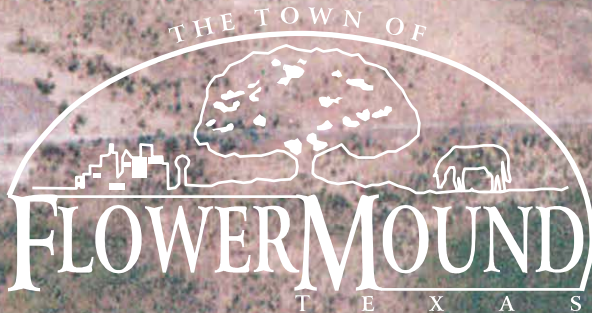


Wastewater System Capital Improvements

Impact Fee Report

April 2004



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Impact Fee Report



Alan R. Tucker
3-24-04

April 2004

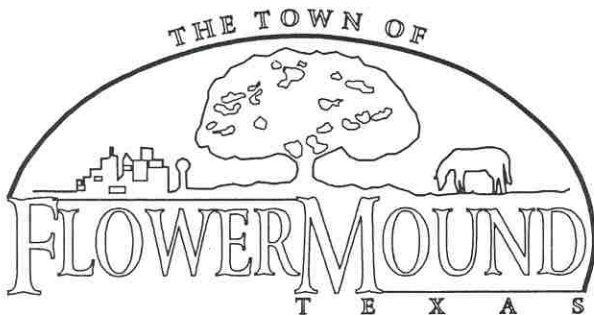


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I. EXECUTIVE SUMMARY

The Town of Flower Mound continues to experience significant growth. Current estimates indicate that 99 percent of the available residential land in the Long Prairie Service Area will be developed within the next ten years. The wastewater capital improvements necessary to serve the projected population in the Town's service areas are significant, totaling approximately \$35.6 million between 2003 and 2013. This report, along with the Town's Master Plan, current land use assumptions report, and updated wastewater model fulfill the technical requirements laid out in Chapter 395 of the Texas Local Government Code pertaining to amendment of capital improvement impact fee ordinances. State statutes clearly specify the methodology allowable for the technical development of impact fees and the procedural requirements required of the Town prior to enactment or amendment of such fees.

The updated maximum wastewater impact fees in this report continue the established practice of dividing the Town into three distinct wastewater service areas: 1) the Long Prairie Service Area encompassing the area served by the Town's Wastewater Treatment Plant (excluding Lakeside Lift Station flows); 2) the Lakeside Service Area which includes developed and undeveloped tracts in the Lakeside District served by the Lakeside Lift Station; and, 3) the Denton Creek Service Area that includes the Denton Creek District in far west Flower Mound. The creation of three distinct wastewater service areas with different impact fees by prior Council action requires the Town to maintain separate accounting of the fees collected in each area. Additional requirements of Chapter 395 mandate that fees must be spent in the service area from which they were collected.

The maximum impact fee, for property owners installing a 5/8-inch to 3/4-inch (minimum size) water meter, chargeable for development in the Long Prairie Service Area is \$5,249 including an ad valorem tax and utility service revenues credit and \$5,490 without the credit. Developers installing the minimum size water meter within the Denton Creek Service Area may be charged a lower wastewater impact fee of \$1516 and \$1525 with and without the ad valorem tax and utility service revenues credit respectively. Lakeside Service Area development may be charged an impact fee of up to \$1081 without the credit and \$1019 with the ad valorem tax and utility service revenues credit for installation of a 5/8-inch to 3/4-inch water meter. The increase in the maximum wastewater impact fees is due to the recovery of financing costs. While there were significant reductions in the capital improvements required within the eligible period, the drop in recoverable project costs was balanced by a reduction in the number of new Service Units projected. The recommended maximum fee schedules represent 25%, 4%, and 21% increases for the Long Prairie, Lakeside, and Denton Creek Service areas respectively. The variance in the fee increase percentage between service areas is due to differences in the amount of existing facilities financed at lower interest rates. Reductions to the Impact Fee Schedules presented, restricting fees at reduced amounts (i.e., 50% of the maximum for commercial non-smart growth development or 25% of the maximum for commercial smart growth development), are permissible under state statutes and may be enacted at the option of the Town.

II. INTRODUCTION

Alan Plummer Associates, Inc. (APAI) was retained to update impact fees for the wastewater collection and treatment system. The existing impact fees were adopted by the Town of Flower Mound in 2000 in accordance with Chapter 395 of the Texas Local Government Code. The Town currently charges impact fees within three defined service areas: Long Prairie, Lakeside District, and the Denton Creek District. APAI recommends the Town continue the impact fee structure adopted in 2000 for wastewater improvements as each area encompasses unique requirements within the allowable 10-year recovery period.

The required update to land use assumptions and capital improvement plan information upon which impact fees are based are required by statute:

“§ 395.052. Periodic Update of Land Use Assumptions and Capital Improvements Plan Required

- (a) A political subdivision imposing an impact fee shall update the land use assumptions and capital improvements plan at least every five years. The initial five-year period begins on the day the capital improvements plan is adopted.
- (b) The political subdivision shall review and evaluate its current land use assumptions and shall cause an update of the capital improvements plan to be prepared in accordance with Subchapter B.”¹

Updated impact fee land use assumptions are documented in “Land Use Assumptions: Impact Fee Update”, May 2003, by Kimley-Horn Associates, Inc.(KHA).

The purpose of this report is to satisfy requirements of law and provide the Town with updated Impact Fee Wastewater Capital Improvements Plan (CIP) information and associated maximum impact fees. CIP requirements are specifically defined by law:

... **“§ 395.014. Capital Improvements Plan**

(a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

- (1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

¹ Excerpt from Texas Local Government Code Chapter 395, Subchapter A

- (2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;
- (3) a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;
- (4) 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;
- (5) 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;
- (6) the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and
- (7) a plan for awarding:
 - (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
 - (B) in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.”...¹

Items recoverable by impact fee were defined by the legislature:

...“§ 395.012. **Items Payable by Fee**

- (a) An impact fee may be imposed only to pay the costs of constructing capital improvements or facility expansions, including and limited to the:
 - (1) Construction contract price;
 - (2) Surveying and engineering fees;
 - (3) Land acquisition costs, including land purchases, court awards and costs, attorney's fees, and expert witness fees; and
 - (4) Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvements plan who is not an employee of the political subdivision.”...¹

Work required to complete an update of the Town’s wastewater impact fee schedule included updates to the collection system model to reflect existing condition (2003) and predictive model runs of future (2013) system requirements. Specific tasks included:

- Wastewater Data Collection was required to support development of the updated impact fee CIP;
- Update and calibration of the HYDRA® model of the Town’s wastewater collection system was necessary to allow projection of existing flows and prediction of 2013 and build out wastewater flows;

- The collection system was evaluated using the HYDRA® model runs to determine improvements required to support build out flow within the Long Prairie Service Area and the cost recoverable in the statutory period (2003-2013);
- The following reports were reviewed and applied to fee calculations: Land Use Assumptions: Impact Fee Update, May 2003, by Kimley-Horn Associates, Inc. (KHA), Water Impact Fee Update, by KHA, October 2003 (DRAFT); and,
- Additional service units were calculated and the maximum impact fees per service unit were determined for each water meter size using service unit equivalents.

III. GLOSSARY

Terms employed in this report defined by Chapter 395 include:

“§ 395.001. Definitions

In this chapter:

(1) "Capital improvement" means any of the following facilities that have a life expectancy of three or more years and are owned and operated by or on behalf of a political subdivision.

(2) "Capital improvements plan" means a plan required by this chapter that identifies capital improvements or facility expansions for which impact fees may be assessed.

(3) "Facility expansion" means the expansion of the capacity of an existing facility that serves the same function as an otherwise necessary new capital improvement, in order that the existing facility may serve new development. The term does not include the repair, maintenance, modernization, or expansion of an existing facility to better serve existing development.

(4) "Impact fee" means a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development. The term includes amortized charges, lump-sum charges, capital recovery fees, contributions in aid of construction, and any other fee that functions as described by this definition

(5) "Land use assumptions" includes 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. ”....

...“ (9) "Service area" means 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.

(10) "Service unit" means 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.”...²

Additional terms employed in this report:

- Annual Average Flow – The rolling 12 month average flow reported by the Town’s Wastewater Treatment Plant (WWTP);

² Excerpt from Texas Local Government Code Chapter 395, Subchapter A

- Build Out – Development has proceeded to consume all available land in a given area. Build out flow estimates are used to calculate the collection system and treatment capacity required when the area is fully developed.
- HYDRA® - Modeling software employed to develop sanitary sewer flow estimates based on existing and future conditions within the Town's collection system.
- MGD – Million gallons per day;
- Recoverable Cost – The cost attributable to 2003 -2013 growth;
- TCEQ – Texas Commission on Environmental Quality;

IV. REGULATORY BACKGROUND

State law contains numerous technical requirements and procedures that control the development and issuance of fee ordinances. Texas Local Government Code, Chapter 395, regulates the development of municipal impact fees. Chapter 395 specifies procedures required when updating impact fee ordinances. Public notice and a subsequent hearing are required prior to approval of updated impact fees.

Land Use Assumptions

Land use assumptions are growth projections that are used to project the demand for capital investments that will be required to serve future growth in the service area. Chapter 395 defines the phrase land use assumptions as “projections of changes in land uses, densities, and population in the service area over at least a ten-year period.” Although land use assumptions are an important part of the Town’s facilities planning process, they do not always have a significant impact on the impact fee level that is ultimately set. Slower or more rapid growth may result in planned capital expenses occurring sooner or later than originally planned. Typically, however, these changes in the projected growth rate do not have a major impact on the average cost per unit of capacity upon which the impact fee is based. Chapter 395 of the Texas Local Government Code requires the update of land use assumptions and a capital improvements plan for all service areas within five years of adoption.

While land use assumptions associated with impact fees must cover at least a 10-year period, the projected demand associated with the capital improvements plan (which forms the cost basis for the impact fee charged) must be considered for a period not to exceed 10 years. This typically results in the use of a 10-year time frame for both capital investment planning and land use assumptions. Land use assumptions, documented in “Impact Fee Update: Land Use Assumptions Report”, May 2003, by Kimley-Horn and Associates, for 2003 through 2013, were used to develop the proposed update to the wastewater impact fee ordinance.

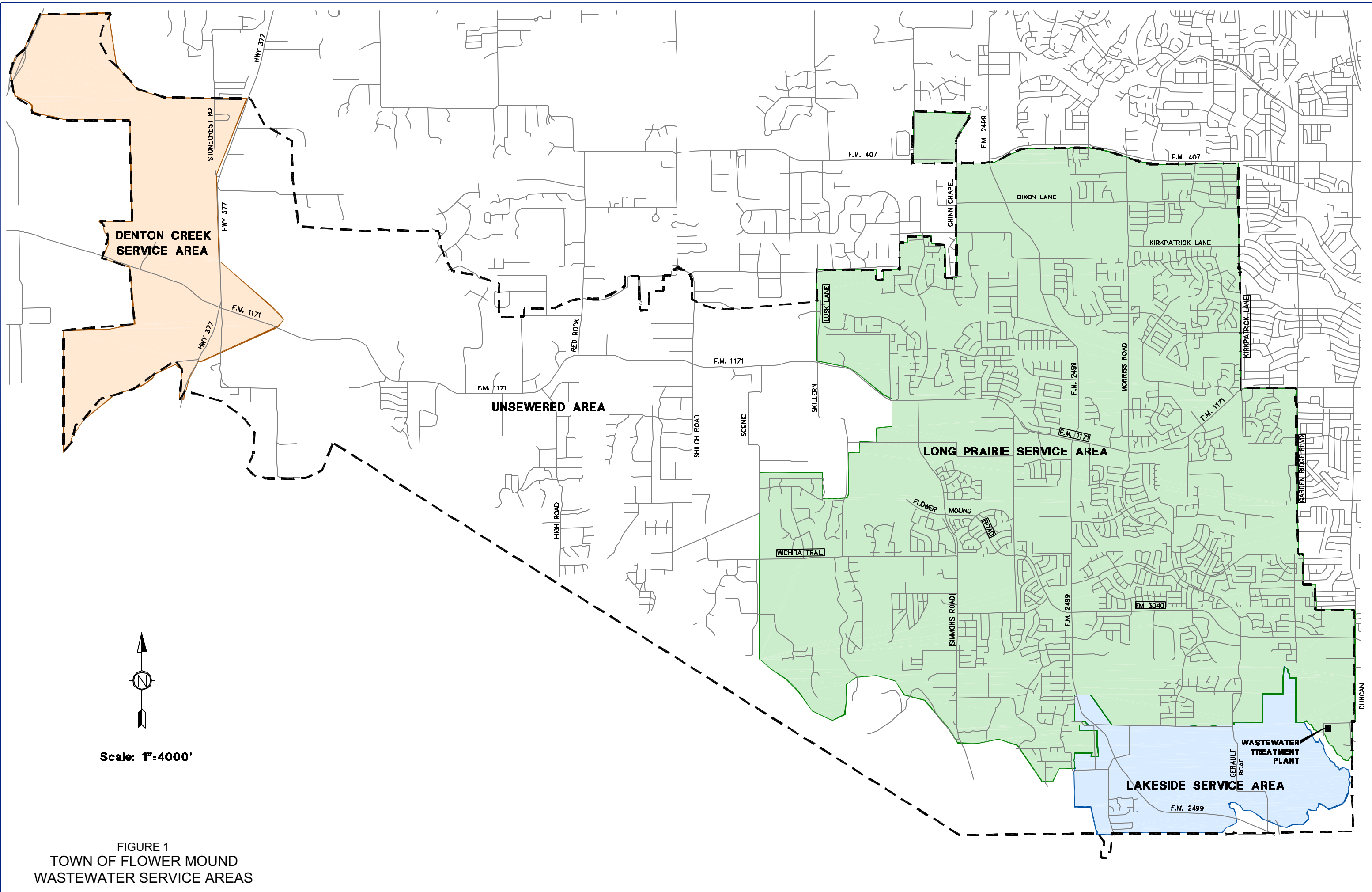
Service Area Requirements

APAI recommends the Town continue the impact fee structure adopted by Council in 2000 for wastewater improvements as each service area encompasses unique requirements within the allowable 10-year recovery period.

The Town currently charges impact fees within three defined service areas: Long Prairie, Lakeside District, and the Denton Creek District. Existing wastewater service areas are depicted in Figure 1. The land use assumptions employed incorporate projected master plan development in the Denton Creek District (far west Flower Mound), the Lakeside District (adjacent to the eastern end of Lake Grapevine), and the remainder of the area served by the Town's Wastewater Treatment Plant (excluding the Lakeside District). Population and employment estimates were employed to calculate the recoverable portion of the build-out facilities based on an updated modeling of the Town's wastewater collection system completed by Alan Plummer Associates, Inc. in October 2003.

The current projections suggest that build out of much of the developable area in the Long Prairie Service Area will occur within the eligible period. Land use assumptions predict the Town will reach build out in the Long Prairie Service Area some time after the end of the eligible 10-year period. Based on North Texas Council of Governments (NTCOG) predicted commercial square footage within applicable Traffic Survey Zones (TSZs), the Long Prairie Service Area will be at 99% of build out in 2013. Projections for the same TSZs indicate the Long Prairie population will be at 99% of the build out estimate in 2013. Commercial square footage estimates for the Lakeside and Denton Creek Service Areas in 2013 are 74% and 35% of build out respectively. Selected population and land use assumptions applicable to the development of wastewater impact fees are summarized in Table 1.

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Scale: 1"=4000'

FIGURE 1
TOWN OF FLOWER MOUND
WASTEWATER SERVICE AREAS

**Table 1
Population and Land Use Assumptions**

Long Prairie Service Area		
Year	Population	Commercial Sq. Footage
2003	45,727	2,610,599
2013	60,140	10,952,184
Build Out	60,978	11,076,518
Percentage of Build Out (2013)	99%	99%

Lakeside Service Area		
Year	Population ^{1,2}	Commercial Sq. Footage
2003	1,199	872,490
2013	2,897	7,415,267
Build Out	3,688	10,042,153
Percentage of Build Out (2013)	100%	74%

Denton Creek Service Area		
Year	Population ³	Commercial Sq. Footage ⁴
2003	20	185,180
2013	149	3,416,298
Build Out	552	9,455,090
Percentage of Build Out (2013)	27%	35%

Notes:

¹Residential population is assumed to be limited to the existing population due to Master Plan Restrictions.

²Due to the predominantly commercial development mandated by the Master Plan, Commercial Sq. Footage was Utilized in lieu of population projections for the Lakeside Service Area percent build out estimate.

³Due to the predominantly commercial development mandated by the Master Plan, Commercial Sq. Footage was utilized in lieu of population projections within the Denton Creek Service Area. Allowable population for the Denton Creek Service Area under the Town Master Plan varies, commercial sq. ft. used for percent build out estimate.

⁴Development of flows in the Preliminary Design Report (PDR) for the Denton Creek Service Area employed Master Plan land use and a simplified area (acreage) flow model. Build out percentage is the ratio of Total 2013 TSZ square footages to Build Out. Commercial acreages were employed by the HYDRA® Model to develop model flows using 1800 gallons per acre

Kimley-Horn and Associates estimates the Town's current population to be approximately 58,700 based on NTCOG estimates. The most recent United States Census in 2000 listed the Town population as 50,702. The Town of Flower Mound continues to experience significant growth in residential development. Build out estimates suggest the residential areas within the Long Prairie Service Area will be nearing build out at the end of the 10-year eligible period. Commercial development in this service area though lagging residential growth, should accelerate and

approach build out by 2013. The Lakeside and Denton Creek Service Areas are projected to be at 74% and 35% of build out development in 2013.

V. METHODOLOGY

Wastewater System Modeling

Evaluation of the Town's wastewater system was accomplished by updating the computer model of the system prepared in conjunction with the Wastewater Master Plan. The Wastewater System Master Plan study, performed in 2000 by Alan Plummer Assoc., Inc. (APAI), identified and prioritized improvements required to accommodate the projected growth of the Town of Flower Mound according to the model developed at the time. Since then, the Town has experienced significant growth, and as a result, the existing collection system model no longer accurately reflected the current state of the system. APAI updated the model to include additional gravity lines, lift stations, and force mains added to the system prior to January 2003. The original hydraulic model was prepared in HYDRA version 3, which is now several versions out of date. APAI converted the 2000 Master Plan Model to HYDRA Version 6 before adding the recent collection system improvements. The system model was then calibrated in accordance with accepted practice. The primary purpose of the updated modeling study was to facilitate reevaluation of the capacity of the existing collection system and wastewater treatment plant. Based on this evaluation, Capital Improvement Plan updates were recommended to reflect changes to the required future capacities of interceptor lines, lift stations, force mains, and treatment facilities.

Existing Service Units

Texas Local Government Code, Chapter 395 specifies that calculation of the maximum impact fee must be based on demand growth expressed in service units. The code defines

a service unit as a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development. Typically, service units for water and wastewater systems are based upon the capacity of the water meters present in the water supply system. The recommended service unit for calculation of the Town's amended impact fee is the "Service Unit" (SU). One SU is equivalent to the smallest water meter in the system (5/8" to 3/4"). The fee for larger meter installation is based on the ratio of the larger meter capacity to that of the smaller "base" meter. While Section 395.014(a)(4) of the Texas Local Government Code requires the presence of an equivalency or conversion table relating the number of SUs to land use, water and wastewater impact fees are determined by the size of the water meter installed in the vast majority of cases. The recommended equivalency conversion factors are summarized in Table 2.

For the purpose of developing wastewater utility impact fees, the number of Service Units (SU) units present in the Long Prairie Service Area was determined using data provided by the Town's Utility Customer Service Department. The majority of the Town's customer base is made up of residential 5/8-inch to 3/4-inch water meters. Table 3 provides a summary of numerical water and wastewater customer data based on Town records as of October 2003. The number of equivalent SUs within the Long Prairie Service Area for each meter size was calculated by multiplying the service unit equivalent factor by the meter totals presented in Table 3. The calculation of wastewater SUs is summarized in Table 4. Based on October 2003 customer data, there are 19,465 SUs present in the Long Prairie Service Area. The number of SUs present in the Lakeside Service Area, 573, was estimated using the modeled 2003 flow and an assumption of 320 gallons per SU per day (3.2 people per SU and 100 gallons per person per day). As Denton Creek Service Area improvements have yet to be constructed the number of SU present in 2003 is zero.

Table 2
Meter Equivalency Factors¹

Water Meter Size	Maximum Capacity (gpm)	Service Unit Equivalent ² Factor
5/8 - 3/4"	10	1
1"	25	2.5
1-1/2"	50	5
2"	80	8
3"	160	16
4"	250	25
6"	500	50
8"	800	80
10"	1,150	115

Notes:

¹Source: American Water Works Association, AWWA Standards C700, C701, C702, C703

²Service Units, based on water meter size is the recommended service unit for Flower Mound's Impact Fees. The equivalent factor is calculated by dividing the maximum capacity of larger meters by the capacity of the base meter (5/8"-3/4").

Table 3**Utility Customer Data****A. Water and Wastewater Service Areas (All)^{1,2}**

Meter Size	Total Water Customers ³			Total Wastewater Customers ³		
	Residential	Commercial	Total	Residential	Commercial	Total
3/4"	18,140	128	18,268	16,896	47	16,943
1"	850	203	1,053	344	78	422
1-1/2"	9	142	151		69	69
2"	7	311	318		12	12
3"		34	34		34	34
4"		4	4		3	3
6"		3	3		3	3
8"						
10"						
Total	19,006	825	19,831	17,240	246	17,486

Notes:

¹Source: Town of Flower Mound October 2003 Utilities Billing Recap Report²Wastewater Customer Total was 17,486, approximately 88.2% of water connections are currently served with the Town Borders³Water and Wastewater Customers within the Town's Water Service Area (All Wastewater Service Areas plus masterplanned 'Unsewered' Areas)**B. Long Prairie Service Wastewater Area (Excludes Denton Creek and Lakeside)^{1,2}**

Meter Size	Long Prairie Wastewater Customers		
	Residential	Commercial ²	Total
3/4"	16,896	42	16,938
1"	344	70	414
1-1/2"		62	62
2"		109	109
3"		10	10
4"		2	2
6"		2	2
8"			
10"			
Total	17,240	297	17,537

Notes:

¹Source: Town of Flower Mound October 2003 Utilities Billing Recap Report²Commercial customers within the Long Prairie Service area were estimated as 90% of commercial numbers Town wide.

Table 4
Wastewater Service Units^{1,2}
Long Prairie Service Area

Meter Size	Total Long Prairie Wastewater Customers	Service Unit Equivalent	Long Prairie Wastewater Service Units (Number of customers x SU Equivalent)
3/4"	16938	1	16938
1"	414	2.5	1035
1-1/2"	62	5	310
2"	109	8	872
3"	10	16	160
4"	2	25	50
6"	2	50	100
8"		80	0
10"		115	0
Total	17537		19465

Notes:

¹Water meter data source: Town of Flower Mound October 2003 Utilities Billing Recap Report

²Wastewater Customer totals were calculated based on October 2003 customer water meters in service within the Long Prairie Service Area

³Water Customers within the Town's Water Service Area

⁴Water Customers within the Long Prairie Wastewater Service Area Only

⁵Commercial customers within the Long Prairie Service area were estimated as 90% of commercial numbers Town wide.

Projected Service Units

While residential service units are typically predicted using service area population growth estimates and an assumed average individuals-per-household, growth prediction in predominantly commercial areas can be problematic. Population growth in commercial areas may over or underestimate future commercial demand dependent on the nature, amount, and speed of development. In addition, the methodology utilized to equate commercial development to population can in some cases induce more error. As a result of these limitations, growth estimates for the Town's two predominantly commercial service areas (Denton Creek and Lakeside), were accomplished using employment estimates.

Two areas of the Town of Flower Mound contain large undeveloped tracts of commercial zoned land: the Lakeside Service Area, in the southern portion of the Town west of the treatment plant; and the Denton Creek Service Area at the western end of the Town. These service areas correspond to the Lakeside and Denton Creek Districts. Projection of the number of SUs these areas will contain at build out was accomplished using the HYDRA® model to predict the flow based on planned land use.

The flows were based on the modeling assumption that each acre of commercial zoned land will contribute approximately 1,800 gallons of wastewater at build out. The SUs projected at build out for the Lakeside and Denton Creek Service Areas, presented in Table 5, were calculated by dividing the predicted flow by the 320-gallon per day per SU planning factor. The Lakeside and Denton Creek Service Areas are projected to be at 74% and 35% of build in 2013 respectively.

$$\text{SUs}_{\text{Lakeside Service Area (Existing)}} = \frac{\left[183,333 \cdot \frac{\text{gal}}{\text{day}} \right]}{320 \cdot \frac{\text{gal/day}}{\text{SUs}}}$$
$$\text{SUs}_{\text{Lakeside Service Area (Existing)}} = 573 \cdot \text{SUs}$$

Table 5
Estimation of Wastewater Service Units
Lakeside and Denton Creek Service Areas

Estimated Wastewater Average gpd per Service Unit ¹	320
Lakeside Business District:	
Estimated 2003 Flow (gpd) ²	183,333
Estimated Existing Service Units ³	573
Projected Lakeside Business District Projected Build-Out Average Flow (gpd) ⁴	2,300,000
Estimated Lakeside Service Units at Build-Out ³	7188
Estimated Lakeside Service Units, 2013 ⁵	5319
Estimated Additional Lakeside Service Units, 2013 ⁶	4746
Denton Creek District:	
Projected Denton Creek District Average Flow at Build-Out ⁷	4,400,000
Estimated Denton Creek District Service Units at Build-Out ³	13750
Estimated Denton Creek District Service Units, 2013 ⁵	4950

Notes:

¹Based on the planning assumptions of 100 gallons per capita and 3.2 people per Service Unit

²Estimated average 2003 flow based on the modeled peak flow of 0.55 MGD and an assumed peaking factor of 3 (550,000gpd/3 = 183,000gpd).
The modeled peak flow includes land use data per Kimley-Horn, Land Use Assumptions for Impact Fees, May 2003 and an assumed flow generation of 1800 gallons per acre per day.

³Flow divided by 320 gallons per service unit per day

⁴Estimated average build out flow based on model predicted build out flow of 4.6 MGD and an assumed peaking factor of 2
(4,600,000gpd/2 = 2,300,000gpd).

⁵Based on 74% and 35% of build out Service Units for Lakeside and Denton Creek Business Districts respectively (ratio of predicted 2013 and Build Out square footage occupancy in NTCOG TSZs per Kimley-Horn, Land Use Assumptions for Impact Fees, May 2003).
Build out SU x %Build out 2013 = 2013 SUs.

⁶Estimated 2013 Service Units less estimated 2003 Service Units (5319 - 573 = 4746).

⁷Denton Creek Development District Wastewater Collection System, Preliminary Design Report (PDR), Alan Plummer Associates, Inc., October 20, 2001.

For the Lakeside Service Area at build out flow:

$$\text{SUS}_{\text{Lakeside Service Area (Build Out)}} = \frac{\left[2,300,000 \cdot \frac{\text{gal}}{\text{day}} \right]}{320 \cdot \frac{\text{gal}}{\text{day}} \text{ SUS}}$$
$$\text{SUS}_{\text{Lakeside Service Area (Build Out)}} = 7,188 \cdot \text{SUS}$$

Similarly, the 2013 Denton Creek District SUSs were calculated based on the average flow modeled for the Denton Creek District Wastewater Collection System, Preliminary Design Report (PDR), by APAI, October 2001:

$$\text{SUS}_{\text{Denton Creek Service Area (Build Out)}} = \frac{\left[4,400,000 \cdot \frac{\text{gal}}{\text{day}} \right]}{320 \cdot \frac{\text{gal}}{\text{day}} \text{ SUS}}$$
$$\text{SUS}_{\text{Denton Creek Service Area (Build Out)}} = 13,750 \cdot \text{SUS}$$

The Lakeside and Denton Creek Service Areas are predicted to contribute 7,188 and 13,750 equivalent units respectively to the SU total under build-out conditions. The Kimley-Horn and Associates report entitled, “Impact Fee Update: Land Use Assumptions Report,” completed in May 2003, utilized map and field surveys, the Town’s Master Plan, and additional assumptions to forecast the pace of commercial development. Employment estimates were used to develop estimates of current and future employment in service areas in terms of square feet of commercial development. The Kimley-Horn report divides the Town into “Traffic Survey Zones” for the purpose of developing population and employment (square footage) predictions. While the borders of the Lakeside and Denton Creek Districts coincide with the boundaries of the Lakeside and Denton Creek wastewater service areas, “Traffic Survey Zones” do not coincide with the Town’s development districts. Data predicting commercial development in these areas was selected from applicable zones based on geographic location and the Town’s Master Plan zones. The selected service area data was employed to predict development in the Lakeside Development and Denton Creek Districts. Based on these employment

estimates, the Lakeside Service Area is expected to be 74 percent developed by 2013. The Denton Creek Service Area is predicted to be 35 percent developed at the end of the eligible period. The projected number of SUs in these areas in 2013 was estimated by multiplying the build-out SU values by the projected development percentages, as summarized in Table 5.

Residential service units present within the Long Prairie Service Area at build out was estimated based on population growth projections. The projection, summarized in Table 6, calculates the number of SUs present at build out within the service area based on the current ratio of population to SU. Dividing the service area population of 45,727 by the number of SUs yielded a ratio of 2.3492 people per SU. Based on the Long Prairie Service Area projected 2013 population of 60,140, the current service area is expected to contain 25,600 SUs based on development predictions. The net difference, 6,135 is the number of new Long Prairie SU predicted based predicted based on current estimates. The total number of new SUs in the all service areas is projected to be 15,831 by 2013.

Table 6
Projected New Service Units 2003 - 2013

Long Prairie Service Area:	
Long Prairie Service Area Estimated Population, 2003 ¹	45727
Long Prairie Wastewater Service Units, 2003 ²	19465
Long Prairie Service Area Population/Service Unit Ratio ³	2.3492
Long Prairie Service Area Estimated Population, 2013 ¹	60,140
Projected Long Prairie Service Area Service Units, 2013 ⁴	25,600
New Long Prairie Service Units 2003-2013 ⁵	6,135
Lakeside Service Area:	
New Lakeside Business District Service Units, 2013	4,746
Denton Creek Service Area:	
New Denton Creek Basin Service Units, 2013	4,950
<hr/>	
Total Service Units within all Service Areas, 2003 ⁶	20,038
Total Service Units within all Service Areas, 2013 ⁷	35,869
<hr/>	
Total New Service Units 2003-2013 ⁸	15,831

Notes:

¹Source: Kimley-Horn and Associates, Inc., Land Use Assumptions-Impact Fee Update, May 2003. Population values developed from NTCOG TDZ data for areas within the Long Prairie Service Area.

²Calculated in Table 4.

³2003 population above divided by the 2003 Service Units above ($45,727/19,465 = 2.3492$).

⁴Total population divided by population to Service Unit ratio presented above ($60,140/2.3492 = 25,600$).

⁵Service Units in 2013 minus existing 2003 service units ($25,600 - 19,465 = 6,135$).

⁶The sum of the Long Prairie, Lakeside, and Denton Creek Wastewater Service Units ($19,465 + 576 + 0 = 20,038$ for 2003).

⁷The sum of the Long Prairie, Lakeside, and Denton Creek Wastewater Service Units ($25,600 + 5319 + 4950 = 35,869$ for 2013).

⁸The total growth in wastewater service units within the Town's Service Areas in the eligible period ($35,869 - 20,038 = 15,831$).

Existing Collection System Cost Recovery

The cost recovered from the construction of the existing collection system, summarized in Table 7, was limited to recovery of the Kirkpatrick Lift Station replacement, extending the system to the intersection of FM 407 and Chinn Chapel Road, and the construction of Lakeside Service Areas initial capacity. Detailed calculation of the recoverable cost in segments of the FM 407 Sewer extension has been included in Appendix, Table A-1.

While limited additional capacity remains in other parts of the system, no cost recovery under the amended impact fee is recommended. The total cost recovered from the existing collection system was \$791,852 divided between the Long Prairie and Lakeside Service Areas based upon the actual improvements within the service area boundaries.

Existing Wastewater Treatment Excess Capacity Cost

The cost of construction of the existing wastewater treatment plant is based on financial data provided by Town Staff. The depreciation periods utilized by the Town are 20 and 45 years for the plant and treatment equipment costs respectively. The total depreciated cost of treatment plant improvements constructed in 1975 and 1994, summarized in Table 8, is \$11,735,580. Original cost data and wastewater plant depreciation line item details from accounting records provided by the Town have been included in Appendix A, as summarized in Table A-2. Improvements are segregated into two categories in Town records: treatment plant improvements and equipment.

The cost of the 2001 wastewater treatment plant expansion, \$19,191,263, includes additional to date un-depreciated costs incurred by the Town in upgrading the plant capacity to 10 MGD. Calculation of the recoverable portion of the depreciated cost, the recoverable fraction of 2001 expansion cost, and the prorate share attributable to the Long Prairie and Lakeside Service Areas, is summarized in Table 9. Based on October 2003 annual average plant flow reported to the TCEQ, 10% of the depreciated cost ($\$11,735,580 \times 10\% = \$1,173,558$) is recoverable based on the current annual average flow of 4.5 MGD and the 5.0 MGD capacity of the improvements.

Table 7
Existing Pump Station and Force Main Recoverable Costs¹
Long Prairie and Lakeside Service Areas

Project Name/Description	Project Cost	2013 Percent Recoverable ^{4,6}	Recovered Cost ^{5,7}
Long Prairie Service Area Projects:			
Kirkpatrick Lift Station Improvements ²	\$505,054	38.7%	\$195,334
FM 407 Sanitary Sewer Extension to Chinn Chapel Road ³	\$553,131	Varies ⁷	\$492,682
Long Prairie Service Area Total Recoverable Existing Facility Costs			\$688,016
Lakeside Business District Projects:			
Lakeside Initial Operating Facilities	\$1,759,671	45.0%	\$791,852
Lakeside Service Area Total Recoverable Existing Facility Costs			\$791,852

Notes:

¹ Collection system assets not specifically mentioned are not included the calculated impact fee. Includes existing improvement costs recovered in each Service Area. No existing facilities are present in the Denton Creek Service Area.

² Construction cost of the replacement Kirkpatrick Lift Station to convey build out flows.

³ Project amount includes construction cost, engineering, and right-of-way expenses.

⁴ Based on 2003 modeled flow of 1.76 MGD of the 2.87 MGD predicted 2013 Flow, $((2.87 \text{ MGD} - 1.76 \text{ MGD}) / 2.87 \text{ MGD}) \times 100\% = 38.7\%$.

⁵ Initial construction cost of the existing Lakeside Lift Station and Force Main.

⁶ Initial construction cost recoverable based on 2003 flow of 0.55 MGD of 1 MGD installed capacity, $((1 \text{ MGD} - 0.55 \text{ MGD}) / 1 \text{ MGD}) \times 100\% = 45\%$

⁷ Recoverable cost is total cost multiplied by the recoverable percentage

⁸ Recoverable cost varies for each modeled line segment, see Appendix Table A-1

Table 8
Depreciation of Wastewater Plant Costs^{1,2}

	Cost	Percentage of Original Cost Depreciated to Date	Amount Depreciated to Date	Net Cost Remaining
Plant Construction, 1975	\$889,400	61%	\$543,522	\$345,878
Treatment Equipment, 1975	\$1,955,400	100%	\$1,955,400	\$0
Plant Improvements, 1994	\$5,523,000	19%	\$1,043,233	\$4,479,767
Plant Equipment, 1994	\$10,469,600	34%	\$3,559,664	\$6,909,936
Total Remaining Cost of Pre-2001 Plant Improvements	\$18,837,400			\$11,735,580

Notes:

¹The cost of construction of plant improvements prior to the 2001 expansion per Town records. Equipment and plant costs are depreciated by the Town over 25 and 40 year periods respectively. See Appendix Table A-2 for details, the line items listed in the detail table reflect Town accounting records as of October 31, 2003.

²Source: Ms. Jane Stanley, Town of Flower Mound Director of Accounting (October 2003).

Table 9
Wastewater Treatment Plant Recoverable Costs
Long Prairie and Lakeside Service Areas¹

	Excess Capacity (MGD) ²		Recoverable Percent	Total Recoverable Cost	Recoverable Cost
	2003	2013	2003-2013	(Build Out)	(2003-2013)
5 MGD Treatment Plant Construction through 2000	0.5	0	10%	\$11,735,580	\$1,173,558
5 MGD Expansion, 2001 ³	5	1.8	64%	\$19,191,263	\$12,282,409
Total Wastewater Treatment Plant Costs					\$13,455,967
Portion of Recoverable Costs Chargeable to the Lakeside Service Area ^{4,5}			15.6%		\$2,094,974
Portion of Recoverable Costs Chargeable to the Long Prairie Service Area ^{4,6}			84.4%		\$11,360,993

Notes:

¹No existing treatment plant costs are chargeable to the Denton Creek Service Area. No facilities are currently in place. Treatment of future flow from the Denton Creek Service Area will be provide by contract with the Trinity River Authority (TRA) Denton Creek Plant.

²Pre-Expansion Plant excess capacity 0.5 MGD based on 2003 estimated annual average flow of 4.5 MGD. 5MGD Expansion excess 2013 capacity of 1.8 MGD is based on the historical trend of flow increases from 1993 to 2003, predicted 2013 plant flow is 8.2 MGD (presented in Figure 2).

³Actual construction costs incurred as of January 2, 2004.

⁴Prorata share of WWTP cost is based on fractional flow, as presented in Figure 2 the historical increases project that the 2013 annual average flow will be approximately 8.2 MGD (15.6% x \$13,455,967 = \$2,094,974).

⁵The portion of the total WWTP cost attributable to Lakeside is the ratio of the lift station's predicted average 2013 flow (3.83 MGD) to the 2013 plant flow (8.2 MGD).

⁶The cost recoverable within the Long Prairie Service Area is the total recoverable cost for 2003-2013 less the prorata share of the cost attributable to Lakeside based on the fractional build out flow (100% - 15.6% = 84.4% or \$13,455,967 - \$2,094,974 = \$11,360,993)

The plant flow expected in 2013 from the areas contributing to the plant (Long Prairie and Lakeside Service Areas) was projected based on the historical increase in plant flow over the preceding 10-year period. The plant flow history, annual average flow as reported to the TCEQ, is depicted in Figure 2. Based on the preceding 10 years, approximately 8.2 MGD of annual average plant flow is predicted in 2013. This flow allows recovery of 64 percent of the 5.0 MGD 2001 expansion cost ($\$19,191,262 \times 64\% = \$12,282,409$).

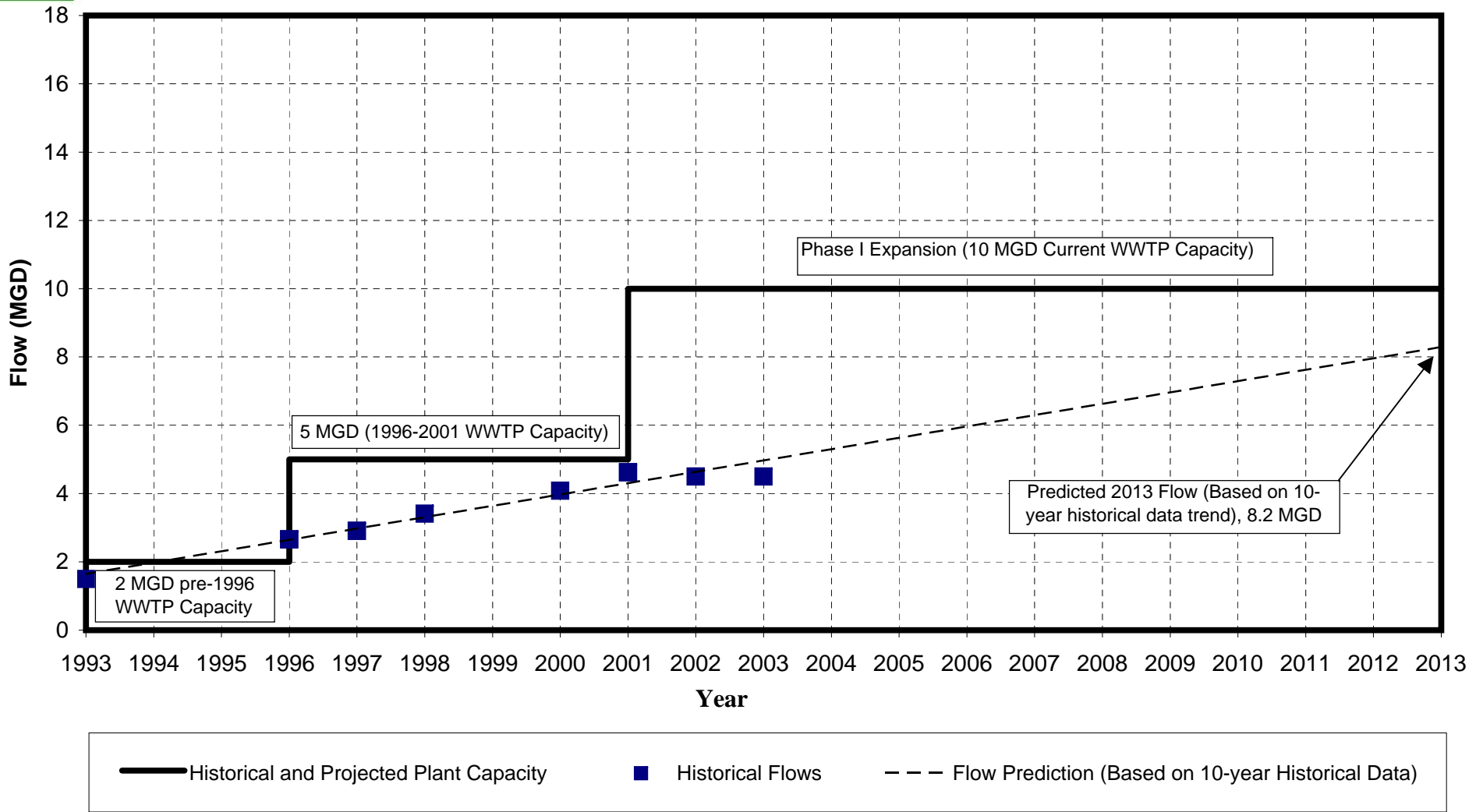


FIGURE 2
TOWN OF FLOWER MOUND WWTP MASTER PLANT
HISTORICAL ANNUAL AVERAGE AND PROJECTED FLOWS
VS.
PLANNED PLANT CAPACITY

VI. IMPACT FEE CAPITAL IMPROVEMENTS PLAN (CIP)

Recoverable CIP Cost of Future Lift Station and Force Main Improvements

Based on the updated Impact Fee CIP, \$3,060,843 in improvements to the Town's lift station capacity will be required at build out. Population projections by Kimley-Horn and Associates, Inc., predict the Long Prairie Service Area will reach 99 percent of its build-out population in 2013. The recoverable portion of the costs applicable to the updated impact fees was estimated for each project. The recoverable cost excludes any costs associated with the portion of the build out required to convey existing peak flows or flows attributable to development beyond 2013. The calculation of the portion cost of expanding each lift station applicable to 2003-2013 impact fees, \$2,073,993, is summarized in Table 10.

Table 11 summarizes the recommended improvements to the Town's force mains. Since replacement of lines was recommended in lieu of paralleling the current mains, the cost considered recoverable was estimated based on the prorated increase in capacity provided by the new line. For example, in the case of the Oak Street Lift Station, to convey build out flow the updated system model includes replacement of the 18-inch force main with a 30-inch line and subsequent abandonment of the original main. The recoverable cost of the 30-inch line was calculated as follows:

$$Cost_{pro-rated} = Cost_{replacement} \cdot \frac{Capacity_{2013} - Capacity_{existing / required}}{Capacity_{ultimate} - Capacity_{existing}}$$

$$Cost_{pro-rated} = \$2,558,948 \cdot \frac{30.6 \cdot MGD - 22.3 \cdot MGD}{31 \cdot MGD - 22.3 \cdot MGD}$$

$$Cost_{pro-rated} = \$2,441,295$$

Thus while the build-out cost of the force main replacement project is \$5,365,590, the portion of this amount that is recoverable when estimated based pro-rated flows is \$4,188,486.

Table 10
Lift Station Recoverable Costs
Long Prairie Service Area

	Construction Cost	Construction Plus Contingency Cost	Easement Cost	Engineering & Survey	Construction Admin.	Line Item Subtotals	2003-2013 Percent Recoverable ²	Recovered Cost
Oak Street ¹	\$1,883,157	\$2,259,788	\$5,590	\$338,968	\$112,989	\$2,717,336	72%	\$1,946,200
Wichita 1 ²	\$234,415	\$281,298	\$5,590	\$42,195	\$14,065	\$343,147	37%	\$127,793
Total CIP Lift Station Improvements						\$3,060,483		\$2,073,993

Notes:

¹ Since the proposed capacity is based on build out flow , the percent recoverable is the ratio of the 2013 flow (30.5 MGD) less the existing 2003 flow (20 MGD) to the additional capacity (14.8 MGD),
 $30.5 \text{ MGD} - 20 \text{ MGD} / 14.8 \text{ MGD} = 72\%$.

² Existing facility is undersized, as additional capacity based on build out flow the percent recoverable is the ratio of the 2013 flow (2.16 MGD) less the existing 2003 flow (1.62 MGD) to the
additional capacity (1.45 MGD), $(2.16 \text{ MGD} - 1.62 \text{ MGD}) / 1.15 \text{ MGD} = 37\%$.

Table 11
Force Main Recoverable Costs
Long Prairie Service Area

Force Main Improvements	Construction Cost	Construction Plus Contingency Cost	Easement Cost	Engineering & Survey	Construction Admin.	Line Item Subtotals	2003-2013 Percent Recoverable	Recovered Cost
Oak Street ¹	\$1,171,198	\$1,405,438	\$872,423	\$210,816	\$70,272	\$2,558,948	95%	\$2,441,295
Wichita 1 ²	\$457,195	\$548,634	\$547,135	\$82,295	\$27,432	\$1,205,496	85%	\$1,025,954
Kirkpatrick ³	\$885,855	\$1,117,673	\$304,400	\$103,973	\$75,100	\$1,601,146	45%	\$721,237
Total Main Improvements	\$2,514,248	\$3,071,744	\$1,723,958	\$397,084	\$172,804	\$5,365,590		\$4,188,486

Notes:

¹ Since the proposed capacity is based on build out flow , the percent recoverable is the ratio of the 2013 flow (30.6 MGD) less the existing 2003 flow (22.3 MGD) to the additional capacity (31 MGD - 22.3 MGD = 8.7 MGD), (30.6 MGD - 22.3 MGD)/ (31 MGD - 22.3 MGD) = 95%.

² Existing facility is undersized, as additional capacity based on build out flow the percent recoverable is the ratio of the 2013 flow (2.16 MGD) less the existing 2003 flow (1.76 MGD) to the additional capacity (2.23MGD - 1.76MGD = 0.47 MGD), (2.16 MGD - 1.76 MGD)/0.47 MGD = 85%.

³ Existing facility is undersized, as additional capacity based on build out flow the percent recoverable is the ratio of the 2013 flow (2.37 MGD) less the existing 2003 flow (1.76 MGD) to the additional capacity (2.87MGD - 1.76 MGD = 1.11 MGD), (2.87 MGD - 2.37 MGD)/(2.87MGD - 1.76 MGD) = 45%.

Additional Recoverable CIP Costs for Gravity Line Improvements

Additional collection system improvements recommended by the updated modeling include work on the Baker's Branch, College, and Timber Creek gravity lines. Table 12 lists the remaining lines to which improvements are recommended and calculates the recoverable portion of the replacement cost based on pro-rated flows.

The cost recovered is a prorated share of the replacement cost based on the increased flow the new line will carry:

$$Cost_{pro-rated} = Cost_{replacement} \cdot \left[\frac{Capacity_{2013} - Capacity_{existing / required}}{Capacity_{ultimate} - Capacity_{existing}} \right]$$

where,

$Capacity_{2013}$ = Modeled required capacity of the line segment in 2013

$Capacity_{existing / required}$ = greater of the line section existing capacity or the modeled peak flow; and,

$Capacity_{ultimate}$ = The model predicted build out capacity required.

$Capacity_{existing}$ = The line section's existing capacity

The methodology excludes costs associated with capacity required to meet existing flows. The individual line segment recoverable costs are then totaled to yield the recoverable costs for each interceptor listed in Table 12. The recoverable portion of the total cost of additional gravity line improvements recommended by the updated modeling is \$8,371,201.

Table 12
Gravity Line Recoverable Costs¹
Long Prairie Service Area

Project No.	Interceptor	Construction Cost	Construction plus Contingency Cost	Easement Cost	Engineering & Survey	Construction Admin.	Line Item Subtotals	2003-2013 Percent Recoverable ²	Recovered Cost
6	Baker's Branch	\$310,398	\$372,477	\$145,250	\$55,872	\$18,624	\$592,223	81%	\$480,924
22	College	\$954,693	\$1,145,632	\$542,569	\$171,845	\$57,282	\$1,917,327	98%	\$1,879,708
42	Upper Timber 2	\$143,100	\$171,720	\$98,550	\$25,758	\$8,586	\$304,614	100%	\$304,614
14	Upper Timber Creek	\$593,837	\$712,605	\$226,159	\$106,891	\$35,630	\$1,081,285	95%	\$1,030,440
15	Upper Timber Creek	\$571,130	\$685,356	\$189,407	\$102,803	\$34,268	\$1,011,834	97%	\$983,149
16	Upper Timber Creek	\$655,395	\$786,474	\$225,972	\$117,971	\$39,324	\$1,169,741	91%	\$1,061,751
17	Upper Timber Creek	\$571,770	\$686,124	\$204,693	\$102,919	\$34,306	\$1,028,042	98%	\$1,006,760
18	Upper Timber Creek	\$951,827	\$1,142,193	\$321,200	\$171,329	\$57,110	\$1,691,831	96%	\$1,623,854
Total		\$4,752,151	\$5,702,581	\$1,953,800	\$855,387	\$285,129	\$8,796,897		\$8,371,201

Notes:

¹No costs resulting from excess capacity in existing gravity lines is recovered.

²The percent recovered is the required 2013 capacity less the greater of the existing capacity or modeled 2003 required capacity divided by difference between the ultimate (build out) capacity less the existing capacity

Lakeside and Denton Creek Service Area Recoverable CIP Costs

The calculations for Lakeside Service Area improvement projects are summarized in Table 13. The total recoverable cost (including 2003 excess capacity of the existing facilities and recommended improvements) for the Lakeside lift station, force mains, gravity lines, and the Lakeside Service Area's prorated share of treatment plant costs totaled \$3,762,491.

The updated Impact Fee CIP includes construction of a portion of the proposed improvements within the Denton Creek Service Area. The recoverable cost was calculated as 35% percent of the total build out value based on the adjusted employment estimates contained in the Impact Fee Update report by Kimley-Horn and Associates completed in May 2003. The cost of the phased improvements recommended by the Denton Creek Wastewater Collection System Preliminary Design Report (PDR) completed by APAI in October 2001, are summarized in Table 14. The total cost of the recommended build out improvements is \$14,356,000. The total recoverable cost of the proposed Denton Creek facilities is \$5,024,600.

Table 13
Recoverable Costs
Lakeside Service Area

Improvements	Construction Cost	Construction Plus Contingency Cost	Easement Cost	Engineering & Survey	Construction Admin.	Line Item Subtotals	2003-2013 Percent Recoverable	Recovered Cost
Existing Components:								
Lakeside Initial Operating Facilities ¹	\$1,759,671						45%	\$791,852
Prorata share of WWTP Improvements ⁵	\$2,094,974							\$2,094,974
Future Improvements:								
Lift Station Phase II ²	\$382,000	\$458,400	\$5,590	\$68,760	\$22,920	\$555,670	79%	\$436,818
Gravity Lines ³	\$4,836,824						0%	\$0
Force Main Phase II ⁴	\$252,560	\$303,072	\$329,230	\$45,461	\$15,154	\$692,916	63%	\$438,847
Total CIP Lakeside Business District Improvements⁶								\$3,762,491

Notes:

¹Refer to Table 7 for the existing lift station and force main recoverable amount.

²Based on projected build out flow (4.6 MGD), recoverable percentage is the ratio of 2013 projected flow (3.83 MGD) less the initial capacity, which was recovered above (1 MGD) to the additional capacity required (4.6 MGD - 1 MGD = 3.6 MGD), $(3.83 \text{ MGD} - 1 \text{ MGD}) \div 3.6 \text{ MGD} = 79\%$.

³Approximate cost in 2000 Dollars, gravity lines in the Lakeside District will be constructed jointly per agreement with developers, as such the cost of these lines is not recoverable.

⁴The 12-inch force main currently in place has a capacity of approximately 2.5 MGD. The recoverable percentage of the parallel is ratio of the predicted 2013 flow (3.83 MGD) less the in place force main capacity (2.5 MGD) to the additional capacity required $(3.83 \text{ MGD} - 2.5 \text{ MGD}) / (4.6 \text{ MGD} - 2.5 \text{ MGD}) = 63\%$.

⁵Prorata share of WWTP cost is based on fractional 2013 flow (The portion of the total WWTP cost attributable to Lakeside is the ratio of the lift station's predicted average 2013 flow, $3.83 \text{ MGD} \div 3 = 1.28 \text{ MGD}$) to the 2013 plant flow (8.2 MGD), $1.28 \text{ MGD} \div 8.2 \text{ MGD} = 15.6\%$, see Table 9.

⁶Build-out cost listed does not include gravity line cost per developer agreement noted above.

Table 14
Recoverable Costs
Denton Creek Service Area

Lift Station Improvements	CIP Opinion of Probable Cost ¹	2003-2013 Percent Recoverable ²	Recovered Cost
Phase I (Initial Lift Station, Gravity Lines, and Force Main)	\$5,484,000	35%	\$1,919,400
Phase II (Lift Station expansion, force main parallel, gravity line extension)	\$2,205,000	35%	\$771,750
Phase III (Additional Lift Station, Interceptor Extension to I-35W)	\$6,667,000	35%	\$2,333,450
Total CIP Denton Creek District Improvements	\$14,356,000		\$5,024,600

Notes:

¹Cost per Denton Creek District Wastewater Collection System Preliminary Design Report, Alan Plummer Associates, Inc. October 2001

²Recoverable percentage based on build out for Denton Creek District (calculated per Kimley-Horn 2013 employment estimates for NTCOG TDZs that make up the Denton Creek District.

CIP Cost Summary

Three separate wastewater service areas were established by the prior action of the Town Council in 2000. Maintaining three separate wastewater service areas enables the Town to pass on the cost of the wastewater infrastructure directly to the property owners obtaining benefit from the improvements within the each area. The total recoverable costs within the Long Prairie Service Area, \$26,703,134, associated with recommended Impact Fee Capital Improvement Plan (CIP) projects for the period 2003 through 2013, are summarized in Table 15. Total Lakeside and Denton Creek Service Area Impact Fee CIP project costs, \$3,782,935 and \$5,045,044 respectively, are summarized in Table 16. The approximate location of the recommended improvements is depicted in Figure 3 for the Long Prairie Service Area and Figure 4 for the Denton Creek Service Area.

The total recoverable Impact Fee CIP costs presented in Table 15 and Table 16 include a line item (\$20,444) for recovery of the expenses associated with the Wastewater Impact Fee Update Study and preparation of this report. This amount attributed to each service area is equal to one-third of the total study cost.

Table 15
CIP Existing and Future Project Cost Summary
Long Prairie Service Area

Project Number		Detail Table	Total Project Cost	Recoverable Cost 2003-2013
Gravity System/Lift Stations/Force Mains (Existing)				
25	Kickpatrick Lift Station Improvements	7	\$505,054	\$195,334
NA ¹	FM 407 Sanitary Sewer Extension to Chinn Chapel Road	7	\$553,131	\$492,682
				\$688,016
Treatment Plant (Existing)				
NA ¹	Portion of Recoverable Costs for the Long Prairie Service Area	9	NA ²	\$11,360,993
				\$11,360,993
Lift Station Improvements (Future)				
34	Oak Street1	10	\$2,717,336	\$1,946,200
32	Wichita 1	10	\$343,147	\$127,793
				\$2,073,993
Force Main Improvements (Future)				
34	Oak Street	11	\$2,558,948	\$2,441,295
32	Wichita 1	11	\$1,205,496	\$1,025,954
25	Kirkpatrick	11	\$1,601,146	\$721,237
				\$4,188,486
Gravity System Improvements (Future)				
6	Baker's Branch	12	\$592,223	\$480,924
22	College	12	\$1,917,327	\$1,879,708
42	Upper Timber Creek	12	\$304,614	\$304,614
14	Upper Timber Creek	12	\$1,081,285	\$1,030,440
15	Upper Timber Creek	12	\$1,011,834	\$983,149
16	Upper Timber Creek	12	\$1,169,741	\$1,061,751
17	Upper Timber Creek	12	\$1,028,042	\$1,006,760
18	Upper Timber Creek	12	\$1,691,831	\$1,623,854
				\$8,371,201
Sub-Total Existing and Future Long Prairie Recoverable Costs				\$26,682,689
NA ¹	Wastewater Impact Fee Update Study	--	\$ 20,444	\$20,444
				\$26,703,134

Notes:

¹Project number not available.

²See Table 8 and 9 in the Impact Fee Report for details, the recoverable cost for each service area is a prorated share of the total cost incurred

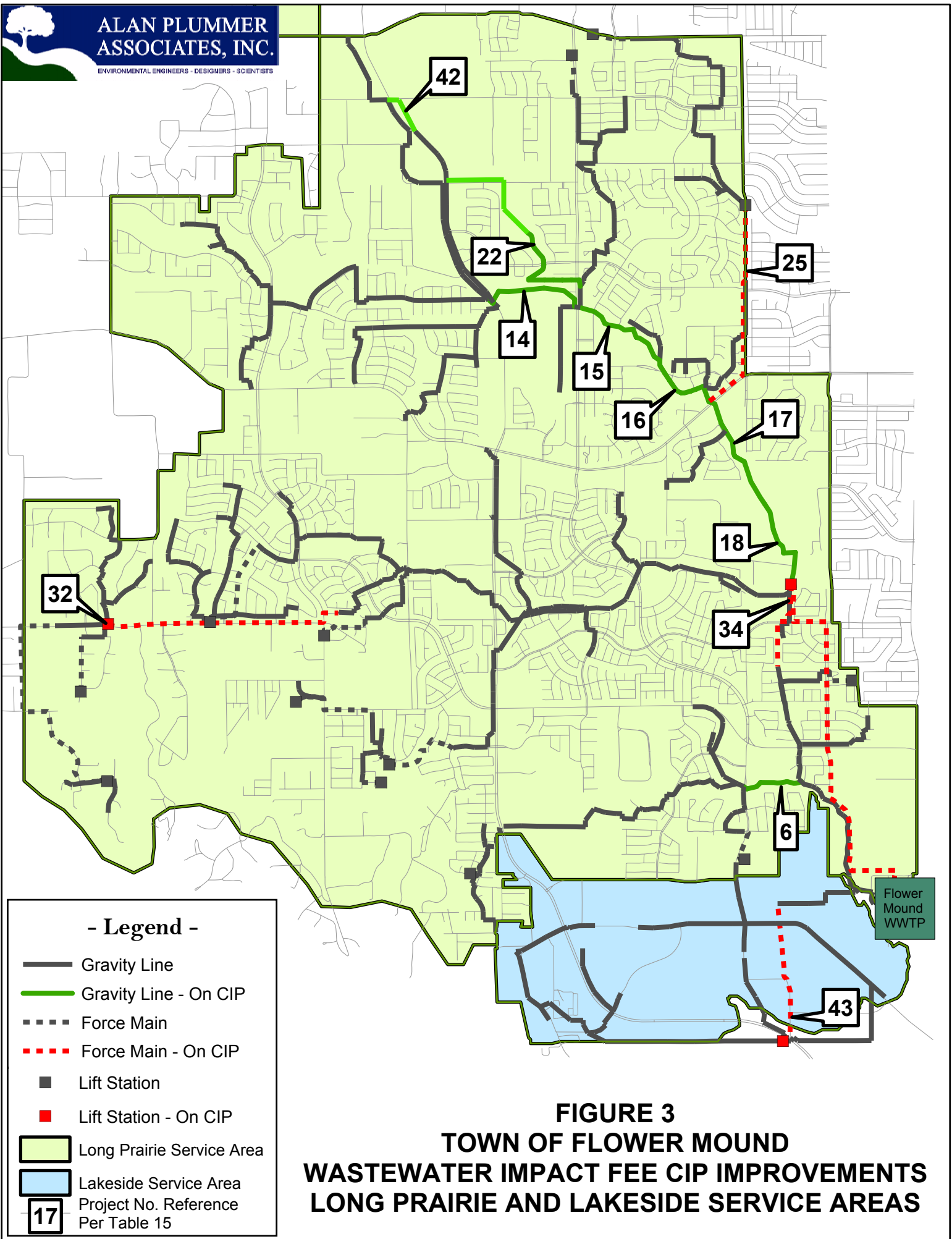
Table 16
CIP Existing and Future Project Cost Summary
Lakeside and Denton Creek Service Areas

Project Number	Detail Table	Total Project Cost	Recoverable Cost 2003-2013
Lakeside Service Area:			
Gravity System/Lift Stations/Force Mains (Existing):			
43 Lakeside Initial Operating Facilities	13	\$1,759,671	\$791,852
Treatment Plant (Existing):			
NA ¹ Portion of Recoverable Costs for the Lakeside Service Area	9	NA ²	\$2,094,974
Lift Station Improvements (Future):			
43 Phase II	13	\$555,670	\$436,818
Force Main Improvements (Future):			
43 Force Main Phase II	13	\$692,916	\$438,847
Gravity System Improvements (Future):			
NA ¹ Gravity Lines	13	\$4,836,824	\$0
NA ¹ Wastewater Impact Fee Update Study	--	\$ 20,444	\$20,444
			<u>\$3,782,935</u>
Denton Creek Service Area:			
Gravity System/Lift Stations/Force Mains (Future Projects):			
NA ¹ Phase I (Initial Lift Station, Gravity Lines, and Force Main)	14	\$5,484,000	\$1,919,400
NA ¹ Phase II (Lift Station expansion, force main parallel, gravity line extension)	14	\$2,205,000	\$771,750
NA ¹ Phase III (Additional Lift Station, Interceptor Extension to I-35W)	14	\$6,667,000	\$2,333,450
			<u>\$5,024,600</u>
NA ¹ Wastewater Impact Fee Update Study	--	\$ 20,444	\$20,444
			<u>\$5,045,044</u>

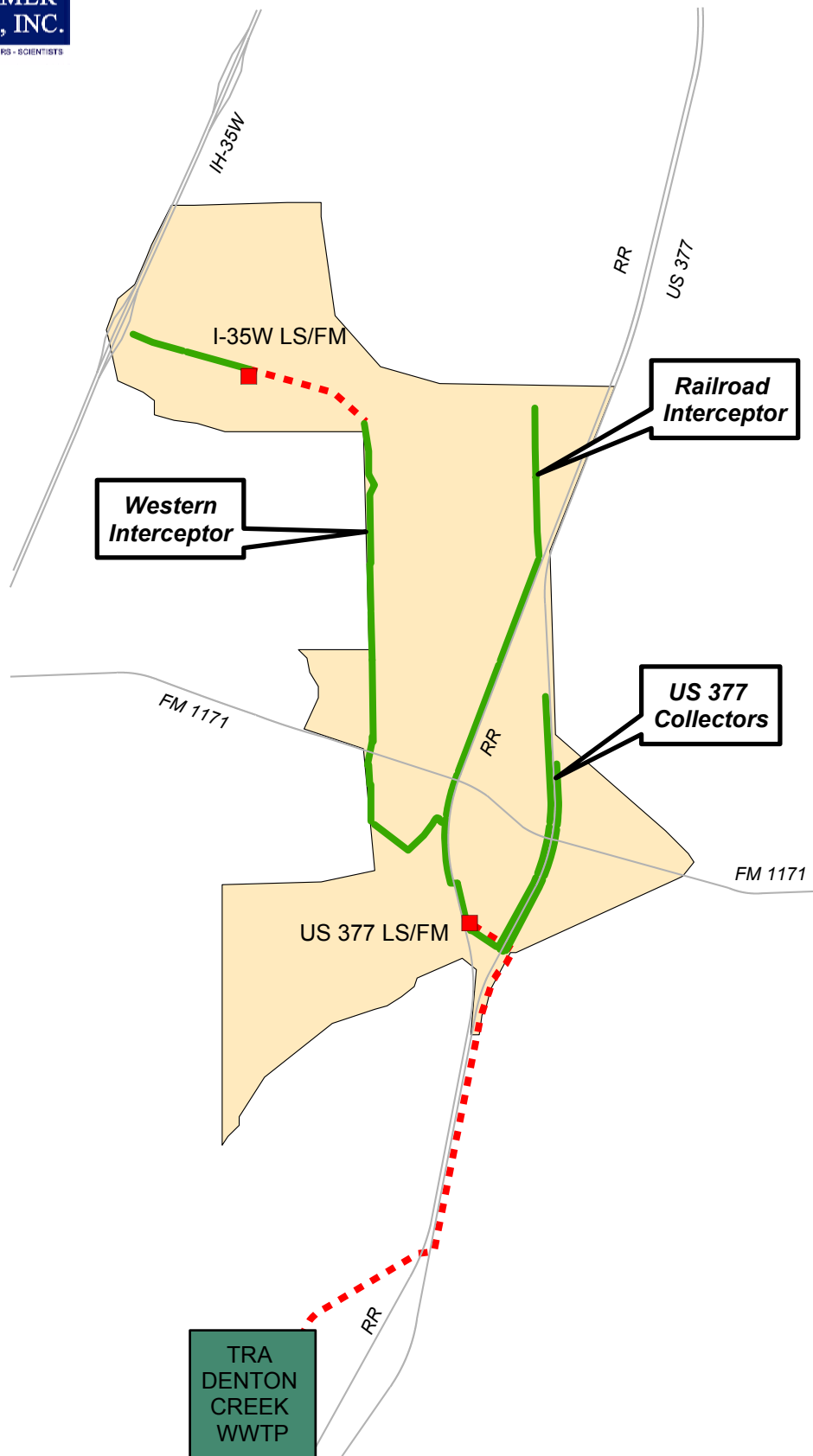
Notes:

¹Project number not available.

²See Table 8 and 9 in the Impact Fee Report for details, the recoverable cost for each service area is a prorated share of the total cost incurred



**FIGURE 3
TOWN OF FLOWER MOUND
WASTEWATER IMPACT FEE CIP IMPROVEMENTS
LONG PRAIRIE AND LAKESIDE SERVICE AREAS**



- Legend -

- - - Force Main - On CIP
- Gravity Line - On CIP
- Lift Station - On CIP
- Denton Creek Service Area

FIGURE 4
TOWN OF FLOWER MOUND
WASTEWATER IMPACT FEE CIP IMPROVEMENTS
DENTON CREEK SERVICE AREA

VII. IMPACT FEE SCHEDULE

In 2001, Chapter 395 of the Texas Local Government Code was amended to mandate a credit for the portion of ad valorem tax and utility service revenues generated by new service units (SUs). The revenues produced by the projected new SUs within each of the Town's Service Areas between 2003 and 2013, which will be used to pay for projects that are included in the Impact Fee Capital Improvements Plan (CIP) must be credited when calculating the new impact fee. The intent of this amendment was to ensure that those paying the impact fee are not charged twice for eligible costs through impact fees and subsequently via property taxes or utility rates. The need for a credit is nullified by isolating and segregating impact fee eligible project costs, ensuring that funding for these expenditures does not come from ad valorem tax or utility service revenues. It is noteworthy that the 2001 amendment is not retroactive; impact fees determined after the modification are required to include a credit only for eligible costs identified subsequent to adoption of the amended rules.

Historically, the Town has funded impact fee eligible wastewater costs with cash, while debt financing remaining impact fee eligible wastewater costs. Currently, the debt service for the debt financed impact fee eligible wastewater projects is being supported by a combination of impact fee revenues and utility rate revenues. Some of the projects identified in the 2003 Update have been or will be paid through existing debt that is funded by utility rates; therefore, a credit determination must occur. The impact fee determination was performed with and without the credit component. Should the Town elect to segregate impact fee eligible project costs, the Impact Fees listed herein as "without credit" may be adopted without further modification.

The following assumptions were used in calculating the maximum wastewater impact fees:

- Based on conversations with Town Staff, it was assumed that all impact fee eligible wastewater costs identified in the 2003 Update would be debt financed.
- The Town's August 28, 2003 Five-Year Capital Projects Plan construction schedule was used as the basis for the debt issuance schedule.

- It was assumed that debt for projects identified in the 2003 Update, but not the Town's August 28, 2003 Five-Year Capital Projects Plan, would be issued in 2009.
- Debt proceeds were assumed to be fully spent within five years of issuance.
- It was assumed that impact fee receipts would be deposited into short-term interest bearing accounts until disbursement. An assumed interest rate of 2.0% based on approximate average bank savings rate from 1991 to 2003 was applied.
- Forecasted interest rates for revenue bonds from the Town's Multi-Year Financial Plan for Water and Wastewater were used for cost of debt projections.
- Growth (new demand) was assumed to grow at a constant annual amount of 495 Service Units for Denton Creek Service Area, 475 Service Units for Lakeside Service Area, and 614 for Long Prairie Service Area.

Detailed financial analysis of the maximum chargeable impact fee for each service area is provided in Appendices B, C, and D. Table 17 provides a summary of the total costs the Town should incur within the eligible 10-year period.

Table 17
10-year Recoverable Cost Summary¹

	Cost	Reference
<u>Long Prairie Service Area:</u>		
Recoverable Impact Fee CIP Costs	\$ 26,703,134	Table 15 of Report
Financing Costs	\$ 16,849,752	Table B-1, Notes, Appendix B
Existing Fund Balance	\$ (3,508,364)	Table B-3, Appendix B
Interest Earnings	\$ (6,312,302)	Table B-5, Appendix B
Pre Credit Recoverable Cost for Impact Fee	\$ 33,732,221	
Credit for Utility Revenues	\$ (1,528,874)	Table B-7, Appendix B
Maximum Recoverable Cost for Impact Fee (Long Prairie)	\$ 32,203,346	
 <u>Lakeside Service Area:</u>		
Recoverable Impact Fee CIP Costs	\$ 3,782,935	Table 16 of Report
Financing Costs	\$ 1,971,533	Table C-1, Notes, Appendix C
Existing Fund Balance	\$ (12,178)	Table C-3, Appendix C
Interest Earnings	\$ (605,112)	Table C-5, Appendix C
Pre Credit Recoverable Cost for Impact Fee	\$ 5,137,178	
Credit for Utility Revenues	\$ (301,807)	Table C-7, Appendix C
Maximum Recoverable Cost for Impact Fee (Lakeside)	\$ 4,835,371	
 <u>Denton Creek Service Area:</u>		
Recoverable Impact Fee CIP Costs	\$ 5,045,044	Table 16 of Report
Financing Costs	3,790,200	Table D-1, Notes, Appendix D
Existing Fund Balance	(1,287)	Table D-3, Appendix D
Interest Earnings	(1,285,164)	Table D-5, Appendix D
Pre Credit Recoverable Cost for Impact Fee	\$ 7,548,793	
Credit for Utility Revenues	(44,306)	Table D-7, Appendix D
Maximum Recoverable Cost for Impact Fee (Denton Creek)	\$ 7,504,487	

Notes:

¹The recoverable cost calculations presented are detailed in Appendix B, C, and D (Table B-1, Table C-1, and Table D-1) for the Long Prairie, Lakeside, and Denton Creek Service Areas respectively. These costs include all recoverable project expenses, including financing costs and applicable credits required under Texas Local Government Code Chapter 395.

Wastewater Service Area

	Long Prairie	Lakeside	Denton Creek
Maximum Impact Fee per Service Unit =	\$ <u>32,203,346</u> 6135	\$ <u>4,835,371</u> 4746	\$ <u>7,504,487</u> 4950
Maximum Impact Fee per Service Unit =	\$5,249	\$1,019	\$1,516

Table 18 summarizes the maximum impact fees adopted in 2000 for each Service Area, for the minimum water meter size (i.e., 5/8-inch to 3/4-inch), and the corresponding updated 2003 maximum fees. Increased amounts are recoverable in all of the Town Service Areas based upon the 2003 Update to the Wastewater Impact Fee CIP. The increase in the maximum wastewater impact fees is due to the recovery of financing costs.

While there were significant reductions in the capital improvements required within the eligible period, the drop in recoverable project costs was balanced by a reduction in the number of new Service Units projected. While Long Prairie and Denton Creek Service Area Impact Fees increase by approximately 20% to 25%, the increase in the Lakeside Service Area Impact Fee is limited to approximately 5%. Financing costs for Lakeside Service Area improvements are significantly less due to a much higher percentage of existing facilities financed at lower interest rates. Denton Creek Service Area financing costs are highest as no facilities currently exist; all Denton Creek Service Area capital costs recovered are projected to be financed at higher future interest rates.

Based on water meter size Equivalent Factors, calculated in Table 2, the impact fee chargeable for larger water meters can be determined. Table 19, Table 20, and Table 21 summarize the full schedule of maximum impact fees within the Long Prairie, Lakeside, and, Denton Creek Service Areas respectively. Reductions to the Impact Fee Schedules presented, restricting fees at reduced amounts (i.e., 50% of the maximum for commercial non-smart growth development or 25% of the maximum for commercial smart growth development), are permissible under state statutes and may be enacted at the option of the Town.

Table 18
Maximum Wastewater Impact Fees^{1,2}

Service Area	Maximum Impact Fee Adopted in 2000 ³	Maximum Impact Fee with Credit ⁴	Maximum Impact Fee without Credit ⁵
Long Prairie	\$4,204	\$5,249	\$5,490
Lakeside	\$978	\$1,019	\$1,081
Denton Creek	\$1,254	\$1,516	\$1,525

Notes:

¹Detailed financial calculations of this fee include all CIP costs presented and required analysis to comply with current Local Government Code Chapter 395 requirements.

²Detailed calculation Tables are provided in Appendicies B, C, and D for the Long Prairie, Lakeside, and Denton Creek Service Areas respectively.

³Per Wastewater System Capital Improvements: Impact Fee Report, November 13, 2000, by Alan Plummer Associates, Inc.

⁴The fee presented includes a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013.

⁵The fee presented does not include a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. Adoption of this fee schedule is not recommended as it would require segregation of costs and funding in accordance with Chapter 395 of the Texas Local Government Code. This fee is reported to document the magnitude of the credit.

Table 19
Maximum Impact Fee by Meter Size
Long Prairie Service Area

Meter Size	Service Unit Equivalents ¹	2003 Maximum Impact ^{2,3} Fee without Credit	2003 Maximum Impact ^{2,4} Fee with Credit	Current Maximum Fee ⁵
5/8 - 3/4"	1.0	\$5,490	\$5,249	\$4,204
1"	2.5	\$13,725	\$13,123	\$10,510
1-1/2"	5.0	\$27,450	\$26,245	\$21,020
2"	8.0	\$43,920	\$41,992	\$33,632
3"	16.0	\$87,840	\$83,984	\$67,264
4"	25.0	\$137,250	\$131,225	\$105,100
6"	50.0	\$274,500	\$262,450	\$210,200
8"	80.0	\$439,200	\$419,920	\$336,320
10"	115.0	\$631,350	\$603,635	\$483,460

Notes:

¹See Table 2 for calculation of Service Unit Equivalents.

²Maximum Fee is = Service Unit Equivalents x 5/8"-3/4" Impact Fee

³The fee presented does not include a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. Adoption of this fee schedule is not recommended as it would require segregation of costs and funding in accordance with Chapter 395 of the Texas Local Government Code. This fee is reported to document the magnitude of the credit.

⁴The fee presented includes a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. The 2003 Maximum Impact Fee (with credit) represents a 25% increase over the current maximum charge able fee.

⁵Wastewater System Capital Improvements: Impact Fee Report, November 12, 2000, Alan Plummer Associates, Inc. Current fee structure as enacted in 2000.

Table 20
Maximum Impact Fee by Meter Size
Lakeside Service Area

Meter Size	Service Unit Equivalents ¹	2003 Maximum Impact ^{2,3} Fee without Credit	2003 Maximum Impact ^{2,4} Fee with Credit	Current Maximum Fee ⁵
5/8 - 3/4"	1.0	\$1,081	\$1,019	\$978
1"	2.5	\$2,703	\$2,548	\$2,445
1-1/2"	5.0	\$5,405	\$5,095	\$4,890
2"	8.0	\$8,648	\$8,152	\$7,824
3"	16.0	\$17,296	\$16,304	\$15,648
4"	25.0	\$27,025	\$25,475	\$24,450
6"	50.0	\$54,050	\$50,950	\$48,900
8"	80.0	\$86,480	\$81,520	\$78,240
10"	115.0	\$124,315	\$117,185	\$112,470

Notes:

¹See Table 2 for calculation of Service Unit Equivalents.

²Maximum Fee is = Service Unit Equivalents x 5/8"-3/4" Impact Fee

³The fee presented does not include a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. Adoption of this fee schedule is not recommended as it would require segregation of costs and funding in accordance with Chapter 395 of the Texas Local Government Code. This fee is reported to document the magnitude of the credit.

⁴The fee presented includes a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. The 2003 Maximum Impact Fee (with credit) represents a 4% increase over the current maximum charge able fee.

⁵Wastewater System Capital Improvements: Impact Fee Report, November 12, 2000, Alan Plummer Associates, Inc. Current fee structure as enacted in 2000.

Table 21
Maximum Impact Fee by Meter Size
Denton Creek Service Area

Meter Size	Service Unit Equivalents ¹	2003 Maximum Impact ^{2,3} Fee without Credit	2003 Maximum Impact ^{2,4} Fee with Credit	Current Maximum Fee ⁵
5/8 - 3/4"	1.0	\$1,525	\$1,516	\$1,254
1"	2.5	\$3,813	\$3,790	\$3,135
1-1/2"	5.0	\$7,625	\$7,580	\$6,270
2"	8.0	\$12,200	\$12,128	\$10,032
3"	16.0	\$24,400	\$24,256	\$20,064
4"	25.0	\$38,125	\$37,900	\$31,350
6"	50.0	\$76,250	\$75,800	\$62,700
8"	80.0	\$122,000	\$121,280	\$100,320
10"	115.0	\$175,375	\$174,340	\$144,210

Notes:

¹See Table 2 for calculation of Service Unit Equivalents.

²Maximum Fee is = Service Unit Equivalents x 5/8"-3/4" Impact Fee

³The fee presented does not include a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. Adoption of this fee schedule is not recommended as it would require segregation of costs and funding in accordance with Chapter 395 of the Texas Local Government Code. This fee is reported to document the magnitude of the credit.

⁴The fee presented includes a credit for the portion of ad valorem tax and utility service revenues generated by new service units between 2003 and 2013. The 2003 Maximum Impact Fee (with credit) represents a 21% increase over the current maximum charge able fee.

⁵Wastewater System Capital Improvements: Impact Fee Report, November 12, 2000, Alan Plummer Associates, Inc. Current fee structure as enacted in 2000.

VIII. OPTIONS FOR IMPACT FEE ASSESSMENT

Appendix E - Impact Fee Schedule Options presents five (5) potential variations in the method of calculating the maximum impact fee. This appendix is included in this report at the request of the Town Staff to facilitate evaluation of varying fee structures. Impact Fee examples are presented for each option including: one (1) service unit, one (1) single-family detached housing unit (5/8" x 3/4" Meter), 150,000 square feet of shopping center land use (2" Meter), and 50,000 square feet of light industrial land use (1 1/2" Meter). Option 1 displays the maximum assessable fee per service unit as calculated in this report. Option 2 presents the impact fee based on 50% of the pre-credit maximum fee. Option 3 presents the fees without including any projected financing costs. Option 4 presents an option that, for Wastewater Impact Fees, uses the existing maximum fee presented in the 2000 Impact Fee Update Report. Option 5 displays the impact fee based on 80% of the maximum assessable fee per service unit. In addition, the maximum impact fees as currently adopted from the 2000 Impact Fee update are included for reference purposes.

On March 8, 2004, the Town of Flower Mound Capital Improvements Advisory Committee (CIAC) met in accordance with Chapter 395 of the Texas Local Government Code. For Wastewater Impact Fees, the CIAC recommended assessing Option 4, which maintains the maximum fee presented in the 2000 Impact Fee Update Report. The 2000 Wastewater Impact Fees presented under Option 4 are approximately 75%, 87%, and 79% of the 2003 maximum fees for the Long Prairie, Lakeside, and Denton Creek Service Areas respectively.

IX. PROJECT SUMMARY SHEETS

Appendix F – Project Summary Sheets, is included in the report at the request of the Town Staff for reference use.

APPENDIX A

FM 407 Sewer Line Extension and Treatment Plant Depreciation Details

Table A-1
FM 407 Sanitary Sewer Extension to Chinn Chapel Road - Line Segment Recoverable Cost Details

Manhole Locator (Beg_End)	Length (ft)	Fraction of Total Length	2013 Peak (cfs)	Capacity (cfs_)	2003 Peak (cfs_)	Fractional Cost (\$)	2003 - 2013 Recoverable % (%)	2003 - 2013 Cost (\$)
R028_R027	198.00	0.01808880	0.74	1.15	0	\$10,005	64%	\$6,438.31
R027_R026	269.00	0.02457519	0.98	1.08	0	\$13,593	91%	\$12,334.66
R026_R025	538.00	0.04915037	0.98	1.09	0	\$27,187	90%	\$24,442.99
R025_R024	538.00	0.04915037	1.3	1.08	0.01	\$27,187	99%	\$26,934.87
R024_R023	604.00	0.05517997	1.3	1.09	0.01	\$30,522	99%	\$30,241.74
R023_R022	557.00	0.05088617	4.18	1.59	0.01	\$28,147	99%	\$27,969.69
R022_R021	420.00	0.03837018	4.18	2.46	0.04	\$21,224	98%	\$20,878.64
R021_R020	482.00	0.04403435	4.18	2.5	0.04	\$24,357	98%	\$23,967.06
R020_R019	303.00	0.02768134	4.18	2.3	0.04	\$15,311	98%	\$15,045.12
R019_R018	462.00	0.04220720	4.18	2.48	0.04	\$23,346	98%	\$22,969.56
R018_R017	221.00	0.02019002	4.4	2.48	0.04	\$11,168	98%	\$10,987.60
R017_R016	359.00	0.03279737	4.4	2.27	0.04	\$18,141	98%	\$17,821.57
R016_R015	387.00	0.03535538	4.4	2.28	0.04	\$19,556	98%	\$19,213.07
R015_R014	348.00	0.03179244	4.4	2.28	0.04	\$17,585	98%	\$17,276.87
R014_R013	352.00	0.03215787	4.4	2.27	0.04	\$17,788	98%	\$17,474.08
R013_R012	189.00	0.01726658	4.4	5.96	0.04	\$9,551	73%	\$6,986.74
R012_R011	557.00	0.05088617	4.39	5.9	0.12	\$28,147	72%	\$20,370.59
R011_R010	428.00	0.03910104	4.39	3.81	0.12	\$21,628	97%	\$20,946.80
R010_R009	387.00	0.03535538	5.32	3.14	0.12	\$19,556	96%	\$18,808.79
R009_R008	417.00	0.03809611	5.32	3.46	0.12	\$21,072	97%	\$20,341.31
R008_R007	506.00	0.04622693	5.31	12.01	0.12	\$25,570	43%	\$11,049.62
R007_R006	494.00	0.04513064	5.3	8.79	0.12	\$24,963	59%	\$14,710.94
R006_R005	489.00	0.04467385	5.3	5.71	0.12	\$24,710	91%	\$22,416.87
R005_R004	313.00	0.02859492	6.04	10.85	0.12	\$15,817	55%	\$8,629.96
R004_R003	138.00	0.01260735	6.03	4.7	0.12	\$6,974	97%	\$6,795.47
R003_R002	125.00	0.01141970	6.02	6.66	0.12	\$6,317	89%	\$5,595.78
R002_R001	457.00	0.04175041	6.01	3.45	0.12	\$23,093	97%	\$22,290.20
R001_D007	408.00	0.03727389	6.01	2.83	0.12	\$20,617	96%	\$19,743.11
Project Total	10,946.00	1.00				\$553,131		\$492,682

Note:

¹Project Cost Total (\$492,682) includes Contractor Bid Amount and Engineering Costs Only, fractional cost is total cost x fraction of total length

**Table A-2
Wastewater Plant Depreciation Details**

Description (Town Accounting Record Name)	Year	Original Cost	Accrued Depreciation End	Net Book Value	Percent Depreciated
WWTP ¹	1975	\$82,000	\$50,111	\$31,889	
WWTP ¹	1975	\$105,000	\$64,167	\$40,833	
WWTP ¹	1975	\$166,000	\$101,444	\$64,556	
WWTP ¹	1975	\$166,000	\$101,444	\$64,556	
WWTP ¹	1975	\$71,500	\$43,694	\$27,806	
WWTP ¹	1975	\$279,000	\$170,500	\$108,500	
WWTP ¹	1975	\$19,900	\$12,161	\$7,739	
		\$889,400	\$543,522	\$345,878	61%
WWTP ¹	1994	\$194,000	\$36,644	\$157,356	
WWTP ¹	1994	\$194,000	\$36,644	\$157,356	
WWTP ¹	1994	\$831,000	\$156,967	\$674,033	
WWTP ¹	1994	\$198,000	\$37,400	\$160,600	
WWTP ¹	1994	\$253,000	\$47,789	\$205,211	
WWTP ¹	1994	\$1,393,000	\$263,122	\$1,129,878	
WWTP ¹	1994	\$401,000	\$75,744	\$325,256	
WWTP ¹	1994	\$1,713,000	\$323,567	\$1,389,433	
WWTP ¹	1994	\$173,000	\$32,678	\$140,322	
WWTP ¹	1994	\$173,000	\$32,678	\$140,322	
		\$5,523,000	\$1,043,233	\$4,479,767	19%
WWTP Equipment ²	1975	\$113,000	\$113,000	\$0	
WWTP Equipment ²	1975	\$531,000	\$531,000	\$0	
WWTP Equipment ²	1975	\$82,000	\$82,000	\$0	
WWTP Equipment ²	1975	\$248,000	\$248,000	\$0	
WWTP Equipment ²	1975	\$80,000	\$80,000	\$0	
WWTP Equipment ²	1975	\$26,700	\$26,700	\$0	
WWTP Equipment ²	1975	\$26,700	\$26,700	\$0	
WWTP Equipment ²	1975	\$336,000	\$336,000	\$0	
WWTP Equipment ²	1975	\$213,000	\$213,000	\$0	
WWTP Equipment ²	1975	\$213,000	\$213,000	\$0	
WWTP Equipment ²	1975	\$86,000	\$86,000	\$0	
		\$1,955,400	\$1,955,400	\$0	100%
WWTP Equipment ²	1994	\$223,000	\$75,820	\$147,180	
WWTP Equipment ²	1994	\$223,000	\$75,820	\$147,180	
WWTP Equipment ²	1994	\$4,433,000	\$1,507,220	\$2,925,780	
WWTP Equipment ²	1994	\$58,000	\$19,720	\$38,280	
WWTP Equipment ²	1994	\$731,000	\$248,540	\$482,460	
WWTP Equipment ²	1994	\$1,461,000	\$496,740	\$964,260	
WWTP Equipment ²	1994	\$463,000	\$157,420	\$305,580	
WWTP Equipment ²	1994	\$2,655,000	\$902,700	\$1,752,300	
WWTP Equipment ²	1994	\$187,000	\$63,580	\$123,420	
WWTP Equipment ²	1994	\$35,600	\$12,104	\$23,496	
		\$10,469,600	\$3,559,664	\$6,909,936	34%
Total 1975/1994 Expenses (WWTP)		\$6,412,400		\$4,825,644	25%
Total 1975/1994 Expenses (WWTP Equipment)		\$12,425,000		\$6,909,936	44%
		\$18,837,400		\$11,735,580	

Notes:

¹Depreciation data as of October 31, 2003 dep. period for the Plant (non-equipment costs) is 45 years.

²Depreciation data as of October 31, 2003 dep. period for Plant Equipment is 20 years.

APPENDIX B
Long Prairie Service Area
Impact Fee Calculation Details

Table B-1
10-year Recoverable Cost Summary, Long Prairie Service Area

Recoverable Impact Fee CIP Costs ⁽¹⁾	\$	26,703,134	Table 15 of Report
Financing Costs ⁽²⁾	\$	16,849,752	Table B-1, Notes, Appendix B
Existing Fund Balance ⁽³⁾	\$	(3,508,364)	Table B-3, Appendix B
Interest Earnings ⁽⁴⁾	\$	(6,312,302)	Table B-5, Appendix B
Pre Credit Recoverable Cost for Impact Fee⁽⁵⁾	\$	33,732,221	
Credit for Utility Revenues ⁽⁶⁾	\$	(1,528,874)	Table B-7, Appendix B
Maximum Recoverable Cost for Impact Fee⁽⁷⁾	\$	32,203,346	

Notes:

(1) Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees. Reference is the Recoverable Cost 2003-2013 column on Table 15 of the Report.

(2) Financing Costs:

Represents the interest costs associated with debt financing the Recoverable Impact Fee CIP Costs. Interest costs are derived from existing debt issues and and forecasted debt issues utilizing the Town's estimates of interest costs.

New Annual Debt Service	\$	26,894,230	(Page 2 of Table B-4, Appendix B)
Existing Annual Debt Service		16,658,656	(Page 2 of Table B-4, Appendix B)
Recoverable Impact Fee CIP Costs		(26,703,134)	(Table B-3 of Appendix B)
Financing Costs	\$	16,849,752	

(3) Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2003 Impact Fee Update were also included in the 2000 Impact Fee Update. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs. Reference is Table B-3 of Appendix B.

(4) Interest Earnings:

Represents the interest earned on cash flows. Assumes a 2.00% annual interest rate based on approximate average bank savings rate from 1991 to 2003 as of 11/05/03 per Bankrate.com. The Impact Fee Statue states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on Table B-5 of Appendix B.

(5) Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Existing Fund Balance less Interest Earnings.

(6) Credit for Utility Revenues:

In 2001, the Impact Fee Statue was amended to include a credit for ad valorem and utility revenues generated by new service units that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for capital improvements. The credit recognizes utility revenues used to fund existing debt service and assumes that all new debt issues will be funded solely through impact fee revenues. Reference is Table B-7 of Appendix B.

(7) Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Revenues. This is the maximum cost that can be recovered through impact fees.

Table B-2
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Impact Fee Calculation, Long Prairie Service Area

Year	Number of Years to End of Period	Future Value Escalation		Annual Service Units		Annual Expense		
		Interest Rate Factor	Recovery Fee Factor	Actual	Escalated	Actual	Escalated	
2004	25	1.6245	1.0000	614	997	\$ 232,526	\$ 377,743	
2005	24	1.5927	1.0000	614	977	551,643	878,584	
2006	23	1.5614	1.0000	614	958	(29,616)	(46,243)	
2007	22	1.5308	1.0000	614	939	(1,785,121)	(2,732,704)	
2008	21	1.5008	1.0000	614	921	(1,058,002)	(1,587,857)	
2009	20	1.4714	1.0000	614	903	2,670,863	3,929,852	
2010	19	1.4425	1.0000	614	885	4,892,174	7,057,101	
2011	18	1.4142	1.0000	614	868	4,551,418	6,436,815	
2012	17	1.3865	1.0000	614	851	3,591,054	4,979,045	
2013	16	1.3593	1.0000	614	834	2,453,207	3,334,711	
2014	15	1.3327	1.0000	-	-	2,258,372	3,009,672	
2015	14	1.3065	1.0000	-	-	2,254,786	2,945,974	
2016	13	1.2809	1.0000	-	-	2,251,657	2,884,202	
2017	12	1.2558	1.0000	-	-	2,249,729	2,825,227	
2018	11	1.2312	1.0000	-	-	2,246,552	2,765,920	
2019	10	1.2070	1.0000	-	-	2,247,391	2,712,698	
2020	9	1.1834	1.0000	-	-	2,194,258	2,596,632	
2021	8	1.1602	1.0000	-	-	2,124,288	2,464,540	
2022	7	1.1374	1.0000	-	-	1,628,956	1,852,814	
2023	6	1.1151	1.0000	-	-	1,629,358	1,816,933	
2024	5	1.0933	1.0000	-	-	1,585,383	1,733,230	
2025	4	1.0718	1.0000	-	-	1,253,455	1,343,478	
2026	3	1.0508	1.0000	-	-	1,116,707	1,173,440	
2027	2	1.0302	1.0000	-	-	702,969	724,198	
2028	1	1.0100	1.0000	-	-	210,007	212,107	
					9,132		53,688,113	
Annual Interest Rate on Deposits:								2.00%
Present Value of Initial Impact Fee Fund							\$	3,508,364
Total Escalated Expense for Entire Period							\$	53,688,113
Less Future Value of Initial Impact Fee Fund								5,755,842
							Sub-Total	\$ 47,932,271
Total Escalated SU's								9,132
Long Prairie Service Area Impact Fee (with credit)⁽¹⁾							\$	5,249
Total Escalated Credit for Entire Period							\$	2,204,680
Total Escalated Credit for Entire Period plus Sub-Total								50,136,951
Total Escalated SU's								9,132
Long Prairie Service Area Impact Fee (without credit)⁽²⁾							\$	5,490

Notes:

(1) Sub-total of escalated expenses and future value of the initial impact fee fund balance divided by the total escalated SU's. This calculation is equivalent to the impact fee with credit presented in the report as \$32,203,346 divided by 6135 (total new Long Prairie SUs. Detailed calculation of recoverable costs (\$32,203,346) is presented in Table B-1.

(2) Sub-total of escalated expenses, future value of the initial impact fee fund balance, and total escalated credit divided by the total escalated SU's

Table B-3
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Impact Fee Calculation Assumptions, Long Prairie Service Area

I. General Assumptions

Initial Impact Fee Fund Balance ⁽¹⁾	\$ 3,508,364
Annual Interest Rate on Deposits ⁽²⁾	2.00%
Annual Service Unit Growth	614

Existing Eligible Debt Funded Projects	\$ 11,556,327
New Eligible Projects	15,146,807
Total Recoverable Project Cost	\$ 26,703,134

II. New Debt Issues Assumptions

<u>Fiscal Year</u>	<u>Principal⁽³⁾</u>	<u>Interest⁽⁴⁾</u>	<u>Term</u>
2004	\$ 513,126	5.75%	20
2005	543,943	6.00%	20
2006	1,537,151	6.25%	20
2007	4,650,712	6.25%	20
2008	5,541,242	6.25%	20
2009	2,360,633	6.25%	20
Total	\$ 15,146,807		

III. Capital Expenditure Assumptions

<u>Fiscal Year</u>		<u>Annual Capital Expenditures⁽⁵⁾</u>
2004	1	\$ 102,625
2005	2	211,414
2006	3	518,844
2007	4	1,448,986
2008	5	2,557,235
2009	6	2,926,736
2010	7	2,817,948
2011	8	2,510,517
2012	9	1,580,375
2013	10	472,127
Total		\$ 15,146,807

Notes:

- (1) Per Town's file: All 02-2003 Sept 30 FINAL.xls
- (2) Approximate average bank savings rate from 1991 to 2003 (Bankrate.com 11/05/03)
- (3) Follows construction schedule in Town's August 28, 2003 Five-Year Capital Projects Plan
- (4) Per Town's Multi-Year Financial Plan for Water and Wastewater
- (5) Assumes bond proceeds spent within 5 years of issuance

Table B-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Debt Service and Expense Summary - Long Prairie Service Area

I. New Debt Service Detail

		1	2	3	4	5	6	7	8	9	10	Total
Year		Series	Series	Series	Series	Series	Series	Series	Series	Series	Series	Annual
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	New Debt
												Service
1	2004	43,833										43,833
2	2005	43,833	47,423									91,256
3	2006	43,833	47,423	136,748								228,005
4	2007	43,833	47,423	136,748	413,738							641,743
5	2008	43,833	47,423	136,748	413,738	492,961						1,134,704
6	2009	43,833	47,423	136,748	413,738	492,961	210,007					1,344,711
7	2010	43,833	47,423	136,748	413,738	492,961	210,007	-				1,344,711
8	2011	43,833	47,423	136,748	413,738	492,961	210,007	-	-			1,344,711
9	2012	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-		1,344,711
10	2013	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
11	2014	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
12	2015	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
13	2016	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
14	2017	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
15	2018	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
16	2019	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
17	2020	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
18	2021	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
19	2022	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
20	2023	43,833	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,344,711
21	2024	-	47,423	136,748	413,738	492,961	210,007	-	-	-	-	1,300,878
22	2025	-	-	136,748	413,738	492,961	210,007	-	-	-	-	1,253,455
23	2026	-	-	-	413,738	492,961	210,007	-	-	-	-	1,116,707
24	2027	-	-	-	-	492,961	210,007	-	-	-	-	702,969
25	2028	-	-	-	-	-	210,007	-	-	-	-	210,007
26	2029	-	-	-	-	-	-	-	-	-	-	-
27	2030	-	-	-	-	-	-	-	-	-	-	-
28	2031	-	-	-	-	-	-	-	-	-	-	-
29	2032	-	-	-	-	-	-	-	-	-	-	-
30	2033	-	-	-	-	-	-	-	-	-	-	-
		876,661	948,468	2,734,969	8,274,757	9,859,230	4,200,145	-	-	-	-	26,894,230

Table B-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Debt Service and Expense Summary - Long Prairie Service Area

II. Summary of Annual Expenses

		New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense
1	2004	43,833	102,625	(513,126)	618,120	(18,926)	232,526
2	2005	91,256	211,414	(543,943)	844,639	(51,724)	551,643
3	2006	228,005	518,844	(1,537,151)	837,628	(76,942)	(29,616)
4	2007	641,743	1,448,986	(4,650,712)	883,008	(108,147)	(1,785,121)
5	2008	1,134,704	2,557,235	(5,541,242)	934,344	(143,043)	(1,058,002)
6	2009	1,344,711	2,926,736	(2,360,633)	931,104	(171,056)	2,670,863
7	2010	1,344,711	2,817,948	-	928,528	(199,013)	4,892,174
8	2011	1,344,711	2,510,517	-	922,045	(225,856)	4,551,418
9	2012	1,344,711	1,580,375	-	919,298	(253,330)	3,591,054
10	2013	1,344,711	472,127	-	917,207	(280,838)	2,453,207
11	2014	1,344,711	-	-	913,660	-	2,258,372
12	2015	1,344,711	-	-	910,074	-	2,254,786
13	2016	1,344,711	-	-	906,945	-	2,251,657
14	2017	1,344,711	-	-	905,017	-	2,249,729
15	2018	1,344,711	-	-	901,840	-	2,246,552
16	2019	1,344,711	-	-	902,679	-	2,247,391
17	2020	1,344,711	-	-	849,546	-	2,194,258
18	2021	1,344,711	-	-	779,576	-	2,124,288
19	2022	1,344,711	-	-	284,245	-	1,628,956
20	2023	1,344,711	-	-	284,647	-	1,629,358
21	2024	1,300,878	-	-	284,505	-	1,585,383
22	2025	1,253,455	-	-	-	-	1,253,455
23	2026	1,116,707	-	-	-	-	1,116,707
24	2027	702,969	-	-	-	-	702,969
25	2028	210,007	-	-	-	-	210,007
26	2029	-	-	-	-	-	-
27	2030	-	-	-	-	-	-
28	2031	-	-	-	-	-	-
29	2032	-	-	-	-	-	-
30	2033	-	-	-	-	-	-
		26,894,230	15,146,807	(15,146,807)	16,658,656	(1,528,874)	42,024,012

Notes:

- (1) Table B-3, Appendix B, page 1
- (2) Table B-2, Appendix B
- (3) Per Town's Debt Service Schedules
- (4) Table B-6, Appendix B

Table B-5
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B- Revenue Test - Long Prairie Service Area

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							3,508,364
2004	\$ 5,249	614	3,220,335	232,526	2,987,809	100,045	6,596,218
2005	\$ 5,249	614	3,220,335	551,643	2,668,692	158,611	9,423,521
2006	\$ 5,249	614	3,220,335	(29,616)	3,249,950	220,970	12,894,441
2007	\$ 5,249	614	3,220,335	(1,785,121)	5,005,455	307,943	18,207,840
2008	\$ 5,249	614	3,220,335	(1,058,002)	4,278,337	406,940	22,893,117
2009	\$ 5,249	614	3,220,335	2,670,863	549,472	463,357	23,905,946
2010	\$ 5,249	614	3,220,335	4,892,174	(1,671,839)	461,401	22,695,507
2011	\$ 5,249	614	3,220,335	4,551,418	(1,331,084)	440,599	21,805,022
2012	\$ 5,249	614	3,220,335	3,591,054	(370,719)	432,393	21,866,697
2013	\$ 5,249	614	3,220,335	2,453,207	767,127	445,005	23,078,829
2014	\$ -	-	-	2,258,372	(2,258,372)	438,993	21,259,450
2015	\$ -	-	-	2,254,786	(2,254,786)	402,641	19,407,306
2016	\$ -	-	-	2,251,657	(2,251,657)	365,630	17,521,278
2017	\$ -	-	-	2,249,729	(2,249,729)	327,928	15,599,478
2018	\$ -	-	-	2,246,552	(2,246,552)	289,524	13,642,450
2019	\$ -	-	-	2,247,391	(2,247,391)	250,375	11,645,435
2020	\$ -	-	-	2,194,258	(2,194,258)	210,966	9,662,143
2021	\$ -	-	-	2,124,288	(2,124,288)	172,000	7,709,855
2022	\$ -	-	-	1,628,956	(1,628,956)	137,908	6,218,807
2023	\$ -	-	-	1,629,358	(1,629,358)	108,083	4,697,531
2024	\$ -	-	-	1,585,383	(1,585,383)	78,097	3,190,245
2025	\$ -	-	-	1,253,455	(1,253,455)	51,270	1,988,060
2026	\$ -	-	-	1,116,707	(1,116,707)	28,594	899,948
2027	\$ -	-	-	702,969	(702,969)	10,969	207,948
2028	\$ -	-	-	210,007	(210,007)	2,059	(0)
Interest Earnings						\$ 6,312,302	

Table B-6
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Debt Service Eligible for Credit Determination, Long Prairie Service Area

Year	Account Number	Project Code	Project Name	Budgeted Amount ⁽¹⁾	Eligible Amount
1999 Revenue Bond:					
	620-591-9806	9806	Oak Street Lift Station and Force Main	\$ 755,000	\$ -
	620-591-9842	9842	Wastewater Treatment Plant	2,918,414	1,769,629
				<u>\$ 3,673,414</u>	<u>\$ 1,769,629</u>
	Total Budgeted for 1999 Revenue Issue				\$ 11,827,835
	Eligible % of Total Budgeted				14.96%
	Total Debt Service for Ten Year Period ⁽²⁾				\$ 9,346,400
	Debt Service Eligible for Credit Determination				\$ 1,398,368
2000 Revenue Bond:					
	621-591-9842	9842	Wastewater Treatment Plant	\$ 136,583	\$ 82,819
				<u>\$ 136,583</u>	<u>\$ 82,819</u>
	Total Budgeted for 2000 Revenue Issue				\$ 3,855,398
	Eligible % of Total Budgeted				2.15%
	Total Debt Service for Ten Year Period ⁽²⁾				\$ 3,319,049
	Debt Service Eligible for Credit Determination				\$ 71,298
2001 Revenue Bond:					
	622-591-7045	7045	Bakers Branch	\$ -	\$ -
	622-591-9857	9857	Kirkpatrick Lift Station and Force Main	625,000	195,334
	622-591-9842	9842	Wastewater Treatment Plant	8,859,874	5,372,333
				<u>\$ 9,484,874</u>	<u>\$ 5,567,667</u>
	Total Budgeted for 2001 Revenue Issue				\$ 20,946,623
	Eligible % of Total Budgeted				26.58%
	Total Debt Service for Ten Year Period ⁽²⁾				\$ 17,877,506
	Debt Service Eligible for Credit Determination				\$ 4,751,888
2004 Utility CO:					
	Account Number	Project Code	Project Name	Budgeted Amount ⁽¹⁾	Eligible Amount
	623-591-9842	9842	Wastewater Treatment Plant	\$ 6,821,304	\$ 4,136,212
				<u>\$ 6,821,304</u>	<u>\$ 4,136,212</u>
	Total Budgeted for 2004 Utility CO Issue				\$ 6,995,242
	Eligible % of Total Budgeted				59.13%
	Total Debt Service for Ten Year Period ⁽²⁾				\$ 4,252,348
	Debt Service Eligible for Credit Determination				\$ 2,514,368
TOTAL EXISTING ELIGIBLE DEBT FUNDED PROJECTS					\$ 11,556,327
TOTAL DEBT SERVICE ELIGIBLE FOR CREDIT DETERMINATION					\$ 8,735,922

Notes:

(1) Per Town's file: All 02-2003 Sept 30 FINAL.xls

(2) Per Town's Debt Service Schedules

Table B-8
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Projected Debt Funded Projects, Long Prairie Service Area

Year	Total Project Costs ⁽¹⁾	Recoverable Costs 2003 -2013 ⁽¹⁾	Eligible for New Debt ⁽²⁾
2004			
FM 407 Sanitary Sewer Extension to Chinn Chapel Road	\$ 553,131	\$ 492,682	\$ 492,682
Impact Fee Study	20,444	20,444	20,444
			<u>\$ 513,126</u>
2005			
Upper Timber Creek	\$ 6,287,347	\$ 6,010,569	\$ 543,943
			<u>\$ 543,943</u>
2006			
Upper Timber Creek	\$ 6,287,347	\$ 6,010,569	\$ 815,914
Kirkpatrick Force Main	1,601,146	721,237	721,237
			<u>\$ 1,537,151</u>
2007			
Upper Timber Creek	\$ 6,287,347	\$ 6,010,569	\$ 4,650,711
			<u>\$ 4,650,711</u>
2008			
Oak Street 1 Lift Station	\$ 2,717,336	\$ 1,946,200	\$ 1,946,200
Wichita 1 Lift Station	343,147	127,793	127,793
Oak Street 1 Force Main	2,558,948	2,441,295	2,441,295
Wichita 1 Force Main	1,205,496	1,025,954	1,025,954
			<u>\$ 5,541,242</u>
2009			
Baker's Branch Gravity Flow	\$ 592,223	\$ 480,924	\$ 480,924
College Gravity Flow	1,917,327	1,879,708	1,879,708
			<u>\$ 2,360,632</u>

Notes:

(1) Table 15 and Table 16 of the Report

(2) Recoverable costs less project costs funded by existing debt

(3) Construction over three years per Town's August 28, 2003 Five-Year Capital Projects Plan

APPENDIX C
Lakeside Service Area
Impact Fee Calculation Details

Table C-1
10-year Recoverable Cost Summary, Lakeside Service Area

Recoverable Impact Fee CIP Costs ⁽¹⁾	\$	3,782,935	Table 15 of Report
Financing Costs ⁽²⁾	\$	1,971,533	Table C-1, Notes, Appendix C
Existing Fund Balance ⁽³⁾	\$	(12,178)	Table C-3, Appendix C
Interest Earnings ⁽⁴⁾	\$	(605,112)	Table C-5, Appendix C
Pre Credit Recoverable Cost for Impact Fee⁽⁵⁾	\$	5,137,178	
Credit for Utility Revenues ⁽⁶⁾	\$	(301,807)	Table C-7, Appendix C
Maximum Recoverable Cost for Impact Fee⁽⁷⁾	\$	4,835,371	

Notes:

(1) Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees. Reference is the Recoverable Cost 2003-2013 column on Table 16 of the Report.

(2) Financing Costs:

Represents the interest costs associated with debt financing the Recoverable Impact Fee CIP Costs. Interest costs are derived from existing debt issues and and forecasted debt issues utilizing the Town's estimates of interest costs.

New Annual Debt Service	\$	1,592,952	(Page 2 of Table C-3, Appendix C)
Existing Annual Debt Service		4,161,516	(Page 2 of Table C-3, Appendix C)
Recoverable Impact Fee CIP Costs		(3,782,935)	(Table C-2 of Appendix C)
Financing Costs	\$	1,971,533	

(3) Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2003 Impact Fee Update were also included in the 2000 Impact Fee Update. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs. Reference is Table C-3 of Appendix C.

(4) Interest Earnings:

Represents the interest earned on cash flows. Assumes a 2.00% annual interest rate based on approximate average bank savings rate from 1991 to 2003 as of 11/05/03 per Bankrate.com. The Impact Fee Statue states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on Table C-5 of Appendix C.

(5) Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Existing Fund Balance less Interest Earnings.

(6) Credit for Utility Revenues:

In 2001, the Impact Fee Statue was amended to include a credit for ad valorem and utility revenues generated by new service units that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for capital improvements. The credit recognizes utility revenues used to fund existing debt service and assumes that all new debt issues will be funded solely through impact fee revenues. Reference is Table C-7 of Appendix C.

(7) Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Revenues. This is the maximum cost that can be recovered through impact fees.

Table C-2
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Impact Fee Calculation, Lakeside Service Area

Year	Number of Years to End of Period	Future Value Escalation		Annual Service Units		Annual Expense	
		Interest Rate Factor	Recovery Fee Factor	Actual	Escalated	Actual	Escalated
2004	24	1.5927	1.0000	475	756	\$ 158,752	\$ 252,840
2005	23	1.5614	1.0000	475	741	215,336	336,234
2006	22	1.5308	1.0000	475	727	209,182	320,221
2007	21	1.5008	1.0000	475	712	210,988	316,652
2008	20	1.4714	1.0000	475	698	(408,536)	(601,111)
2009	19	1.4425	1.0000	475	685	457,001	659,237
2010	18	1.4142	1.0000	475	671	450,929	637,724
2011	17	1.3865	1.0000	475	658	444,984	616,977
2012	16	1.3593	1.0000	475	645	439,001	596,747
2013	15	1.3327	1.0000	475	632	257,957	343,772
2014	14	1.3065	1.0000	-	-	313,263	409,291
2015	13	1.2809	1.0000	-	-	313,015	400,949
2016	12	1.2558	1.0000	-	-	312,695	392,685
2017	11	1.2312	1.0000	-	-	312,439	384,670
2018	10	1.2070	1.0000	-	-	311,820	376,381
2019	9	1.1834	1.0000	-	-	312,576	369,895
2020	8	1.1602	1.0000	-	-	292,780	339,675
2021	7	1.1374	1.0000	-	-	220,211	250,474
2022	6	1.1151	1.0000	-	-	132,062	147,266
2023	5	1.0933	1.0000	-	-	132,137	144,459
2024	4	1.0718	1.0000	-	-	130,364	139,727
2025	3	1.0508	1.0000	-	-	77,901	81,859
2026	2	1.0302	1.0000	-	-	77,901	80,254
2027	1	1.0100	1.0000	-	-	77,901	78,680
					6,925		7,075,555

Annual Interest Rate on Deposits:	2.00%
Present Value of Initial Impact Fee Fund	\$ 12,178
Total Escalated Expense for Entire Period	\$ 7,075,555
Less Future Value of Initial Impact Fee Fund	19,587
Sub-Total	\$ 7,055,968
Total Escalated SU's	6,925
Lakeside Service Area Impact Fee (with credit)⁽¹⁾	\$ 1,019
Total Escalated Credit for Entire Period	\$ 426,842
Total Escalated Credit for Entire Period plus Sub-Total	7,482,810
Total Escalated SU's	6,925
Lakeside Service Area Impact Fee (without credit)⁽²⁾	\$ 1,081

Notes:

Table C-3
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Impact Fee Calculation Assumptions, Lakeside Service Area

I. General Assumptions

Initial Impact Fee Fund Balance ⁽¹⁾	\$ 12,178
Annual Interest Rate on Deposits ⁽²⁾	2.00%
Annual Service Unit Growth	475

Existing Eligible Debt Funded Projects	\$ 2,886,826
New Eligible Projects	896,109
Total Recoverable Project Cost	\$ 3,782,935

II. New Debt Issues Assumptions

<u>Fiscal Year</u>	<u>Principal⁽³⁾</u>	<u>Interest⁽⁴⁾</u>	<u>Term</u>
2004	\$ 20,444	5.75%	20
2005	0	6.00%	20
2006	0	6.25%	20
2007	0	6.25%	20
2008	875,665	6.25%	20
2009	0	6.25%	20
Total	\$ 896,109		

III. Capital Expenditure Assumptions

<u>Fiscal Year</u>		<u>Annual Capital Expenditures⁽⁵⁾</u>
2004	1	\$ 4,089
2005	2	4,089
2006	3	4,089
2007	4	4,089
2008	5	179,222
2009	6	175,133
2010	7	175,133
2011	8	175,133
2012	9	175,133
2013	10	0
Total		\$ 896,109

Notes:

- (1) Per Town's file: *All 02-2003 Sept 30 FINAL.xls*
- (2) Approximate average bank savings rate from 1991 to 2003 (Bankrate.com 11/05/03)
- (3) Follows construction schedule in Town's August 28, 2003 Five-Year Capital Projects Plan
- (4) Per Town's Multi-Year Financial Plan for Water and Wastewater
- (5) Assumes bond proceeds spent within 5 years of issuance

Table C-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Debt Service and Expense Summary - Lakeside Service Area

I. New Debt Service Detail

		1	2	3	4	5	6	7	8	9	10	Total
	Year	Series 2004	Series 2005	Series 2006	Series 2007	Series 2008	Series 2009	Series 2010	Series 2011	Series 2012	Series 2013	Annual New Debt Service
1	2004	1,746										1,746
2	2005	1,746	-									1,746
3	2006	1,746	-	-								1,746
4	2007	1,746	-	-	-							1,746
5	2008	1,746	-	-	-	77,901						79,648
6	2009	1,746	-	-	-	77,901	-					79,648
7	2010	1,746	-	-	-	77,901	-	-				79,648
8	2011	1,746	-	-	-	77,901	-	-	-			79,648
9	2012	1,746	-	-	-	77,901	-	-	-	-		79,648
10	2013	1,746	-	-	-	77,901	-	-	-	-	-	79,648
11	2014	1,746	-	-	-	77,901	-	-	-	-	-	79,648
12	2015	1,746	-	-	-	77,901	-	-	-	-	-	79,648
13	2016	1,746	-	-	-	77,901	-	-	-	-	-	79,648
14	2017	1,746	-	-	-	77,901	-	-	-	-	-	79,648
15	2018	1,746	-	-	-	77,901	-	-	-	-	-	79,648
16	2019	1,746	-	-	-	77,901	-	-	-	-	-	79,648
17	2020	1,746	-	-	-	77,901	-	-	-	-	-	79,648
18	2021	1,746	-	-	-	77,901	-	-	-	-	-	79,648
19	2022	1,746	-	-	-	77,901	-	-	-	-	-	79,648
20	2023	1,746	-	-	-	77,901	-	-	-	-	-	79,648
21	2024	-	-	-	-	77,901	-	-	-	-	-	77,901
22	2025	-	-	-	-	77,901	-	-	-	-	-	77,901
23	2026	-	-	-	-	77,901	-	-	-	-	-	77,901
24	2027	-	-	-	-	77,901	-	-	-	-	-	77,901
25	2028	-	-	-	-	-	-	-	-	-	-	-
26	2029	-	-	-	-	-	-	-	-	-	-	-
27	2030	-	-	-	-	-	-	-	-	-	-	-
28	2031	-	-	-	-	-	-	-	-	-	-	-
29	2032	-	-	-	-	-	-	-	-	-	-	-
30	2033	-	-	-	-	-	-	-	-	-	-	-
		34,928	-	-	-	1,558,023	-	-	-	-	-	1,592,952

Table C-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Debt Service and Expense Summary - Lakeside Service Area

II. Summary of Annual Expenses

		New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense
1	2004	1,746	4,089	(20,444)	177,567	(4,206)	158,752
2	2005	1,746	4,089	-	219,918	(10,417)	215,336
3	2006	1,746	4,089	-	218,900	(15,553)	209,182
4	2007	1,746	4,089	-	226,622	(21,470)	210,988
5	2008	79,648	179,222	(875,665)	236,235	(27,975)	(408,536)
6	2009	79,648	175,133	-	235,717	(33,497)	457,001
7	2010	79,648	175,133	-	235,131	(38,982)	450,929
8	2011	79,648	175,133	-	234,667	(44,463)	444,984
9	2012	79,648	175,133	-	234,127	(49,906)	439,001
10	2013	79,648	-	-	233,647	(55,338)	257,957
11	2014	79,648	-	-	233,615	-	313,263
12	2015	79,648	-	-	233,368	-	313,015
13	2016	79,648	-	-	233,048	-	312,695
14	2017	79,648	-	-	232,791	-	312,439
15	2018	79,648	-	-	232,173	-	311,820
16	2019	79,648	-	-	232,928	-	312,576
17	2020	79,648	-	-	213,132	-	292,780
18	2021	79,648	-	-	140,564	-	220,211
19	2022	79,648	-	-	52,415	-	132,062
20	2023	79,648	-	-	52,489	-	132,137
21	2024	77,901	-	-	52,463	-	130,364
22	2025	77,901	-	-	-	-	77,901
23	2026	77,901	-	-	-	-	77,901
24	2027	77,901	-	-	-	-	77,901
25	2028	-	-	-	-	-	-
26	2029	-	-	-	-	-	-
27	2030	-	-	-	-	-	-
28	2031	-	-	-	-	-	-
29	2032	-	-	-	-	-	-
30	2033	-	-	-	-	-	-
		1,592,952	896,109	(896,109)	4,161,516	(301,807)	5,452,661

Notes:

- (1) Table B-4, Appendix B, page 1
- (2) Table B-3, Appendix B
- (3) Per Town's Debt Service Schedules
- (4) Table B-7, Appendix B

Table C-5
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C- Revenue Test - Lakeside Service Area

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							12,178
2004	\$ 1,019	475	483,537	158,752	324,785	3,491	340,454
2005	\$ 1,019	475	483,537	215,336	268,201	9,491	618,146
2006	\$ 1,019	475	483,537	209,182	274,355	15,106	907,608
2007	\$ 1,019	475	483,537	210,988	272,549	20,878	1,201,034
2008	\$ 1,019	475	483,537	(408,536)	892,073	32,941	2,126,048
2009	\$ 1,019	475	483,537	457,001	26,536	42,786	2,195,371
2010	\$ 1,019	475	483,537	450,929	32,608	44,234	2,272,213
2011	\$ 1,019	475	483,537	444,984	38,553	45,830	2,356,595
2012	\$ 1,019	475	483,537	439,001	44,536	47,577	2,448,708
2013	\$ 1,019	475	483,537	257,957	225,580	51,230	2,725,518
2014	\$ -	-	-	313,263	(313,263)	51,378	2,463,633
2015	\$ -	-	-	313,015	(313,015)	46,143	2,196,760
2016	\$ -	-	-	312,695	(312,695)	40,808	1,924,874
2017	\$ -	-	-	312,439	(312,439)	35,373	1,647,808
2018	\$ -	-	-	311,820	(311,820)	29,838	1,365,825
2019	\$ -	-	-	312,576	(312,576)	24,191	1,077,440
2020	\$ -	-	-	292,780	(292,780)	18,621	803,282
2021	\$ -	-	-	220,211	(220,211)	13,864	596,934
2022	\$ -	-	-	132,062	(132,062)	10,618	475,489
2023	\$ -	-	-	132,137	(132,137)	8,188	351,541
2024	\$ -	-	-	130,364	(130,364)	5,727	226,904
2025	\$ -	-	-	77,901	(77,901)	3,759	152,762
2026	\$ -	-	-	77,901	(77,901)	2,276	77,137
2027	\$ -	-	-	77,901	(77,901)	764	(0)
Interest Earnings						\$ 605,112	

Table C-6
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Debt Service Eligible for Credit Determination, Lakeside Service Area

Account Number	Project Code	Project Name	Budgeted Amount ⁽¹⁾	Eligible Amount
1999 Revenue Bond:				
620-591-9827	9827	Lakeside Sewer	\$ 200,000	\$ 131,975
620-591-9842	9842	Wastewater Treatment Plant	2,918,414	326,321
			\$ 3,118,414	\$ 458,296
Total Budgeted for 1999 Revenue Issue				\$ 11,827,835
Eligible % of Total Budgeted				3.87%
Total Debt Service for Ten Year Period ⁽²⁾				\$ 9,346,400
Debt Service Eligible for Credit Determination				\$ 362,147
2000 Revenue Bond:				
621-591-9827	9827	Lakeside Sewer	\$ 999,999	\$ 659,877
621-591-9842	9842	Wastewater Treatment Plant	136,583	15,272
			\$ 1,136,582	\$ 675,149
Total Budgeted for 2000 Revenue Issue				\$ 3,855,398
Eligible % of Total Budgeted				17.51%
Total Debt Service for Ten Year Period ⁽²⁾				\$ 3,319,049
Debt Service Eligible for Credit Determination				\$ 581,224
2001 Revenue Bond:				
622-591-9842	9842	Wastewater Treatment Plant	\$ 8,859,874	\$ 990,661
			\$ 8,859,874	\$ 990,661
Total Budgeted for 2001 Revenue Issue				\$ 20,946,623
Eligible % of Total Budgeted				4.73%
Total Debt Service for Ten Year Period ⁽²⁾				\$ 17,877,506
Debt Service Eligible for Credit Determination				\$ 845,509
2004 Utility CO:				
623-591-9842	9842	Wastewater Treatment Plant	\$ 6,821,304	\$ 762,720
			\$ 6,821,304	\$ 762,720
Total Budgeted for 2004 Utility CO Issue				\$ 6,995,242
Eligible % of Total Budgeted				10.90%
Total Debt Service for Ten Year Period ⁽²⁾				\$ 4,252,348
Debt Service Eligible for Credit Determination				\$ 463,651
TOTAL EXISTING ELIGIBLE DEBT FUNDED PROJECTS				\$ 2,886,826
TOTAL DEBT SERVICE ELIGIBLE FOR CREDIT DETERMINATION				\$ 2,252,531

Notes:

(1) Per Town's file: All 02-2003 Sept 30 FINAL.xls

(2) Per Town's Debt Service Schedules

Table C-8
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix C - Projected Debt Funded Projects, Lakeside Service Area

Year		Total Project Costs ⁽¹⁾	Recoverable Costs 2003 -2013 ⁽¹⁾	Eligible for New Debt ⁽²⁾
2004				
	Impact Fee Study	\$ 20,444	\$ 20,444	\$ 20,444
				\$ 20,444
2008				
	Phase II Lift Station	\$ 555,670	\$ 436,818	\$ 436,818
	Phase II Force Main	692,916	438,847	438,847
				\$ 875,665

Notes:

(1) Table 15 and Table 16 of the Report

(2) Recoverable costs less project costs funded by existing debt

APPENDIX D
Denton Creek Service Area
Impact Fee Calculation Details

Table D-1
10-year Recoverable Cost Summary, Denton Creek Service Area

Recoverable Impact Fee CIP Costs	\$	5,045,044	Table 15 of Report
Financing Costs		3,790,200	Table D-1, Notes, Appendix D
Existing Fund Balance		(1,287)	Table D-3, Appendix D
Interest Earnings		(1,285,164)	Table D-5, Appendix D
Pre Credit Recoverable Cost for Impact Fee	\$	7,548,793	
Credit for Utility Revenues		(44,306)	Table D-7, Appendix D
Maximum Recoverable Cost for Impact Fee	\$	7,504,487	

Notes:

(1) Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees. Reference is the Recoverable Cost 2003-2013 column on Table 16 of the Report.

(2) Financing Costs:

Represents the interest costs associated with debt financing the Recoverable Impact Fee CIP Costs. Interest costs are derived from existing debt issues and and forecasted debt issues utilizing the Town's estimates of interest costs.

New Annual Debt Service	\$	8,242,858	(Page 2 of Table D-3, Appendix D)
Existing Annual Debt Service		592,386	(Page 2 of Table D-3, Appendix D)
Recoverable Impact Fee CIP Costs		<u>(5,045,044)</u>	(Table D-2 of Appendix D)
Financing Costs	\$	3,790,200	

(3) Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Some projects that are included in the 2003 Impact Fee Update were also included in the 2000 Impact Fee Update. To avoid charging twice for the same project, the impact fee revenues collected but yet to be expended (i.e. fund balance) are credited against the recoverable costs. Reference is Table D-3 of Appendix D.

(4) Interest Earnings:

Represents the interest earned on cash flows. Assumes a 2.00% annual interest rate based on approximate average bank savings rate from 1991 to 2003 as of 11/05/03 per Bankrate.com. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on Table D-5 of Appendix D.

(5) Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Existing Fund Balance less Interest Earnings.

(6) Credit for Utility Revenues:

In 2001, the Impact Fee Statute was amended to include a credit for ad valorem and utility revenues generated by new service units that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for capital improvements. The credit recognizes utility revenues used to fund existing debt service and assumes that all new debt issues will be funded solely through impact fee revenues. Reference is Table D-7 of Appendix D.

(7) Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Revenues. This is the maximum cost that can be recovered through impact fees.

Table D-2
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D - Impact Fee Calculation - Denton Creek Service Area

Future Value Escalation

Year	Number of Years to End of Period	Interest Rate Factor	Recovery Fee Factor	Annual Service Units			
				Actual	Escalated	Actual	Escalated
2004	23	1.5614	1.0000	495	773	\$ 16,883	\$ 26,362
2005	22	1.5308	1.0000	495	758	(1,060,262)	(1,623,073)
2006	21	1.5008	1.0000	495	743	(71,122)	(106,740)
2007	20	1.4714	1.0000	495	728	(959,312)	(1,411,512)
2008	19	1.4425	1.0000	495	714	1,373,328	1,981,066
2009	18	1.4142	1.0000	495	700	1,368,471	1,935,352
2010	17	1.3865	1.0000	495	686	1,060,062	1,469,790
2011	16	1.3593	1.0000	495	673	905,076	1,230,295
2012	15	1.3327	1.0000	495	660	437,688	583,295
2013	14	1.3065	1.0000	495	647	436,998	570,957
2014	13	1.2809	1.0000	-	-	445,238	570,316
2015	12	1.2558	1.0000	-	-	445,350	559,274
2016	11	1.2312	1.0000	-	-	445,474	548,460
2017	10	1.2070	1.0000	-	-	445,510	537,750
2018	9	1.1834	1.0000	-	-	445,664	527,389
2019	8	1.1602	1.0000	-	-	445,719	517,111
2020	7	1.1374	1.0000	-	-	445,790	507,052
2021	6	1.1151	1.0000	-	-	445,865	497,194
2022	5	1.0933	1.0000	-	-	412,143	450,578
2023	4	1.0718	1.0000	-	-	412,143	441,743
2024	3	1.0508	1.0000	-	-	410,397	431,246
2025	2	1.0302	1.0000	-	-	276,246	284,588
2026	1	1.0100	1.0000	-	-	207,589	209,665
					7,082		10,738,158
Annual Interest Rate on Deposits:							2.00%
Present Value of Initial Impact Fee Fund							\$ 1,287
Total Escalated Expense for Entire Period							\$ 10,738,158
Less Future Value of Initial Impact Fee Fund							2,030
							Sub-Total \$ 10,736,128
Total Escalated SU's							7,082
Denton Creek Service Area Impact Fee (with credit)							\$ 1,516
Total Escalated Credit for Entire Period							\$ 61,480
Total Escalated Credit for Entire Period plus Sub-Total							10,797,608
Total Escalated SU's							7,082
Denton Creek Service Area Impact Fee (without credit)							\$ 1,525

Table D-3
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions - Denton Creek Service Area

I. General Assumptions

Initial Impact Fee Fund Balance ⁽¹⁾	\$ 1,287
Annual Interest Rate on Deposits ⁽²⁾	2.00%
Annual Service Unit Growth	495
Existing Eligible Debt Funded Projects	\$ 380,700
New Eligible Projects	4,664,344
Total Recoverable Project Cost	\$ 5,045,044

II. New Debt Issues Assumptions

<u>Fiscal Year</u>	<u>Principal⁽³⁾</u>	<u>Interest⁽⁴⁾</u>	<u>Term</u>
2004	\$ 20,444	5.75%	20
2005	1,538,700	6.00%	20
2006	771,750	6.25%	20
2007	2,333,450	6.25%	20
2008	0	6.25%	20
2009	0	6.25%	20
Total	\$ 4,664,344		

III. Capital Expenditure Assumptions

<u>Fiscal Year</u>		<u>Annual Capital Expenditures⁽⁵⁾</u>
2004	1	\$ 4,089
2005	2	311,829
2006	3	466,179
2007	4	932,869
2008	5	932,869
2009	6	928,780
2010	7	621,040
2011	8	466,690
2012	9	0
2013	10	0
Total		\$ 4,664,344

Notes:

- (1) Per Town's file: *All 02-2003 Sept 30 FINAL.xls*
- (2) Approximate average bank savings rate from 1991 to 2003 (Bankrate.com 11/05/03)
- (3) Follows construction schedule in Town's August 28, 2003 Five-Year Capital Projects Plan
- (4) Per Town's Multi-Year Financial Plan for Water and Wastewater
- (5) Assumes bond proceeds spent within 5 years of issuance

Table D-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D - Debt Service and Expense Summary - Denton Creek Service Area

I. New Debt Service Detail

		1	2	3	4	5	6	7	8	9	10	Total
Year	Series	Series	Series	Series	Series	Series	Series	Series	Series	Series	Series	Annual
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013		New Debt
												Service
1	2004	1,746										1,746
2	2005	1,746	134,151									135,897
3	2006	1,746	134,151	68,657								204,554
4	2007	1,746	134,151	68,657	207,589							412,143
5	2008	1,746	134,151	68,657	207,589	-						412,143
6	2009	1,746	134,151	68,657	207,589	-	-					412,143
7	2010	1,746	134,151	68,657	207,589	-	-	-				412,143
8	2011	1,746	134,151	68,657	207,589	-	-	-	-			412,143
9	2012	1,746	134,151	68,657	207,589	-	-	-	-	-		412,143
10	2013	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
11	2014	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
12	2015	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
13	2016	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
14	2017	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
15	2018	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
16	2019	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
17	2020	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
18	2021	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
19	2022	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
20	2023	1,746	134,151	68,657	207,589	-	-	-	-	-	-	412,143
21	2024	-	134,151	68,657	207,589	-	-	-	-	-	-	410,397
22	2025	-	-	68,657	207,589	-	-	-	-	-	-	276,246
23	2026	-	-	-	207,589	-	-	-	-	-	-	207,589
24	2027	-	-	-	-	-	-	-	-	-	-	-
25	2028	-	-	-	-	-	-	-	-	-	-	-
26	2029	-	-	-	-	-	-	-	-	-	-	-
27	2030	-	-	-	-	-	-	-	-	-	-	-
28	2031	-	-	-	-	-	-	-	-	-	-	-
29	2032	-	-	-	-	-	-	-	-	-	-	-
30	2033	-	-	-	-	-	-	-	-	-	-	-
		34,928	2,683,018	1,373,133	4,151,780	-	-	-	-	-	-	8,242,858

Table D-4
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D - Debt Service and Expense Summary - Denton Creek Service Area

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Annual Credit ⁽⁴⁾	Total Expense	
1	2004	1,746	4,089	(20,444)	32,290	(798)	16,883
2	2005	135,897	311,829	(1,538,700)	32,309	(1,596)	(1,060,262)
3	2006	204,554	466,179	(771,750)	32,288	(2,393)	(71,122)
4	2007	412,143	932,869	(2,333,450)	32,320	(3,194)	(959,312)
5	2008	412,143	932,869	-	32,307	(3,990)	1,373,328
6	2009	412,143	928,780	-	32,342	(4,794)	1,368,471
7	2010	412,143	621,040	-	32,499	(5,620)	1,060,062
8	2011	412,143	466,690	-	32,707	(6,464)	905,076
9	2012	412,143	-	-	32,848	(7,303)	437,688
10	2013	412,143	-	-	33,010	(8,154)	436,998
11	2014	412,143	-	-	33,095	-	445,238
12	2015	412,143	-	-	33,207	-	445,350
13	2016	412,143	-	-	33,331	-	445,474
14	2017	412,143	-	-	33,367	-	445,510
15	2018	412,143	-	-	33,522	-	445,664
16	2019	412,143	-	-	33,576	-	445,719
17	2020	412,143	-	-	33,647	-	445,790
18	2021	412,143	-	-	33,722	-	445,865
19	2022	412,143	-	-	-	-	412,143
20	2023	412,143	-	-	-	-	412,143
21	2024	410,397	-	-	-	-	410,397
22	2025	276,246	-	-	-	-	276,246
23	2026	207,589	-	-	-	-	207,589
24	2027	-	-	-	-	-	-
25	2028	-	-	-	-	-	-
26	2029	-	-	-	-	-	-
27	2030	-	-	-	-	-	-
28	2031	-	-	-	-	-	-
29	2032	-	-	-	-	-	-
30	2033	-	-	-	-	-	-
		8,242,858	4,664,344	(4,664,344)	592,386	(44,306)	8,790,939

Notes:

- (1) Table B-4, Appendix B, page 1
- (2) Table B-3, Appendix B
- (3) Per Town's Debt Service Schedules
- (4) Table B-7, Appendix B

Table D-5
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D- Revenue Test - Denton Creek Service Area

Year	Impact Fee	Service Units	Impact Fee Revenue	Annual Expenses	Sub-Total	Accumulated Interest	Estimated Fund Balance
Initial							1,287
2004	\$ 1,516	495	750,449	16,883	733,565	7,361	742,214
2005	\$ 1,516	495	750,449	(1,060,262)	1,810,710	32,951	2,585,876
2006	\$ 1,516	495	750,449	(71,122)	821,571	59,933	3,467,380
2007	\$ 1,516	495	750,449	(959,312)	1,709,761	86,445	5,263,586
2008	\$ 1,516	495	750,449	1,373,328	(622,880)	99,043	4,739,749
2009	\$ 1,516	495	750,449	1,368,471	(618,022)	88,615	4,210,341
2010	\$ 1,516	495	750,449	1,060,062	(309,613)	81,111	3,981,839
2011	\$ 1,516	495	750,449	905,076	(154,628)	78,090	3,905,302
2012	\$ 1,516	495	750,449	437,688	312,761	81,234	4,299,296
2013	\$ 1,516	495	750,449	436,998	313,450	89,120	4,701,867
2014	\$ -	-	-	445,238	(445,238)	89,585	4,346,214
2015	\$ -	-	-	445,350	(445,350)	82,471	3,983,335
2016	\$ -	-	-	445,474	(445,474)	75,212	3,613,073
2017	\$ -	-	-	445,510	(445,510)	67,806	3,235,369
2018	\$ -	-	-	445,664	(445,664)	60,251	2,849,956
2019	\$ -	-	-	445,719	(445,719)	52,542	2,456,779
2020	\$ -	-	-	445,790	(445,790)	44,678	2,055,667
2021	\$ -	-	-	445,865	(445,865)	36,655	1,646,456
2022	\$ -	-	-	412,143	(412,143)	28,808	1,263,121
2023	\$ -	-	-	412,143	(412,143)	21,141	872,119
2024	\$ -	-	-	410,397	(410,397)	13,338	475,061
2025	\$ -	-	-	276,246	(276,246)	6,739	205,554
2026	\$ -	-	-	207,589	(207,589)	2,035	(0)
Interest Earnings						\$ 1,285,164	

Table D-6
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D - Debt Service Eligible for Credit Determination, Denton Creek Service Area

2001 Revenue Bond	Account Number	Project Code	Project Name	Budgeted Amount ⁽¹⁾	Eligible Amount
	622-591-9858	9858	Denton Creek Sewer	380,700	380,700
				\$ 380,700	\$ 380,700
	Total Budgeted for 2001 Revenue Issue				\$ 20,946,623
Eligible % of Total Budgeted					1.82%
Total Debt Service for Ten Year Period ⁽²⁾					\$ 17,877,506
Debt Service Eligible for Credit Determination					\$ 324,920
TOTAL EXISTING ELIGIBLE DEBT FUNDED PROJECTS					\$ 380,700
TOTAL DEBT SERVICE ELIGIBLE FOR CREDIT DETERMINATION					\$ 324,920

Notes:

(1) Per Town's file: *All 02-2003 Sept 30 FINAL.xls*

(2) Per Town's Debt Service Schedules

Table D-7
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix D - Credit Determination for Denton Creek Service Area Impact Fees

FY 2003 Wastewater Rate Revenues (unaudited)	
2003 Service Units ⁽¹⁾	\$ 5,407,977
Revenue per Service Unit	20,038
	\$ 269.89
Ten Year Growth in Service Units ⁽¹⁾	4,950
Annual Growth in Service Units	10 years
	495

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Total Existing Debt Service Eligible for Impact Fees ⁽²⁾	\$ 32,290	\$ 32,309	\$ 32,288	\$ 32,320	\$ 32,307	\$ 32,342	\$ 32,499	\$ 32,707	\$ 32,848	\$ 33,010	\$ 324,920
Standardized Service Units (2003 Service Units)	20,038	20,038	20,038	20,038	20,038	20,038	20,038	20,038	20,038	20,038	
Existing Eligible Impact Fee Debt Service per Service Unit	\$ 1.61	\$ 1.61	\$ 1.61	\$ 1.61	\$ 1.61	\$ 1.61	\$ 1.62	\$ 1.63	\$ 1.64	\$ 1.65	
Annual Growth in Service Units (Cumulative)	495	990	1,485	1,980	2,475	2,970	3,465	3,960	4,455	4,950	
Annual Rate Revenue Generated by New Service Units for Existing Impact Fee Debt Service	\$ 798	\$ 1,596	\$ 2,393	\$ 3,194	\$ 3,990	\$ 4,794	\$ 5,620	\$ 6,464	\$ 7,303	\$ 8,154	\$ 44,306
Credit Amount											\$ 44,306

Notes:
(1) Table 6 of the Report
(2) Table B-4, Appendix B, page 2

Table B-8
Town of Flower Mound 2003 Wastewater Impact Update
Capital Improvement Plan for Impact Fees
Appendix B - Projected Debt Funded Projects, Long Prairie Service Area

Year	Total Project Costs ⁽¹⁾	Recoverable Costs 2003 -2013 ⁽¹⁾	Eligible for New Debt ⁽²⁾
2004			
Impact Fee Study	20,444	20,444	20,444
			\$ 20,444
2005			
Phase I	\$ 5,484,000	\$ 1,919,400	\$ 1,538,700
			\$ 1,538,700
2006			
Phase II	\$ 2,205,000	\$ 771,750	\$ 771,750
			\$ 771,750
2007			
Phase III	\$ 6,667,000	\$ 2,333,450	\$ 2,333,450
			\$ 2,333,450

Notes:

(1) Table 15 and Table 16 of the Report

(2) Recoverable costs less project costs funded by existing debt

APPENDIX E
Impact Fee Schedule Options

**Town of Flower Mound 2003 Impact Fee Update
Fee Per Service Unit Comparison**

		2000-2003 Maximum Impact Fee Per Service Unit ^	Option								
			1	2		3		4		5	
	Service Area		Maximum Allowable	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1
Wastewater	Long Prairie	\$ 4,204	\$ 5,249	\$ 2,754	52%	\$ 4,103	78%	\$ 4,204	80%	\$ 4,199	80%
	Lakeside	\$ 978	\$ 1,019	\$ 541	53%	\$ 733	72%	\$ 978	96%	\$ 815	80%
	Denton Creek	\$ 1,254	\$ 1,516	\$ 762	50%	\$ 1,010	67%	\$ 1,254	83%	\$ 1,213	80%

Notes:	^ Current Roadway Impact Fee values shown are a range of the existing service areas	
	CIAC recommended Option 4 for Wastewater Impact Fees	
	Option	Description
	1	w/ Financing Costs and Credit Calcs [Calculated Maximum Fees per Chapter 395]
	2	w/ Financing Costs @ 50% of Maximum
	3	w/o Financing Costs, w/ Credit Calcs
	4	Roadway: Service Area A Max. used Townwide, Water/WW: Match 2000-2003 maximums
5	80% of the Maximum Allowable	

**Town of Flower Mound 2003 Impact Fee Update
Single-Family Residential Dwelling Unit (5/8" x 3/4" Meter)**

		2000-2003 Maximum Impact Fee ^	Option									
			1	2		3		4		5		
	Service Area		Maximum Allowable	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	
Wastewater	Long Prairie	\$ 4,204	\$ 5,249	\$ 2,754	52%	\$ 4,103	78%	\$ 4,204	80%	\$ 4,199	80%	
	Lakeside	\$ 978	\$ 1,019	\$ 541	53%	\$ 733	72%	\$ 978	96%	\$ 815	80%	
	Denton Creek	\$ 1,254	\$ 1,516	\$ 762	50%	\$ 1,010	67%	\$ 1,254	83%	\$ 1,213	80%	

Notes:	^ Current Roadway Impact Fee values shown are a range of the existing service areas	
	CIAC recommended Option 4 for Wastewater Impact Fees	
	Option	Description
	1	w/ Financing Costs and Credit Calcs [Calculated Maximum Fees per Chapter 395]
	2	w/ Financing Costs @ 50% of Maximum
	3	w/o Financing Costs, w/ Credit Calcs
	4	Roadway: Service Area A Max. used Townwide, Water/WW: Match 2000-2003 maximums
5	80% of the Maximum Allowable	

**Town of Flower Mound 2003 Impact Fee Update
150,000 Sq. Ft. Shopping Center (2" Meter)**

		2000-2003 Maximum Impact Fee ^	Option									
			1	2		3		4		5		
	Service Area		Maximum Allowable	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	
Wastewater	Long Prairie	\$ 33,632	\$ 41,992	\$ 22,032	52%	\$ 32,824	78%	\$ 33,632	80%	\$ 33,592	80%	
	Lakeside	\$ 7,824	\$ 8,152	\$ 4,328	53%	\$ 5,864	72%	\$ 7,824	96%	\$ 6,520	80%	
	Denton Creek	\$ 10,032	\$ 12,128	\$ 6,096	50%	\$ 8,080	67%	\$ 10,032	83%	\$ 9,704	80%	

Notes:	^ Current Roadway Impact Fee values shown are a range of the existing service areas	
	CIAC recommended Option 4 for Wastewater Impact Fees	
	Option	Description
	1	w/ Financing Costs and Credit Calcs [Calculated Maximum Fees per Chapter 395]
	2	w/ Financing Costs @ 50% of Maximum
	3	w/o Financing Costs, w/ Credit Calcs
	4	Roadway: Service Area A Max. used Townwide, Water/WW: Match 2000-2003 maximums
5	80% of the Maximum Allowable	

Town of Flower Mound 2003 Impact Fee Update 50,000 Square Foot Light Industrial (1½" meter)											
		2000-2003 Maximum Impact Fee ^	Option								
			1	2		3		4		5	
	Service Area		Maximum Allowable	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1	Fee	% of Opt.1
Wastewater	Long Prairie	\$ 21,020	\$ 26,245	\$ 13,770	52%	\$ 20,515	78%	\$ 21,020	80%	\$ 20,995	80%
	Lakeside	\$ 4,875	\$ 5,095	\$ 2,705	53%	\$ 3,665	72%	\$ 4,875	96%	\$ 4,075	80%
	Denton Creek	\$ 6,270	\$ 7,580	\$ 3,810	50%	\$ 5,050	67%	\$ 6,270	83%	\$ 6,065	80%
Notes:	^ Current Roadway Impact Fee values shown are a range of the existing service areas										
	CIAC recommended Option 4 for Wastewater Impact Fees										
	Option	Description									
	1	w/ Financing Costs and Credit Calcs [Calculated Maximum Fees per Chapter 395]									
	2	w/ Financing Costs @ 50% of Maximum									
	3	w/o Financing Costs, w/ Credit Calcs									
4	Roadway: Service Area A Max. used Townwide, Water/WW: Match 2000-2003 maximums										
5	80% of the Maximum Allowable										

APPENDIX F
Project Summary Sheets

Town of Flower Mound

2013 CIP Opinion of Probable Cost (2003 dollars*)

Wastewater Collection System Project Summary

Project No.	Project	Upstream Manhole ID	Downstream Manhole ID	Total Project Length (ft)	Existing Line Size (in)	Proposed Line Size (in)	Construction Cost	Contingency Cost	Subtotal
6	Baker's Branch Interceptor	M005	O002	1990	15	21	\$ 310,398	\$ 62,080	\$ 372,477
22	College St. Interceptor	A009	B003	7434	12/15	15/18	\$ 954,693	\$ 190,939	\$ 1,145,632
25	Kirkpatrick Force Main Replacement	NA	NA	6813		16	\$ 885,855	\$ 231,818	\$ 1,117,673
--	Lakeside Lift Station Ph II	NA	NA	NA	NA	NA	\$ 382,000	\$ 76,400	\$ 458,400
--	Lakeside Force Main Ph II	NA	NA	NA	NA	16	\$ 252,560	\$ 50,512	\$ 303,072
--	Oak Street Force Main Parallel	NA	NA	NA	NA	30	\$ 1,171,198	\$ 234,240	\$ 1,405,438
--	Oak Street Lift Station Expansion	NA	NA	NA	NA	NA	\$ 1,883,157	\$ 376,631	\$ 2,259,788
42	Upper Timber 2 Interceptor	R022	Q017	1350	NA	12	\$ 143,100	\$ 28,620	\$ 171,720
14	Upper Timber Creek Interceptor	D007	D001	3098	15/18	27/30	\$ 593,837	\$ 118,767	\$ 712,605
15	Upper Timber Creek Interceptor	D001	H010	2595	24/27	30/33/36	\$ 571,130	\$ 114,226	\$ 685,356
16	Upper Timber Creek Interceptor	H010	K014	3096	27	33	\$ 655,395	\$ 131,079	\$ 786,474
17	Upper Timber Creek Interceptor	K014	K006	2804	24/27	30/33/36	\$ 571,770	\$ 114,354	\$ 686,124
18	Upper Timber Creek Interceptor	K006	K001	4400	27/30	33/36	\$ 951,827	\$ 190,365	\$ 1,142,193
--	Wichita 1 Lift Station Expansion	NA	NA	NA	NA	NA	\$ 234,415	\$ 46,883	\$ 281,298
--	Wichita 1 Force Main Replacement	NA	NA	7495	12	18	\$ 457,195	\$ 91,439	\$ 548,634
Total							\$ 10,018,531	\$ 2,058,353	\$ 12,076,884

THESE DOCUMENTS ARE INTENDED FOR INTERIM REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

**ROSSER R. STANDIFER
TEXAS P.E. NO. 92755**

Town of Flower Mound

2013 CIP Opinion of Probable Cost (2003 dollars*)

Wastewater Collection System Project Summary (Continued)

Project No.	Project	Subtotal	Easement Cost	Engineering & Survey	Construction Admin.	Line Item Subtotals	Percentage Assignable to 2003-2013 Growth	2003-2013 Share of Ultimate Impr. Cost
6	Baker's Branch Interceptor	\$ 372,477	\$ 145,250	\$ 55,872	\$ 18,624	\$ 592,223	81%	\$ 480,924
22	College St. Collector	\$ 1,145,632	\$ 542,569	\$ 171,845	\$ 57,282	\$ 1,917,327	98%	\$ 1,879,708
25	Kirkpatrick Force Main Replacement	\$ 1,117,673	\$ 304,400	\$ 103,973	\$ 75,100	\$ 1,601,146	45%	\$ 721,237
--	Lakeside Lift Station Ph II	\$ 458,400	\$ 5,590	\$ 68,760	\$ 22,920	\$ 555,670	79%	\$ 436,818
--	Lakeside Force Main Ph II	\$ 303,072	\$ 329,230	\$ 45,461	\$ 15,154	\$ 692,916	63%	\$ 438,847
--	Oak Street Force Main Parallel	\$ 1,405,438	\$ 872,423	\$ 210,816	\$ 70,272	\$ 2,558,948	95%	\$ 2,441,295
--	Oak Street Lift Station Expansion	\$ 2,259,788	\$ 5,590	\$ 338,968	\$ 112,989	\$ 2,717,336	72%	\$ 1,946,200
42	Upper Timber 2 Interceptor	\$ 171,720	\$ 98,550	\$ 25,758	\$ 8,586	\$ 304,614	100%	\$ 304,614
14	Upper Timber Creek Interceptor	\$ 712,605	\$ 226,159	\$ 106,891	\$ 35,630	\$ 1,081,285	95%	\$ 1,030,440
15	Upper Timber Creek Interceptor	\$ 685,356	\$ 189,407	\$ 102,803	\$ 34,268	\$ 1,011,834	97%	\$ 983,149
16	Upper Timber Creek Interceptor	\$ 786,474	\$ 225,972	\$ 117,971	\$ 39,324	\$ 1,169,741	91%	\$ 1,061,751
17	Upper Timber Creek Interceptor	\$ 686,124	\$ 204,693	\$ 102,919	\$ 34,306	\$ 1,028,042	98%	\$ 1,006,760
18	Upper Timber Creek Interceptor	\$ 1,142,193	\$ 321,200	\$ 171,329	\$ 57,110	\$ 1,691,831	96%	\$ 1,623,854
--	Wichita 1 Lift Station Expansion	\$ 281,298	\$ 5,590	\$ 42,195	\$ 14,065	\$ 343,147	37%	\$ 127,793
--	Wichita 1 Force Main Replacement	\$ 548,634	\$ 547,135	\$ 82,295	\$ 27,432	\$ 1,205,496	85%	\$ 1,025,954
Total		\$ 12,076,884	\$ 4,023,758	\$ 1,747,855	\$ 623,061	\$ 18,471,556	95%	\$ 15,509,345

THESE DOCUMENTS ARE INTENDED FOR INTERIM REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

**ROSSER R. STANDIFER
TEXAS P.E. NO. 92755**

The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Baker's Branch Interceptor Capacity Improvements, Project No. 6

Project Description: Consists of replacement of approximately 1,990 linear feet of existing 15-inch gravity sewer line with 21-inch line to allow the interceptor capacity to convey build out flow.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 145,250	\$ _____	_____	_____
Engineering	\$ 55,872	\$ _____	_____	_____
Construction	\$ 310,398	\$ _____	_____	_____
Construction Administration	\$ 18,624	\$ _____	_____	_____
Project Contingency	\$ 62,080	\$ _____	_____	_____
Project Total	\$ 592,223	\$ 0		
Project Cost Assignable to 2013 Growth = 81%	\$ 480,924	\$ 0		

Comments:

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 NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT
 PURPOSES.

ROSSER R. STANDIFER
 TEXAS P.E. NO. 92755

The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: College St. Interceptor Capacity Improvements, Project No. 22

Project Description: Consists of the installation of approximately 7434-feet of new gravity sewer line. Existing 12-inch gravity line from Manhole A015 to A011 will be replaced with 15-inch line. Existing 15-inch gravity line from Manhole A011 to B003 will be replace with 18-inch line. This project also includes installation of approximately 3600-feet of new 15-inch line from Manhole A015 to FM 2499.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 542,569	\$		
Engineering	\$ 171,845	\$		
Construction	\$ 954,693	\$		
Construction Administration	\$ 57,282	\$		
Project Contingency	\$ 190,939	\$		
Project Total	\$ 1,917,327	\$ 0		
Project Cost Assignable to 2013 Growth = 98%	\$ 1,879,708	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Kirkpatrick Force Main Replacement, Project No. 25

Project Description: Consists of the installation of approximately 2465-feet of new force main and 4348-feet of new gravity sewer line. Existing 10-inch force main and gravity line alignment, which traverses a built-out neighborhood southwest of the lift station will be replaced with a new alignment south along Kirkpatrick Rd. to Crosstimbers. Line sizing will be determined in final design, the existing 10-inch line will be replace by 12 to 16-inch force main and gravity sections.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 304,400	\$ _____	_____	_____
Engineering	\$ 103,973	\$ _____	_____	_____
Construction	\$ 885,855	\$ _____	_____	_____
Construction Administration	\$ 75,100	\$ _____	_____	_____
Project Contingency	\$ 231,818	\$ _____	_____	_____
Project Total	\$ 1,601,146	\$ 0		
Project Cost Assignable to 2013 Growth = 45%	\$ 721,237	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Lakeside Lift Station Improvements, Phase II

Project Description: Consists of the installation a new pumps, motors, and piping at the Lakeside Lift Station. This project increases the capacity of the Lakeside Collection System to convey built out flows.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 5,590	\$ _____	_____	_____
Engineering	\$ 68,760	\$ _____	_____	_____
Construction	\$ 382,000	\$ _____	_____	_____
Construction Administration	\$ 22,920	\$ _____	_____	_____
Project Contingency	\$ 76,400	\$ _____	_____	_____
Project Total	\$ 555,670	\$ 0		
Project Cost Assignable to 2013 Growth = 79%	\$ 436,818	\$ 0		

Comments:

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**The Town of Flower Mound
Utility Capital Projects
Project Budget Information**

Date: 12/15/03

Project Name: Lakeside Force Main Phase II

Project Description: Consists of the installation a parallel force main to the Town's Wastewater Treatment Plant. This project increases the capacity of the Lakeside Collection System to convey built out flows.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 329,230	\$ _____	_____	_____
Engineering	\$ 45,461	\$ _____	_____	_____
Construction	\$ 252,560	\$ _____	_____	_____
Construction Administration	\$ 15,154	\$ _____	_____	_____
Project Contingency	\$ 50,512	\$ _____	_____	_____
Project Total	\$ 692,916	\$ 0		
Project Cost Assignable to 2013 Growth = 63%	\$ 438,847	\$ 0		

Comments:

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**The Town of Flower Mound
Utility Capital Projects
Project Budget Information**

Date: 12/15/03

Project Name: Oak Street Lift Station Improvements

Project Description: Consists of the installation a parallel lift station wetwell, pumps, motors, and piping. This project increases the capacity of the Oak Street Lift Station to convey built out flows.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 5,590	\$ _____	_____	_____
Engineering	\$ 338,968	\$ _____	_____	_____
Construction	\$ 1,883,157	\$ _____	_____	_____
Construction Administration	\$ 112,989	\$ _____	_____	_____
Project Contingency	\$ 376,631	\$ _____	_____	_____
Project Total	\$ 2,717,336	\$ 0		
Project Cost Assignable to 2013 Growth = 72%	\$ 1,946,200	\$ 0		

Comments:

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ROSSER R. STANDIFER
TEXAS P.E. NO. 92755

**The Town of Flower Mound
Utility Capital Projects
Project Budget Information**

Date: 12/15/03

Project Name: Oak Street Force Main Parallel

Project Description: Consists of the installation a parallel force main to the Town's Wastewater Treatment Plant. This project increases the capacity of the Oak Street Lift Station to convey built out flows.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 872,423	\$ _____	_____	_____
Engineering	\$ 210,816	\$ _____	_____	_____
Construction	\$ 1,171,198	\$ _____	_____	_____
Construction Administration	\$ 70,272	\$ _____	_____	_____
Project Contingency	\$ 234,240	\$ _____	_____	_____
Project Total	\$ 2,558,948	\$ 0		
Project Cost Assignable to 2013 Growth = 95%	\$ 2,441,295	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek 2 Interceptor Extension, Project No. 42

Project Description: Consists of approximately 1,350 linear feet of 12-inch gravity sewer line. The project extends the Upper Timber
from Manhole R022 to proposed Manhole Q017.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ <u>98,550</u>	\$ _____	_____	_____
Engineering	\$ <u>25,758</u>	\$ _____	_____	_____
Construction	\$ <u>143,100</u>	\$ _____	_____	_____
Construction Administration	\$ <u>8,586</u>	\$ _____	_____	_____
Project Contingency	\$ <u>28,620</u>	\$ _____	_____	_____
Project Total	\$ 304,614	\$ 0		
Project Cost Assignable to 2013 Growth = 100%	\$ 304,614	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek Interceptor Improvements, Project No. 14

Project Description: Consists of replacement of approximately 3,098 linear feet of 15 to 18-inch gravity sewer line. The project increases the capacity of the Upper Timber to convey built out flows. The 15 and 18-inch gravity sections between Manhole D007 to D004 will be replaced with 27-inch line, the remaining sections from Manhole D004 to D001 will be replaced with 30-inch pipe.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 226,159	\$ _____	_____	_____
Engineering	\$ 106,891	\$ _____	_____	_____
Construction	\$ 593,837	\$ _____	_____	_____
Construction Administration	\$ 35,630	\$ _____	_____	_____
Project Contingency	\$ 118,767	\$ _____	_____	_____
Project Total	\$ 1,081,285	\$ 0		
Project Cost Assignable to 2013 Growth = 95%	\$ 1,030,440	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek Interceptor Improvements, Project No. 15

Project Description: Consists of replacement of approximately 2,595 linear feet of 24 to 27-inch gravity sewer line. The project increases the capacity of the Upper Timber to convey built out flows. The 14-inch gravity line sections between Manhole D001 to H013 will be replaced with 30-inch pipe, the sections from Manhole H013 to H019 will be replaced with 33-inch pipe, and sections between Manhole H019 and Manhole H010 will be replaced with 36-inch pipe.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 189,407	\$ _____	_____	_____
Engineering	\$ 102,803	\$ _____	_____	_____
Construction	\$ 571,130	\$ _____	_____	_____
Construction Administration	\$ 34,268	\$ _____	_____	_____
Project Contingency	\$ 114,226	\$ _____	_____	_____
Project Total	\$ 1,011,834	\$ 0		
Project Cost Assignable to 2013 Growth = 97%	\$ 983,149	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek Interceptor Improvements, Project No. 16

Project Description: Consists of replacement of approximately 3,096 linear feet of 27-inch gravity sewer line. The project increases the capacity of the Upper Timber to convey built out flows. The 27-inch gravity line sections between Manhole H010 to H001 and H001 to K014 will be replaced with 33-inch pipe.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 225,972	\$ _____	_____	_____
Engineering	\$ 117,971	\$ _____	_____	_____
Construction	\$ 655,395	\$ _____	_____	_____
Construction Administration	\$ 39,324	\$ _____	_____	_____
Project Contingency	\$ 131,079	\$ _____	_____	_____
Project Total	\$ 1,169,741	\$ 0		
Project Cost Assignable to 2013 Growth = 91%	\$ 1,061,751	\$ 0		

Comments:

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ROSSER R. STANDIFER
 TEXAS P.E. NO. 92755

The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek Interceptor Improvements, Project No. 17

Project Description: Consists of replacement of approximately 2,804 linear feet of 24 and 27-inch gravity sewer line. The project increases the capacity of the Upper Timber to convey built out flows. The sizing of the replacement lines will be determined in detailed design. The 24 to 27-inch existing line will be replaced with new 30 to 36-inch sections.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 204,693	\$ _____	_____	_____
Engineering	\$ 102,919	\$ _____	_____	_____
Construction	\$ 571,770	\$ _____	_____	_____
Construction Administration	\$ 34,306	\$ _____	_____	_____
Project Contingency	\$ 114,354	\$ _____	_____	_____
Project Total	\$ 1,028,042	\$ 0		
Project Cost Assignable to 2013 Growth = 98%	\$ 1,006,760	\$ 0		

Comments:

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ROSSER R. STANDIFER
TEXAS P.E. NO. 92755

The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Upper Timber Creek Interceptor Improvements, Project No. 18

Project Description: Consists of replacement of approximately 4,400 linear feet of 27 and 30-inch gravity sewer line. The project increases the capacity of the Upper Timber to convey built out flows. The 27-inch gravity line sections between Manhole K006 to K004 will be replaced with 33-inch pipe, the 30-inch sections from Manhole K004 to K001 will be replaced with 36-inch pipe.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 321,200	\$ _____	_____	_____
Engineering	\$ 171,329	\$ _____	_____	_____
Construction	\$ 951,827	\$ _____	_____	_____
Construction Administration	\$ 57,110	\$ _____	_____	_____
Project Contingency	\$ 190,365	\$ _____	_____	_____
Project Total	\$ 1,691,831	\$ 0		
Project Cost Assignable to 2013 Growth = 96%	\$ 1,623,854	\$ 0		

Comments:

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**The Town of Flower Mound
Utility Capital Projects
Project Budget Information**

Date: 12/15/03

Project Name: Wichita 1 Lift Station Improvements

Project Description: Consists of the installation a new pumps, motors, and piping at the Wichita 1 Lift Station. This project increases the capacity of the Wichita 1 Lift Station to convey built out flows.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 5,590	\$ _____	_____	_____
Engineering	\$ 42,195	\$ _____	_____	_____
Construction	\$ 234,415	\$ _____	_____	_____
Construction Administration	\$ 14,065	\$ _____	_____	_____
Project Contingency	\$ 46,883	\$ _____	_____	_____
Project Total	\$ 343,147	\$ 0		
Project Cost Assignable to 2013 Growth = 37%	\$ 127,793	\$ 0		

Comments:

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The Town of Flower Mound
Utility Capital Projects
Project Budget Information

Date: 12/15/03

Project Name: Wichita 1 Force Main Replacement

Project Description: Consists of the installation a replacement force main. This project increases the capacity of the Wichita 1 Lift Station to convey built out flows. The existing 12-inch piping will be replaced with a new 18-inch force main.

Description	Budget	Actual	Start Date	Completion Date
ROW Easements	\$ 547,135	\$ _____	_____	_____
Engineering	\$ 82,295	\$ _____	_____	_____
Construction	\$ 457,195	\$ _____	_____	_____
Construction Administration	\$ 27,432	\$ _____	_____	_____
Project Contingency	\$ 91,439	\$ _____	_____	_____
Project Total	\$ 1,205,496	\$ 0		
Project Cost Assignable to 2013 Growth = 85%	\$ 1,025,954	\$ 0		

Comments:

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