1,539	\$807	\$2,346	154.9%	154.9%	0.0%	\$3,634	\$2,346	\$0
1008	10"	H	10"	302	\$17,750	\$9,311	\$27,061	154.9%	154.9%	0.0%	\$41,908	\$27,061	\$0
1337	10"	J	10"	14	\$796	\$417	\$1,213	43.0%	67.9%	24.9%	\$522	\$824	\$303
1338	10"	J	10"	78	\$4,568	\$2,396	\$6,964	43.0%	67.9%	24.9%	\$2,995	\$4,732	\$1,737
1339	10"	J	10"	12	\$713	\$374	\$1,086	43.0%	67.9%	24.9%	\$467	\$738	\$271
1340	10"	J	10"	406	\$23,906	\$12,540	\$36,446	43.0%	67.9%	24.9%	\$15,672	\$24,762	\$9,090
1341	10"	J	10"	58	\$3,399	\$1,783	\$5,182	43.0%	67.9%	24.9%	\$2,228	\$3,521	\$1,292
1342	10"	J	10"	29	\$1,718	\$901	\$2,619	43.0%	67.9%	24.9%	\$1,126	\$1,779	\$653
1343	10"	J	10"	10	\$589	\$309	\$897	43.0%	67.9%	24.9%	\$386	\$610	\$224

**TABLE 6  
EXISTING IMPACT FEE WATER LINES**

Segment ID	Dia.	LINE GROUP	Dia.	Segment Length (Ft)	Total Capital Cost	20-Year Debt Service (@5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
								2008	2018	10-Yr Period	2008	2018	10-Yr Period
1348	10"	J	10"	29	\$1,711	\$697	\$2,608	43.0%	67.9%	24.9%	\$1,122	\$1,772	\$650
1351	10"	J	10"	1,314	\$77,285	\$40,541	\$117,826	43.0%	67.9%	24.9%	\$50,665	\$80,051	\$29,386
1352	10"	J	10"	133	\$7,814	\$4,099	\$11,913	43.0%	67.9%	24.9%	\$5,123	\$8,094	\$2,971
1174	10"	L	10"	923	\$54,294	\$28,480	\$82,775	43.0%	67.9%	24.9%	\$35,593	\$56,237	\$20,644
1175	10"	L	10"	1,491	\$87,678	\$45,992	\$133,670	43.0%	67.9%	24.9%	\$57,478	\$90,815	\$33,337
1345	10"	L	10"	13	\$767	\$402	\$1,169	43.0%	67.9%	24.9%	\$503	\$794	\$292
1356	10"	L	10"	776	\$45,644	\$23,943	\$69,586	43.0%	67.9%	24.9%	\$29,923	\$47,278	\$17,355
1361	10"	L	10"	108	\$6,355	\$3,334	\$9,689	43.0%	67.9%	24.9%	\$4,166	\$6,583	\$2,416
1362	10"	L	10"	466	\$27,387	\$14,366	\$41,753	43.0%	67.9%	24.9%	\$17,954	\$28,367	\$10,413
1369	10"	M	10"	2,346	\$137,973	\$72,375	\$210,348	46.0%	72.7%	26.7%	\$96,760	\$152,881	\$56,121
1370	10"	M	10"	5	\$272	\$143	\$414	46.0%	72.7%	26.7%	\$191	\$301	\$111
405	10"	N	10"	40	\$2,336	\$1,225	\$3,561	73.5%	116.1%	26.5%	\$2,618	\$3,561	\$943
414	10"	N	10"	24	\$1,386	\$727	\$2,114	73.5%	116.1%	26.5%	\$1,554	\$2,114	\$560
417	10"	N	10"	352	\$20,699	\$10,858	\$31,557	73.5%	116.1%	26.5%	\$23,198	\$31,557	\$8,360
418	10"	N	10"	263	\$15,475	\$8,118	\$23,593	73.5%	116.1%	26.5%	\$17,343	\$23,593	\$6,250
425	10"	N	10"	349	\$20,513	\$10,760	\$31,273	73.5%	116.1%	26.5%	\$22,989	\$31,273	\$8,284
426	10"	N	10"	34	\$2,008	\$1,053	\$3,061	73.5%	116.1%	26.5%	\$2,250	\$3,061	\$811
437	10"	N	10"	390	\$22,921	\$12,023	\$34,944	73.5%	116.1%	26.5%	\$25,687	\$34,944	\$9,257
438	10"	N	10"	372	\$21,882	\$11,479	\$33,361	73.5%	116.1%	26.5%	\$24,523	\$33,361	\$8,837
477	10"	N	10"	775	\$45,566	\$23,902	\$69,468	73.4%	116.0%	26.6%	\$51,002	\$69,468	\$18,466
478	10"	N	10"	27	\$1,567	\$822	\$2,389	73.4%	116.0%	26.6%	\$1,753	\$2,388	\$635
1037	10"	N	10"	362	\$21,287	\$11,166	\$32,453	73.5%	116.1%	26.5%	\$23,856	\$32,453	\$8,597
1038	10"	N	10"	26	\$1,555	\$816	\$2,370	73.5%	116.1%	26.5%	\$1,742	\$2,370	\$628
404	10"	O	10"	180	\$10,559	\$5,539	\$16,097	67.3%	106.3%	32.7%	\$10,829	\$16,097	\$5,269
466	10"	O	10"	64	\$3,770	\$1,977	\$5,747	65.2%	103.1%	34.8%	\$3,749	\$5,747	\$1,998
470	10"	O	10"	267	\$15,706	\$8,239	\$23,945	77.4%	122.2%	22.6%	\$18,527	\$23,945	\$5,419
472	10"	O	10"	271	\$15,938	\$8,360	\$24,298	77.4%	122.2%	22.6%	\$18,800	\$24,298	\$5,499
474	10"	O	10"	15	\$879	\$461	\$1,340	77.4%	122.2%	22.6%	\$1,037	\$1,340	\$303
475	10"	O	10"	16	\$967	\$507	\$1,475	77.4%	122.2%	22.6%	\$1,141	\$1,475	\$334
1039	10"	O	10"	225	\$13,242	\$6,946	\$20,189	67.3%	106.3%	32.7%	\$13,981	\$20,189	\$6,608
1040	10"	O	10"	482	\$28,373	\$14,883	\$43,257	67.3%	106.3%	32.7%	\$29,099	\$43,257	\$14,158
1043	10"	O	10"	178	\$10,448	\$5,481	\$15,929	67.3%	106.3%	32.7%	\$10,715	\$15,929	\$5,214
1044	10"	O	10"	38	\$2,260	\$1,185	\$3,445	67.3%	106.3%	32.7%	\$2,318	\$3,445	\$1,128
15	10"	Q	10"	305	\$17,929	\$9,405	\$27,334	118.8%	118.8%	0.0%	\$32,480	\$27,334	\$0
16	10"	Q	10"	444	\$26,140	\$13,712	\$39,851	118.8%	118.8%	0.0%	\$47,355	\$39,851	\$0
17	10"	Q	10"	87	\$5,102	\$2,676	\$7,778	118.8%	118.8%	0.0%	\$9,242	\$7,778	\$0
18	10"	Q	10"	202	\$11,873	\$6,228	\$18,101	118.8%	118.8%	0.0%	\$21,510	\$18,101	\$0
29	10"	Q	10"	28	\$1,623	\$851	\$2,474	118.8%	118.8%	0.0%	\$2,940	\$2,474	\$0
30	10"	Q	10"	17	\$1,013	\$531	\$1,544	118.8%	118.8%	0.0%	\$1,835	\$1,544	\$0
31	10"	Q	10"	28	\$1,635	\$858	\$2,493	118.8%	118.8%	0.0%	\$2,963	\$2,493	\$0
131	10"	Q	10"	236	\$13,871	\$7,276	\$21,147	118.8%	118.8%	0.0%	\$25,128	\$21,147	\$0
132	10"	Q	10"	167	\$9,816	\$5,149	\$14,966	118.8%	118.8%	0.0%	\$17,784	\$14,966	\$0
185	10"	Q	10"	18	\$1,074	\$563	\$1,637	118.8%	118.8%	0.0%	\$1,946	\$1,637	\$0
186	10"	Q	10"	21	\$1,257	\$660	\$1,917	118.8%	118.8%	0.0%	\$2,278	\$1,917	\$0
189	10"	Q	10"	121	\$7,137	\$3,744	\$10,881	118.8%	118.8%	0.0%	\$12,929	\$10,881	\$0
190	10"	Q	10"	249	\$14,631	\$7,675	\$22,306	118.8%	118.8%	0.0%	\$26,506	\$22,306	\$0
657	10"	Q	10"	30	\$1,784	\$936	\$2,719	107.8%	107.8%	0.0%	\$2,931	\$2,719	\$0
716	10"	Q	10"	182	\$10,731	\$5,629	\$16,360	107.8%	107.8%	0.0%	\$17,636	\$16,360	\$0
717	10"	Q	10"	28	\$1,642	\$862	\$2,504	107.8%	107.8%	0.0%	\$2,699	\$2,504	\$0
720	10"	Q	10"	336	\$19,780	\$10,376	\$30,156	118.8%	118.8%	0.0%	\$35,634	\$30,156	\$0
721	10"	Q	10"	44	\$2,596	\$1,362	\$3,957	118.8%	118.8%	0.0%	\$4,702	\$3,957	\$0
722	10"	Q	10"	333	\$19,560	\$10,260	\$29,820	118.8%	118.8%	0.0%	\$35,435	\$29,820	\$0
835	10"	Q	10"	228	\$13,385	\$7,021	\$20,407	118.8%	118.8%	0.0%	\$24,249	\$20,407	\$0
836	10"	Q	10"	64	\$3,788	\$1,987	\$5,776	118.8%	118.8%	0.0%	\$6,863	\$5,776	\$0
864	10"	Q	10"	45	\$2,619	\$1,374	\$3,993	107.8%	107.8%	0.0%	\$4,305	\$3,993	\$0
890	10"	Q	10"	42	\$2,459	\$1,290	\$3,749	107.8%	107.8%	0.0%	\$4,041	\$3,749	\$0
898	10"	Q	10"	560	\$32,928	\$17,273	\$50,201	118.8%	118.8%	0.0%	\$59,653	\$50,201	\$0
899	10"	Q	10"	84	\$4,927	\$2,584	\$7,511	118.8%	118.8%	0.0%	\$8,926	\$7,511	\$0
900	10"	Q	10"	602	\$35,422	\$18,581	\$54,004	118.8%	118.8%	0.0%	\$64,172	\$54,004	\$0
901	10"	Q	10"	48	\$2,828	\$1,483	\$4,311	118.8%	118.8%	0.0%	\$5,123	\$4,311	\$0
902	10"	Q	10"	121	\$7,118	\$3,734	\$10,852	118.8%	118.8%	0.0%	\$12,895	\$10,852	\$0
1116	10"	Q	10"	485	\$28,520	\$14,960	\$43,480	107.8%	107.8%	0.0%	\$46,870	\$43,480	\$0
1117	10"	Q	10"	569	\$33,481	\$17,563	\$51,043	107.8%	107.8%	0.0%	\$55,024	\$51,043	\$0
1123	10"	Q	10"	217	\$12,782	\$6,705	\$19,487	107.8%	107.8%	0.0%	\$21,006	\$19,487	\$0
1124	10"	Q	10"	9	\$530	\$278	\$807	107.8%	107.8%	0.0%	\$870	\$807	\$0
1125	10"	Q	10"	309	\$18,194	\$9,523	\$27,676	107.8%	107.8%	0.0%	\$29,834	\$27,676	\$0
1451	12"	A	12"	412	\$24,702	\$12,958	\$37,660	48.7%	76.9%	26.2%	\$18,335	\$26,970	\$10,635

**TABLE 6  
EXISTING IMPACT FEE WATER LINES**

Segment ID	Dia.	LINE GROUP	Dia.	Segment Length (Ft)	Total Capital Cost	20-Year Debt Service (@5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
								2008	2018	10-Yr Period	2008	2018	10-Yr Period
1403	12"	A	12"	245	\$14,689	\$7,705	\$22,395	48.7%	76.9%	28.2%	\$10,903	\$17,227	\$6,324
1405	12"	A	12"	26	\$1,582	\$830	\$2,411	48.7%	76.9%	28.2%	\$1,174	\$1,855	\$681
1407	12"	A	12"	68	\$4,071	\$2,135	\$6,206	48.7%	76.9%	28.2%	\$3,021	\$4,774	\$1,752
1408	12"	A	12"	73	\$4,352	\$2,283	\$6,635	48.7%	76.9%	28.2%	\$3,231	\$5,104	\$1,874
1409	12"	A	12"	376	\$22,542	\$11,825	\$34,367	48.7%	76.9%	28.2%	\$16,732	\$26,436	\$9,704
1410	12"	A	12"	41	\$2,467	\$1,294	\$3,761	48.7%	76.9%	28.2%	\$1,832	\$2,894	\$1,062
1411	12"	A	12"	192	\$11,491	\$6,028	\$17,519	48.7%	76.9%	28.2%	\$8,529	\$13,476	\$4,947
1412	12"	A	12"	211	\$12,648	\$6,635	\$19,283	48.7%	76.9%	28.2%	\$9,368	\$14,833	\$5,445
1414	12"	A	12"	380	\$22,738	\$11,927	\$34,666	48.7%	76.9%	28.2%	\$16,877	\$26,666	\$9,789
1417	12"	A	12"	400	\$23,984	\$12,581	\$36,565	48.7%	76.9%	28.2%	\$17,802	\$28,127	\$10,325
1421	12"	A	12"	269	\$17,319	\$9,085	\$26,405	48.7%	76.9%	28.2%	\$12,855	\$20,312	\$7,456
1435	12"	A	12"	25	\$1,525	\$800	\$2,325	48.7%	76.9%	28.2%	\$1,132	\$1,789	\$657
1436	12"	A	12"	401	\$23,995	\$12,587	\$36,582	48.7%	76.9%	28.2%	\$17,810	\$28,140	\$10,330
1441	12"	A	12"	110	\$6,617	\$3,471	\$10,088	48.7%	76.9%	28.2%	\$4,911	\$7,760	\$2,849
289	12"	B	12"	115	\$6,887	\$3,612	\$10,499	78.2%	123.6%	21.8%	\$8,215	\$10,499	\$2,284
290	12"	B	12"	368	\$22,014	\$11,548	\$33,562	78.2%	123.6%	21.8%	\$26,260	\$33,562	\$7,302
291	12"	B	12"	312	\$18,657	\$9,787	\$28,443	78.2%	123.6%	21.8%	\$22,255	\$28,443	\$6,188
292	12"	B	12"	307	\$18,396	\$9,650	\$28,046	78.2%	123.6%	21.8%	\$21,944	\$28,046	\$6,102
293	12"	B	12"	200	\$11,957	\$6,272	\$18,230	78.2%	123.6%	21.8%	\$14,263	\$18,230	\$3,966
294	12"	B	12"	33	\$1,986	\$1,043	\$3,031	78.2%	123.6%	21.8%	\$2,372	\$3,031	\$659
298	12"	B	12"	380	\$22,759	\$11,939	\$34,698	78.2%	123.6%	21.8%	\$27,148	\$34,698	\$7,549
299	12"	B	12"	657	\$39,321	\$20,626	\$59,947	78.2%	123.6%	21.8%	\$46,904	\$59,947	\$13,043
311	12"	B	12"	75	\$4,499	\$2,360	\$6,859	50.5%	79.7%	29.3%	\$3,461	\$5,469	\$2,008
1027	12"	B	12"	88	\$5,292	\$2,776	\$8,068	78.2%	123.6%	21.8%	\$6,313	\$8,068	\$1,755
1028	12"	B	12"	322	\$19,280	\$10,114	\$29,393	79.5%	125.6%	20.5%	\$23,374	\$29,393	\$6,020
1046	12"	B	12"	657	\$39,360	\$20,647	\$60,007	51.4%	81.1%	29.8%	\$30,119	\$48,695	\$17,875
1047	12"	B	12"	706	\$42,288	\$22,183	\$64,471	78.2%	123.6%	21.8%	\$50,417	\$64,471	\$14,055
346	12"	C	12"	32	\$1,906	\$1,000	\$2,905	43.8%	69.3%	25.4%	\$1,274	\$2,012	\$739
347	12"	C	12"	378	\$22,661	\$11,887	\$34,549	43.8%	69.3%	25.4%	\$15,144	\$23,928	\$8,784
169	12"	D	12"	374	\$22,384	\$11,742	\$34,126	71.7%	113.2%	28.3%	\$24,458	\$34,126	\$9,669
352	12"	D	12"	378	\$22,663	\$11,888	\$34,551	71.7%	113.2%	28.3%	\$24,762	\$34,551	\$9,789
353	12"	D	12"	10	\$626	\$328	\$955	71.7%	113.2%	28.3%	\$684	\$955	\$270
758	12"	D	12"	616	\$36,915	\$19,364	\$56,280	59.8%	94.5%	34.7%	\$33,652	\$53,170	\$19,518
1020	12"	D	12"	79	\$4,717	\$2,474	\$7,191	71.7%	113.2%	28.3%	\$5,154	\$7,191	\$2,037
1025	12"	D	12"	19	\$1,146	\$601	\$1,747	71.7%	113.2%	28.3%	\$1,252	\$1,747	\$495
1026	12"	D	12"	303	\$18,149	\$9,520	\$27,669	71.7%	113.2%	28.3%	\$19,830	\$27,669	\$7,839
1056	12"	D	12"	494	\$29,584	\$15,519	\$45,103	43.4%	68.5%	25.1%	\$19,555	\$30,896	\$11,342
1176	12"	D	12"	963	\$58,866	\$30,879	\$89,745	62.7%	99.1%	36.4%	\$56,298	\$88,950	\$32,653
1177	12"	D	12"	1,102	\$65,980	\$34,616	\$100,606	62.7%	99.1%	36.4%	\$63,080	\$99,666	\$36,586
304	12"	E	12"	502	\$30,077	\$15,777	\$45,854	44.6%	70.5%	25.9%	\$20,451	\$32,319	\$11,862
306	12"	E	12"	509	\$30,475	\$15,986	\$46,461	44.6%	70.5%	25.9%	\$20,722	\$32,741	\$12,019
308	12"	E	12"	31	\$1,873	\$982	\$2,855	78.2%	123.6%	21.8%	\$2,234	\$2,855	\$621
1029	12"	E	12"	563	\$33,711	\$17,684	\$51,395	44.6%	70.5%	25.9%	\$22,923	\$36,218	\$13,295
1030	12"	E	12"	38	\$2,298	\$1,205	\$3,503	44.6%	70.5%	25.9%	\$1,562	\$2,469	\$906
1240	12"	F	12"	492	\$29,476	\$15,462	\$44,938	48.1%	76.0%	27.9%	\$21,606	\$34,138	\$12,532
1474	12"	F	12"	1,531	\$91,679	\$48,091	\$139,770	48.7%	77.0%	28.3%	\$68,094	\$107,588	\$39,494
1242	12"	G	12"	1,352	\$80,975	\$42,476	\$123,452	48.1%	76.0%	27.9%	\$59,356	\$93,782	\$34,426
773	12"	H	12"	1,274	\$76,301	\$40,025	\$116,326	44.2%	69.8%	25.6%	\$51,362	\$81,153	\$29,790
774	12"	H	12"	1,028	\$61,575	\$32,300	\$93,874	44.2%	69.8%	25.6%	\$41,449	\$65,490	\$24,041
1065	12"	H	12"	998	\$59,796	\$31,366	\$91,162	44.2%	69.8%	25.6%	\$40,252	\$63,598	\$23,346
1066	12"	H	12"	101	\$6,066	\$3,182	\$9,247	44.2%	69.8%	25.6%	\$4,087	\$6,458	\$2,371
1067	12"	H	12"	129	\$7,705	\$4,042	\$11,747	44.2%	69.8%	25.6%	\$5,192	\$8,203	\$3,011
1068	12"	H	12"	629	\$37,682	\$19,766	\$57,448	45.7%	72.3%	26.5%	\$26,283	\$41,526	\$15,244
1222	12"	H	12"	1,336	\$80,025	\$41,978	\$122,003	45.7%	72.3%	26.5%	\$55,816	\$88,190	\$32,373
849	12"	J	12"	48	\$2,675	\$1,508	\$4,183	42.7%	67.5%	24.8%	\$1,874	\$2,961	\$1,087
850	12"	J	12"	226	\$13,522	\$7,093	\$20,616	42.7%	67.5%	24.8%	\$8,813	\$13,925	\$5,112
1490	12"	L	12"	164	\$9,839	\$5,161	\$15,001	44.0%	69.5%	25.5%	\$6,600	\$10,426	\$3,828
1492	12"	L	12"	128	\$7,652	\$4,014	\$11,665	44.0%	69.5%	25.5%	\$5,133	\$8,110	\$2,977
1493	12"	L	12"	569	\$34,082	\$17,878	\$51,960	44.0%	69.5%	25.5%	\$22,863	\$36,123	\$13,260
1495	12"	L	12"	614	\$36,757	\$19,281	\$56,038	44.0%	69.5%	25.5%	\$24,657	\$38,958	\$14,301
1455	12"	M	12"	72	\$4,325	\$2,269	\$6,594	42.9%	67.8%	24.9%	\$2,831	\$4,474	\$1,642
1457	12"	M	12"	55	\$3,283	\$1,722	\$5,005	42.9%	67.8%	24.9%	\$2,147	\$3,392	\$1,245
1460	12"	M	12"	36	\$2,132	\$1,119	\$3,251	42.9%	67.8%	24.9%	\$1,395	\$2,204	\$809

**TABLE 6  
EXISTING IMPACT FEE WATER LINES**

Segment ID	Dia.	LINE GROUP	Dia.	Segment Length (Ft)	Total Capital Cost	20-Year Debt Service (@5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
								2008	2018	10-Yr Period	2008	2018	10-Yr Period
1461	12"	M	12"	24	\$1,429	\$750	\$2,179	45.7%	72.2%	26.5%	\$996	\$1,574	\$578
1462	12"	M	12"	363	\$21,719	\$11,393	\$33,111	46.5%	73.5%	27.0%	\$15,394	\$24,323	\$8,929
1464	12"	M	12"	76	\$4,567	\$2,396	\$6,962	46.5%	73.5%	27.0%	\$3,237	\$5,114	\$1,877
1465	12"	M	12"	374	\$22,390	\$11,745	\$34,135	46.5%	73.5%	27.0%	\$15,870	\$25,074	\$9,204
1259	12"	P	12"	1,378	\$82,506	\$43,279	\$125,786	50.0%	78.9%	29.0%	\$62,846	\$99,297	\$36,451
763	16"	A	16"	324	\$24,230	\$12,710	\$36,939	31.7%	50.1%	18.4%	\$11,710	\$18,501	\$6,792
764	16"	A	16"	177	\$13,279	\$6,966	\$20,245	31.7%	50.1%	18.4%	\$6,417	\$10,138	\$3,722
1188	16"	A	16"	1,128	\$84,464	\$44,307	\$128,771	31.7%	50.1%	18.4%	\$40,814	\$64,486	\$23,672
1189	16"	A	16"	1,799	\$134,693	\$70,654	\$205,347	30.7%	48.5%	17.8%	\$63,094	\$99,689	\$36,595
1061	16"	B	16"	515	\$38,551	\$20,223	\$58,774	30.0%	47.4%	17.4%	\$17,632	\$27,899	\$10,227
1468	16"	B	16"	55	\$4,106	\$2,154	\$6,260	30.0%	47.4%	17.4%	\$1,878	\$2,967	\$1,089
833	16"	C	16"	25	\$1,907	\$1,001	\$2,908	24.0%	37.9%	13.9%	\$698	\$1,103	\$405
834	16"	C	16"	3,535	\$264,601	\$138,799	\$403,400	24.0%	37.9%	13.9%	\$96,816	\$152,969	\$56,153
1185	16"	D	16"	1,305	\$97,687	\$51,243	\$148,929	24.4%	38.6%	14.2%	\$36,347	\$57,429	\$21,081
1186	16"	D	16"	1,070	\$80,096	\$42,015	\$122,111	24.4%	38.6%	14.2%	\$29,802	\$47,087	\$17,265
1187	16"	D	16"	2,325	\$174,032	\$91,290	\$265,322	24.4%	38.6%	14.2%	\$64,754	\$102,311	\$37,557
1200	16"	E	16"	2,540	\$197,646	\$103,677	\$301,324	24.4%	38.6%	14.2%	\$73,523	\$116,166	\$42,643
1201	16"	E	16"	712	\$53,278	\$27,947	\$81,225	24.4%	38.6%	14.2%	\$19,819	\$31,314	\$11,495
1202	16"	E	16"	1,806	\$135,196	\$70,919	\$206,115	24.4%	38.6%	14.2%	\$50,292	\$79,461	\$29,169
1203	16"	E	16"	1,391	\$104,160	\$54,638	\$158,797	24.4%	38.6%	14.2%	\$38,747	\$61,220	\$22,473
1204	16"	F	16"	1,271	\$95,111	\$49,892	\$145,003	10.0%	15.8%	5.8%	\$14,500	\$22,910	\$8,410
1254	16"	G	16"	976	\$73,075	\$38,332	\$111,408	32.0%	50.6%	18.6%	\$35,650	\$56,328	\$20,677
1255	16"	G	16"	2,344	\$175,495	\$92,057	\$267,552	32.0%	50.6%	18.6%	\$85,617	\$135,274	\$49,658
<b>TOTALS</b>					<b>\$8,941,657</b>						<b>\$5,019,378</b>	<b>\$6,653,181</b>	<b>\$1,910,936</b>
					<b>System Utilization</b>						<b>56.1%</b>	<b>74.4%</b>	<b>21.4%</b>

**TABLE 7  
EXISTING IMPACT FEE WASTEWATER LINES**

Segment ID	Dia.	Line Group	Length (Ft.)	Total Capital Cost	20-Year Debt Service (@ 5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
							2008	2018	10-Yr Period	2008	2018	10-Yr Period
781	10"	A	126	\$5,707	\$2,994	\$8,701	34%	54%	20%	\$2,958	\$4,674	\$1,716
782	10"	A	27	\$1,240	\$650	\$1,890	34%	54%	20%	\$642	\$1,014	\$372
783	10"	A	246	\$11,201	\$5,876	\$17,077	34%	54%	20%	\$5,801	\$9,165	\$3,364
784	10"	A	325	\$14,761	\$7,743	\$22,504	31%	49%	18%	\$6,918	\$10,930	\$4,012
785	10"	A	24	\$1,103	\$579	\$1,682	31%	49%	18%	\$517	\$817	\$300
786	10"	A	48	\$2,185	\$1,146	\$3,331	41%	64%	24%	\$1,353	\$2,138	\$785
787	10"	A	50	\$2,277	\$1,194	\$3,471	41%	64%	24%	\$1,410	\$2,228	\$818
729	10"	A	165	\$7,484	\$3,926	\$11,410	100%	158%	0%	\$11,381	\$17,983	\$6,601
730	10"	A	180	\$8,176	\$4,289	\$12,465	23%	36%	13%	\$2,862	\$4,521	\$1,660
788	10"	A	50	\$2,273	\$1,192	\$3,465	32%	50%	18%	\$1,095	\$1,730	\$635
790	10"	A	33	\$1,487	\$780	\$2,267	32%	50%	18%	\$716	\$1,132	\$415
791	10"	A	130	\$5,914	\$3,102	\$9,017	32%	50%	18%	\$2,849	\$4,501	\$1,652
792	10"	A	38	\$1,706	\$895	\$2,600	32%	50%	18%	\$822	\$1,298	\$477
732	10"	A	79	\$3,569	\$1,872	\$5,442	63%	99%	36%	\$3,418	\$5,401	\$1,983
733	10"	A	71	\$3,227	\$1,693	\$4,920	91%	144%	9%	\$4,478	\$7,076	\$2,597
734	10"	A	150	\$6,818	\$3,576	\$10,394	40%	62%	23%	\$4,110	\$6,493	\$2,384
735	10"	A	244	\$11,090	\$5,817	\$16,907	36%	57%	21%	\$6,071	\$9,592	\$3,521
736	10"	A	370	\$16,816	\$8,821	\$25,638	46%	73%	27%	\$11,793	\$18,633	\$6,840
737	10"	A	169	\$7,681	\$4,029	\$11,710	24%	38%	14%	\$2,853	\$4,508	\$1,655
738	10"	A	200	\$9,090	\$4,768	\$13,858	70%	111%	30%	\$9,751	\$15,407	\$5,656
795	10"	A	71	\$3,217	\$1,688	\$4,905	33%	52%	19%	\$1,613	\$2,549	\$936
772	10"	A	260	\$11,817	\$6,199	\$18,016	15%	24%	9%	\$2,762	\$4,364	\$1,602
773	10"	A	333	\$15,135	\$7,939	\$23,074	57%	90%	33%	\$13,140	\$20,762	\$7,621
774	10"	A	233	\$10,590	\$5,555	\$16,145	13%	21%	8%	\$2,179	\$3,443	\$1,264
796	10"	A	194	\$8,808	\$4,621	\$13,429	21%	34%	12%	\$2,850	\$4,503	\$1,653
798	10"	A	201	\$9,158	\$4,804	\$13,961	16%	25%	9%	\$2,205	\$3,484	\$1,279
799	10"	A	300	\$13,622	\$7,145	\$20,767	23%	36%	13%	\$4,699	\$7,425	\$2,726
671	12"	B	521	\$22,300	\$11,698	\$33,998	6%	10%	4%	\$2,206	\$3,485	\$1,279
677	12"	B	401	\$17,168	\$9,005	\$26,173	9%	13%	5%	\$2,227	\$3,519	\$1,292
673	10"	B	439	\$19,956	\$10,468	\$30,424	7%	11%	4%	\$2,189	\$3,459	\$1,270
672	10"	B	101	\$4,605	\$2,416	\$7,020	0%	10%	10%	\$0	\$702	\$702
314	10"	C	823	\$37,396	\$19,617	\$57,013	11%	17%	6%	\$6,212	\$9,815	\$3,603
278	10"	C	342	\$15,541	\$8,152	\$23,693	6%	9%	3%	\$1,391	\$2,197	\$807
280	10"	C	219	\$9,954	\$5,222	\$15,176	10%	16%	6%	\$1,556	\$2,459	\$903
279	10"	C	128	\$5,813	\$3,049	\$8,862	13%	21%	8%	\$1,179	\$1,863	\$684
285	10"	C	180	\$8,166	\$4,284	\$12,450	9%	14%	5%	\$1,090	\$1,722	\$632
284	10"	C	435	\$19,752	\$10,361	\$30,113	4%	6%	2%	\$1,073	\$1,695	\$622
748	10"	C	453	\$20,800	\$10,806	\$31,606	2%	3%	1%	\$502	\$794	\$291
749	10"	C	178	\$8,102	\$4,250	\$12,352	0%	1%	0%	\$41	\$65	\$24
519	10"	D	149	\$6,772	\$3,552	\$10,324	0%	10%	10%	\$0	\$1,032	\$1,032
564	10"	D	482	\$21,885	\$11,480	\$33,364	0%	10%	10%	\$0	\$3,336	\$3,336
48	10"	E	60	\$2,731	\$1,433	\$4,164	50%	79%	29%	\$2,087	\$3,297	\$1,210
49	10"	E	274	\$12,457	\$6,534	\$18,991	31%	49%	18%	\$5,949	\$9,399	\$3,450
56	15"	E	218	\$8,271	\$4,339	\$12,610	11%	17%	6%	\$1,333	\$2,106	\$773
50	10"	E	206	\$9,375	\$4,918	\$14,292	17%	28%	10%	\$2,494	\$3,941	\$1,447
51	10"	E	290	\$13,186	\$6,917	\$20,103	24%	38%	14%	\$4,886	\$7,720	\$2,834
52	10"	E	309	\$14,056	\$7,373	\$21,429	7%	10%	4%	\$1,408	\$2,225	\$817
227	15"	E	400	\$15,200	\$7,973	\$23,173	7%	11%	4%	\$1,552	\$2,452	\$900
226	10"	E	181	\$8,218	\$4,311	\$12,529	13%	21%	8%	\$1,648	\$2,604	\$956
54	10"	E	402	\$18,266	\$9,581	\$27,847	6%	10%	4%	\$1,768	\$2,793	\$1,025
228	10"	E	26	\$1,200	\$629	\$1,829	9%	15%	5%	\$172	\$272	\$100
133	10"	E	398	\$18,097	\$9,493	\$27,590	4%	6%	2%	\$1,126	\$1,779	\$653
641	10"	E	82	\$3,721	\$1,952	\$5,673	8%	13%	5%	\$456	\$720	\$264
642	10"	E	290	\$13,163	\$6,905	\$20,067	5%	8%	3%	\$1,036	\$1,637	\$601
640	10"	E	229	\$10,410	\$5,461	\$15,871	5%	8%	3%	\$782	\$1,236	\$454
639	10"	E	204	\$9,274	\$4,865	\$14,139	5%	8%	3%	\$703	\$1,111	\$408
643	10"	E	185	\$8,423	\$4,418	\$12,841	8%	12%	5%	\$1,001	\$1,582	\$581

**TABLE 7  
EXISTING IMPACT FEE WASTEWATER LINES**

Segment ID	Dia.	Line Group	Length (Ft.)	Total Capital Cost	20-Year Debt Service (@ 5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
							2008	2018	10-Yr Period	2008	2018	10-Yr Period
131	10"	E	406	\$18,442	\$9,674	\$28,115	6%	10%	4%	\$1,815	\$2,868	\$1,053
230	10"	E	71	\$3,239	\$1,899	\$4,938	1%	2%	1%	\$62	\$98	\$36
28	10"	E	378	\$17,174	\$9,009	\$26,182	2%	3%	1%	\$558	\$882	\$324
27	10"	E	48	\$2,189	\$1,148	\$3,337	1%	2%	1%	\$33	\$52	\$19
29	10"	E	408	\$18,521	\$9,716	\$28,237	3%	5%	2%	\$911	\$1,440	\$529
132	10"	E	393	\$17,864	\$9,371	\$27,235	2%	3%	1%	\$490	\$774	\$284
138	10"	E	393	\$17,878	\$9,378	\$27,257	2%	3%	1%	\$439	\$694	\$255
188	10"	E	375	\$17,050	\$8,944	\$25,993	3%	6%	2%	\$907	\$1,434	\$526
189	10"	E	382	\$17,345	\$9,098	\$26,443	2%	3%	1%	\$557	\$881	\$323
158	15"	E	382	\$14,505	\$7,609	\$22,114	1%	1%	1%	\$202	\$320	\$117
191	10"	E	383	\$17,400	\$9,127	\$26,527	2%	3%	1%	\$587	\$928	\$341
159	15"	E	379	\$14,395	\$7,551	\$21,946	1%	1%	0%	\$185	\$292	\$107
160	15"	E	367	\$13,917	\$7,300	\$21,217	1%	2%	1%	\$209	\$330	\$121
161	15"	E	390	\$14,788	\$7,757	\$22,545	1%	1%	0%	\$178	\$281	\$103
190	10"	E	371	\$16,884	\$8,857	\$25,741	1%	2%	1%	\$251	\$397	\$146
162	15"	E	371	\$14,065	\$7,378	\$21,443	0%	1%	0%	\$68	\$107	\$39
141	10"	E	383	\$17,415	\$9,135	\$26,551	1%	1%	0%	\$215	\$340	\$125
223	10"	E	387	\$17,604	\$9,234	\$26,838	0%	1%	0%	\$101	\$159	\$58
142	10"	E	375	\$17,022	\$8,929	\$25,952	0%	1%	0%	\$89	\$141	\$52
140	10"	E	381	\$17,299	\$9,075	\$26,374	0%	0%	0%	\$49	\$78	\$28
139	10"	E	377	\$17,144	\$8,993	\$26,137	0%	10%	10%	\$0	\$2,614	\$2,614
184	15"	E	173	\$6,549	\$3,435	\$9,984	0%	10%	10%	\$0	\$998	\$998
224	10"	E	192	\$8,728	\$4,578	\$13,307	0%	10%	10%	\$0	\$1,331	\$1,331
237	10"	E	201	\$9,124	\$4,786	\$13,910	0%	10%	10%	\$0	\$1,391	\$1,391
55	15"	F	463	\$17,570	\$9,216	\$26,786	7%	11%	4%	\$1,880	\$2,970	\$1,090
135	10"	G	209	\$9,485	\$4,976	\$14,461	10%	15%	6%	\$1,377	\$2,176	\$799
134	10"	G	400	\$18,176	\$9,534	\$27,711	22%	35%	13%	\$6,059	\$9,572	\$3,514
136	10"	G	210	\$9,539	\$5,004	\$14,542	21%	34%	12%	\$3,100	\$4,898	\$1,798
137	10"	G	211	\$9,588	\$5,029	\$14,617	21%	34%	12%	\$3,116	\$4,923	\$1,807
154	10"	G	384	\$17,441	\$9,149	\$26,589	14%	23%	8%	\$3,839	\$6,066	\$2,227
155	10"	G	381	\$17,319	\$9,085	\$26,403	19%	30%	11%	\$5,038	\$7,959	\$2,922
233	10"	G	387	\$17,597	\$9,231	\$26,828	11%	17%	6%	\$2,874	\$4,540	\$1,667
495	10"	G	191	\$8,679	\$4,553	\$13,232	7%	11%	4%	\$958	\$1,513	\$555
340	10"	G	361	\$16,391	\$8,598	\$24,988	5%	7%	3%	\$1,129	\$1,784	\$655
493	10"	G	409	\$18,591	\$9,752	\$28,343	4%	6%	2%	\$1,091	\$1,724	\$633
494	10"	G	199	\$9,067	\$4,756	\$13,823	3%	4%	2%	\$390	\$617	\$226
489	10"	G	376	\$17,068	\$8,953	\$26,021	4%	6%	2%	\$1,034	\$1,634	\$600
490	10"	G	399	\$18,117	\$9,503	\$27,620	4%	6%	2%	\$1,057	\$1,671	\$613
612	10"	G	219	\$9,939	\$5,214	\$15,153	3%	5%	2%	\$485	\$767	\$281
614	10"	G	245	\$11,141	\$5,844	\$16,985	1%	1%	0%	\$138	\$218	\$80
341	10"	G	363	\$16,479	\$8,644	\$25,123	0%	0%	0%	\$12	\$19	\$7
545	18"	H	3,082	\$98,879	\$51,868	\$150,747	8%	13%	5%	\$12,743	\$20,134	\$7,391
532	10"	H	2,991	\$135,923	\$71,300	\$207,223	6%	10%	4%	\$12,516	\$19,776	\$7,259
535	10"	H	111	\$5,054	\$2,651	\$7,705	2%	3%	1%	\$127	\$200	\$74
536	10"	H	105	\$4,753	\$2,493	\$7,246	1%	2%	1%	\$77	\$122	\$45
533	10"	H	1,332	\$60,519	\$31,746	\$92,265	2%	3%	1%	\$1,573	\$2,486	\$913
537	10"	H	217	\$9,872	\$5,179	\$15,051	1%	2%	1%	\$176	\$278	\$102
538	10"	H	451	\$20,479	\$10,743	\$31,222	1%	2%	1%	\$356	\$562	\$206
534	10"	H	528	\$23,996	\$12,587	\$36,583	0%	1%	0%	\$125	\$198	\$73
422	10"	I	152	\$6,930	\$3,635	\$10,565	0%	1%	0%	\$46	\$72	\$27
423	10"	I	453	\$20,588	\$10,800	\$31,388	0%	1%	0%	\$120	\$189	\$70
467	10"	J	332	\$15,092	\$7,917	\$23,009	14%	22%	8%	\$3,236	\$5,114	\$1,877
474	10"	J	350	\$15,918	\$8,350	\$24,268	15%	24%	9%	\$3,755	\$5,932	\$2,178
475	10"	J	299	\$13,592	\$7,130	\$20,721	9%	14%	5%	\$1,851	\$2,925	\$1,074
476	10"	J	193	\$8,784	\$4,608	\$13,392	5%	8%	3%	\$720	\$1,138	\$418
477	10"	J	150	\$6,839	\$3,587	\$10,426	13%	21%	8%	\$1,404	\$2,218	\$814

City of Marble Falls, Texas  
2008 Development Impact Fee Study

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Existing Wastewater Facilities  
July 2008

**TABLE 7  
EXISTING IMPACT FEE WASTEWATER LINES**

Segment ID	Dia.	Line Group	Length (Ft.)	Total Capital Cost	20-Year Debt Service (@ 5%)	Total 20-Yr Project Cost	(% Utilized Capacity)			(\$ Utilized Capacity)		
							2008	2018	10-Yr Period	2008	2018	10-Yr Period
472	10"	J	262	\$11,890	\$6,237	\$18,127	7%	10%	4%	\$1,186	\$1,875	\$688
473	10"	J	183	\$8,303	\$4,355	\$12,658	4%	6%	2%	\$499	\$788	\$289
470	10"	J	109	\$4,975	\$2,610	\$7,585	4%	6%	2%	\$306	\$484	\$178
471	10"	J	396	\$17,989	\$9,436	\$27,426	13%	21%	8%	\$3,666	\$5,792	\$2,126
469	10"	J	362	\$16,460	\$8,634	\$25,095	4%	6%	2%	\$883	\$1,395	\$512
389	10"	J	439	\$19,954	\$10,467	\$30,421	5%	8%	3%	\$1,602	\$2,532	\$929
390	10"	J	217	\$9,854	\$5,169	\$15,023	3%	5%	2%	\$454	\$717	\$263
468	10"	J	84	\$3,797	\$1,992	\$5,789	5%	8%	3%	\$278	\$440	\$161
391	10"	J	143	\$6,482	\$3,400	\$9,882	1%	2%	1%	\$131	\$207	\$76
392	10"	J	486	\$22,096	\$11,591	\$33,687	1%	2%	1%	\$450	\$711	\$261
401	10"	J	327	\$14,869	\$7,800	\$22,669	0%	10%	10%	\$0	\$2,267	\$2,267
402	10"	J	410	\$18,652	\$9,784	\$28,437	0%	10%	10%	\$0	\$2,844	\$2,844
245	10"	K	132	\$5,997	\$3,146	\$9,143	2%	4%	1%	\$206	\$325	\$119
654	10"	L	255	\$11,577	\$6,073	\$17,650	3%	4%	2%	\$488	\$772	\$283
655	10"	L	196	\$8,888	\$4,662	\$13,551	3%	4%	1%	\$347	\$548	\$201
656	10"	L	158	\$7,194	\$3,774	\$10,968	1%	2%	1%	\$140	\$221	\$81
659	10"	L	341	\$15,498	\$8,130	\$23,628	2%	3%	1%	\$376	\$594	\$218
5	10"	L	375	\$17,044	\$8,940	\$25,984	1%	2%	1%	\$273	\$431	\$158
6	10"	L	236	\$10,726	\$5,627	\$16,353	1%	2%	1%	\$176	\$278	\$102
838	12"	M	1,340	\$57,325	\$30,071	\$87,396	3%	5%	2%	\$2,745	\$4,337	\$1,592
98	15"	N	402	\$15,245	\$7,997	\$23,242	15%	24%	9%	\$3,552	\$5,612	\$2,060
109	15"	N	308	\$11,710	\$6,143	\$17,853	15%	24%	9%	\$2,728	\$4,311	\$1,582
110	15"	N	367	\$13,945	\$7,315	\$21,259	15%	24%	9%	\$3,249	\$5,133	\$1,884
111	15"	N	420	\$15,940	\$8,361	\$24,301	15%	24%	9%	\$3,713	\$5,867	\$2,154
638	15"	N	404	\$15,345	\$8,049	\$23,394	10%	16%	6%	\$2,399	\$3,791	\$1,392
637	15"	N	385	\$14,601	\$7,659	\$22,260	6%	10%	4%	\$1,422	\$2,247	\$825
99	15"	N	376	\$14,255	\$7,478	\$21,733	15%	24%	9%	\$3,295	\$5,206	\$1,911
101	15"	N	219	\$8,331	\$4,370	\$12,701	13%	20%	7%	\$1,635	\$2,583	\$948
100	15"	N	353	\$13,386	\$7,022	\$20,407	7%	12%	4%	\$1,530	\$2,417	\$887
93	15"	N	434	\$16,481	\$8,645	\$25,126	14%	22%	8%	\$3,531	\$5,579	\$2,048
92	15"	N	420	\$15,949	\$8,366	\$24,315	14%	21%	8%	\$3,301	\$5,216	\$1,915
91	15"	N	739	\$28,037	\$14,707	\$42,745	13%	21%	8%	\$5,569	\$8,799	\$3,230
<b>TOTALS</b>						<b>\$3,184,726</b>				<b>\$289,756</b>	<b>\$474,329</b>	<b>\$184,574</b>
System Utilization										9.1%	14.9%	5.8%