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Water & Wastewater Impact Fee Update

EXHIBIT B: Land Use Assumptions Wastewater Facilities 2013- 2033

Prepared for:

City of Fort Worth Water Department



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Appendix B- Wastewater Wholesale Customer Population and Employment Projections

1.0 INTRODUCTION

Chapter 395 of the Texas Local Government Code requires an impact fee analysis before impact fees can be assessed. Chapter 395 defines an impact fee as “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.” In September 2001, Senate Bill 243 amended Chapter 395, thus creating the current procedure for implementing impact fees. Chapter 395 identifies the following items as impact fee eligible costs:

- Construction contract price
- Surveying, engineering and inspection fees
- Land acquisition costs
- Cost of engineering studies
- Fees paid to the consultant preparing or updating the capital improvements plan (CIP)
- Projected interest charges and other finance costs for projects identified in the CIP

Chapter 395 also identifies items that impact fees cannot be used to pay for, such as:

- Construction, acquisition, or expansion of public facilities or assets other than those identified on the capital improvements plan
- Repair, operation or maintenance of existing or new capital improvements
- Upgrading, updating, expanding or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental or regulatory standards
- Upgrading, updating, expanding or replacing existing capital improvements to provide better service to existing development
- Administrative and operating costs of the political subdivision
- Principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed above

In April 2012, the City of Fort Worth authorized Freese and Nichols, Inc. (FNI) to perform an update to the impact fee analysis on the City's water and wastewater systems. The purpose of this report is to address the methodology used in the development of the wastewater facilities land use assumptions. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water and wastewater impact fees.

The City updated its wastewater land use assumptions and capital improvements plan in 1993, 1996, 1999, 2004 and 2009. This report updates the wastewater facilities land use assumptions for the years 2013, 2023 and 2033. This information will be used in the update of the wastewater impact fees.

2.0 WASTEWATER SERVICE AREA

Chapter 395 defines the service area as the area within the corporate boundaries or extraterritorial jurisdiction, as determined under Chapter 42, of the political subdivision to be served by the capital improvements or facilities expansions specified in the capital improvements plan, except roadway facilities and storm water, drainage, and flood control facilities. The service area for Fort Worth's wastewater system is defined as the city limits, the unincorporated existing extraterritorial jurisdiction (ETJ), and wholesale customers. The service area is the area to which wastewater service could be provided on a retail basis and to all wholesale wastewater customers. **Figure B-1** shows the entire wastewater service area for the City of Fort Worth.

The City of Fort Worth provides wastewater service to 23 wholesale customers which make up the wastewater service area. For the purposes of this study, it is assumed that the wholesale customers will remain under contract with the City for the duration of the future planning periods (2013-2033). The wholesale customers include all or part of:

- Benbrook Water Authority
- Bethesda Water Supply Corp.
- Blue Mound
- Burleson
- Crowley
- Edgecliff Village
- Everman
- Forest Hill
- Haltom City
- Hurst
- Kennedale
- Lake Worth
- North Richland Hills
- Pantego
- Richland Hills
- River Oaks
- Saginaw
- Sansom Park
- Trinity River Authority
- Wautaga
- Westover Hills
- Westworth Village
- White Settlement

The City also provides wastewater service to unincorporated areas that are not included within its limits or wholesale customers' city limits.

3.0 POPULATION AND EMPLOYMENT PROJECTIONS

Population and employment projections are important elements in the impact fee process. Wastewater flows depend on the residential population and commercial development served by the collection system and determine the sizing and location of collection system infrastructure. For the impact fee update, populations are projected for years 2013, 2023 and 2033. FNI utilized data from wholesale customer surveys, the Fort Worth Planning and Development Department and North Central Texas Council of Governments (NCTCOG) projections to determine the population and employment projections for the City of Fort Worth and its customers for the planning periods of 2013, 2023 and 2033.

3.1 CITY OF FORT WORTH PROJECTIONS

FNI utilized NCTCOG data, along with data from the City of Fort Worth Planning and Development Department, to develop population projections for the 2013, 2023 and 2033 planning periods. **Table 3-1** shows the City’s population and employment projections and annual growth rate for each 10-year period.

Table 3-1 City of Fort Worth Retail Service Population and Employment Projections

Fort Worth Wastewater Service Area					
Year	Area	Population		Employment	
		Amount	Annual Growth Rate*	Amount	Annual Growth Rate*
2013	Village Creek WRF	706,632	--	447,297	--
	TRA Denton Creek	28,521	--	37,968	--
	TRA Central	32,657	--	39,842	--
2023	Village Creek WRF	922,692	2.7%	532,335	1.8%
	TRA Denton Creek	69,404	9.3%	60,020	4.7%
	TRA Central	41,659	2.5%	49,911	2.3%
2033	Village Creek WRF	1,151,081	2.2%	608,874	1.4%
	TRA Denton Creek	99,342	3.7%	77,037	2.5%
	TRA Central	51,732	2.2%	60,064	1.9%

*Annual Growth Rate is based on information from NCTCOG and the Fort Worth Planning and Development Department

The Village Creek Water Reclamation Facility (WRF) retail service population is projected to annually increase 2.7% from 2013 to 2023 and 2.2% from 2023 to 2033. The Village Creek WRF retail service employment is projected to annually increase 1.8% from 2013 to 2023 and 1.4% from 2023 to 2033.

3.2 WHOLESALE CUSTOMERS

Surveys were sent out by the City of Fort Worth to each wholesale customer to provide population and employment projections for each planning period. Wholesale customers were contacted with follow-up emails or phone calls if no survey was returned by the requested due date. If no survey was returned, FNI used projection information from NCTCOG to estimate population and employment. The wholesale customer surveys received by FNI can be found in **Appendix A**. The completed surveys were compared to the NCTCOG projections to check for validity and consistency. Adjustments were made to population and employment projections where necessary. **Table 3-2** summarizes the sum of the wholesale customer population and employment projections within the City of Fort Worth’s wastewater service area.

Table 3-2 Wholesale Customer Service Population and Employment Projections

Fort Worth Wastewater Service Area					
Year	Area	Population		Employment	
		Amount	Annual Growth Rate*	Amount	Annual Growth Rate*
2013	Village Creek WRF	319,453	--	127,925	--
	TRA Denton Creek	2,400	--	649	--
	TRA Central	--	--	--	--
2023	Village Creek WRF	371,028	1.5%	157,573	2.1%
	TRA Denton Creek	2,400	0.0%	765	0.0%
	TRA Central	--	--	--	--
2033	Village Creek WRF	412,473	1.1%	180,961	1.4%
	TRA Denton Creek	2,400	0.0%	894	0.0%
	TRA Central	--	--	--	--

*Annual Growth Rate is based on information from NCTCOG, Fort Worth Wastewater Master Plan, and Wholesale Customer Surveys

The Village Creek WRF wholesale service population is projected to annually increase 1.5% from 2013 to 2023 and 1.1% from 2023 to 2033. The Village Creek WRF wholesale service employment is projected to annually increase 2.1% from 2013 to 2023 and 1.4% from 2023 to 2033. Detailed service population and employment projections broken down by each wholesale customer can be found in **Appendix B**.

3.3 TOTAL WASTEWATER SERVICE AREA

Table 3-3 shows the combined population and employment projections for the City of Fort Worth, and its wholesale customer cities. The total Village Creek WRF service population is projected to annually increase 2.3% from 2013 to 2023 and 1.9% from 2023 to 2033. The total Village Creek WRF service employment is projected to annually increase 1.9% from 2013 to 2023 and 1.4% from 2023 to 2033.

Table 3-3 Total Wastewater Service Area Population and Employment Projections

Fort Worth Wastewater Service Area					
Year	Area	Population		Employment	
		Amount	Annual Growth Rate*	Amount	Annual Growth Rate*
2013	Village Creek WRF	1,026,085	--	575,222	--
	TRA Denton Creek	30,921	--	38,617	--
	TRA Central	32,657	--	39,842	--
2023	Village Creek WRF	1,293,720	2.3%	689,908	1.8%
	TRA Denton Creek	71,804	8.8%	60,785	4.6%
	TRA Central	41,659	2.5%	49,911	2.3%
2033	Village Creek WRF	1,563,554	1.9%	789,835	1.4%
	TRA Denton Creek	101,742	3.5%	77,931	2.5%
	TRA Central	51,732	2.2%	60,064	1.9%

*Annual Growth Rate is based on information from NCTCOG, the Fort Worth Planning and Development Department and Wholesale Customer Surveys

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