

WATER/WASTEWATER IMPACT FEE UPDATE



EXHIBIT B: LAND USE ASSUMPTIONS - WASTEWATER (2022–2041)

PREPARED BY: FREESE AND NICHOLS, INC. 801 CHERRY STREET, SUITE 2800 FORT WORTH, TEXAS 76102 817-735-7300





Innovative approaches
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WATER & WASTEWATER IMPACT FEE UPDATE

EXHIBIT B: LAND USE ASSUMPTIONS - WASTEWATER (2022 – 2041)

Prepared for:

Fort Worth Water



July 22, 2021

Prepared by:

FREESE AND NICHOLS, INC.

801 Cherry Street, Suite 2800 Fort Worth, Texas 76102 817-735-7300



WATER & WASTEWATER IMPACT FEE UPDATE

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Fort Worth Water



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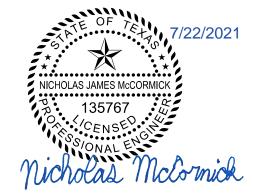
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FREESE AND NICHOLS, INC. TEXAS REGISTERED ENGINEERING FIRM F-2144

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FTW20118



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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." 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

Exhibit B: Land Use Assumptions - Wastewater



In December 2019, 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 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, 2009, 2012 and 2017. This report updates the wastewater land use assumptions for the years 2022, 2031 and 2041. This information will be used in the update of the wastewater impact fees.

Exhibit B: Land Use Assumptions - Wastewater



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, portions of the unincorporated existing extraterritorial jurisdiction (ETJ), and wholesale customers. This 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 (2022-2041). The wholesale customers are:

•	Ben	brook	(Water	Aut	hority
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Haltom City

Kennedale

Saginaw

Bethesda Water Supply Corp.

Sansom Park

Trinity River Authority

Blue MoundBurleson

Lake Worth

Hurst

Watauga

Crowley

• North Richland Hills

Westover Hills

Edgecliff Village

Pantego

Westworth Village

Everman

Richland Hills

White Settlement

Forest Hill

River Oaks

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

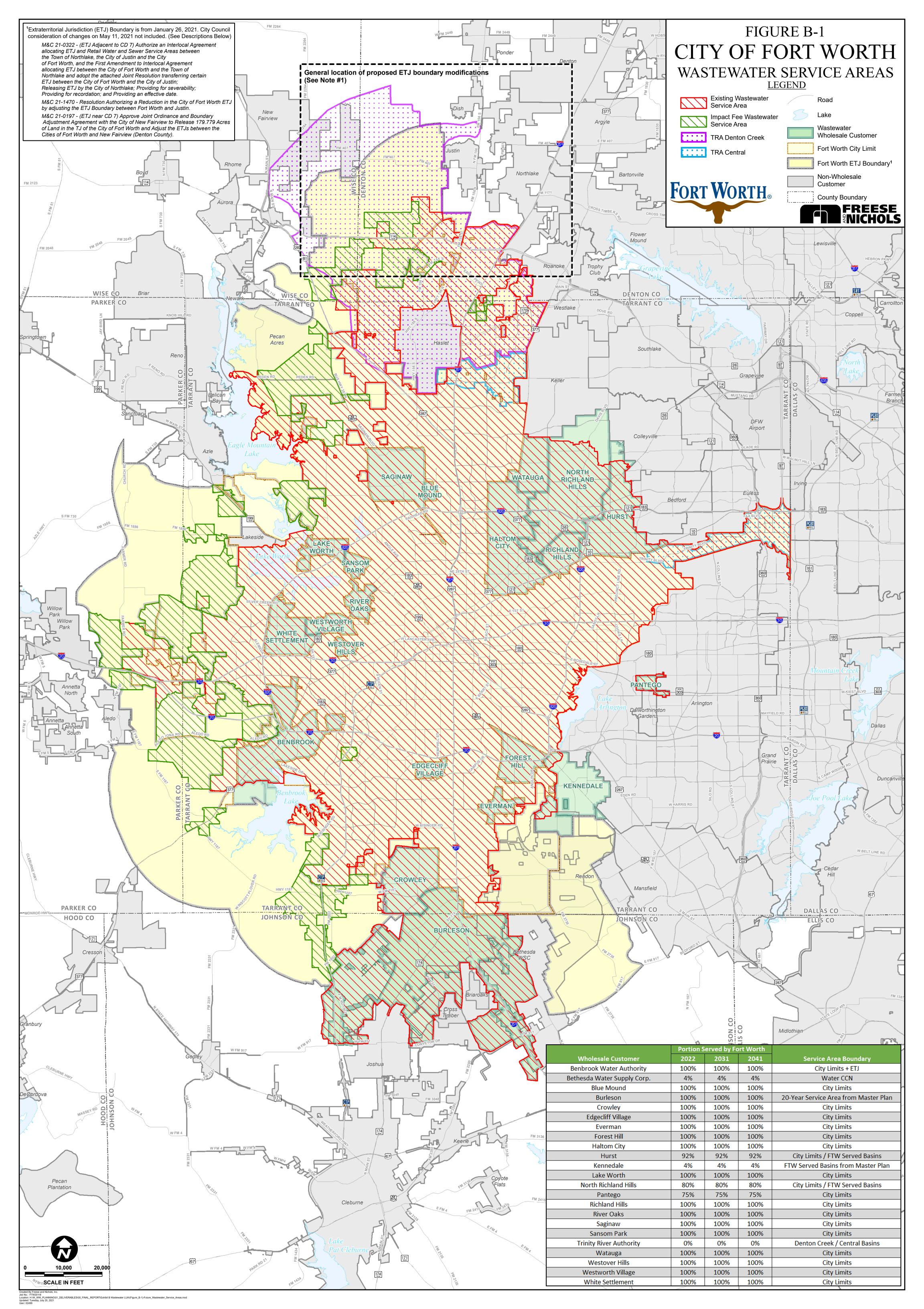


Exhibit B: Land Use Assumptions - Wastewater



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 2022, 2031 and 2041. 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 2022, 2031 and 2041. At the time of this study, 2020 U.S. Census information was not available. Historical NCTCOG information was utilized as the basis for the population and employment projections.

3.1 CITY OF FORT WORTH PROJECTIONS

FNI utilized development data from the City of Fort Worth Planning and Development Department, along with NCTCOG data, to develop population projections for the 2022, 2031 and 2041 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					
		Population		Employment		
			Annual Growth		Annual Growth	
Year	Area	Amount	Rate*	Amount	Rate*	
	Village Creek WRF	839,735		553,086		
2022	TRA Denton Creek	54,497		50,765		
76	TRA Central	17,738		11,158		
	Total	911,970		615,009		
	Village Creek WRF	1,043,237	2.2%	627,583	1.3%	
2031	TRA Denton Creek	70,672	2.6%	63,259	2.2%	
70	TRA Central	19,769	1.1%	13,199	1.7%	
	Total	1,133,678	2.2%	704,041	1.4%	
	Village Creek WRF	1,270,448	2.0%	736,753	1.6%	
11	TRA Denton Creek	91,385	2.6%	76,373	1.9%	
2041	TRA Central	20,114	0.2%	14,522	1.0%	
	Total	1,381,947	2.0%	827,648	1.6%	

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

The total Village Creek Water Reclamation Facility (WRF) retail service population is projected to increase 2.2% annually from 2022 to 2031 and 2.0% annually from 2031 to 2041. The total Village Creek WRF retail employment is projected to increase 1.3% annually from 2022 to 2031 and 1.6% annually from 2031 to 2041.

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 NCTCOG projections to check for validity and consistency. Adjustments were made to population and employment projections where necessary. **Table 3-2** summarizes the total served wholesale customer population and employment projections within the City of Fort Worth's wastewater service area.

Table 3-2 Wholesale Customer Population and Employment Projections

Fort Worth Wastewater Service Area					
		Population		Employment	
Year	Area	Amount	Annual Growth Rate*	Amount	Annual Growth Rate*
	Village Creek WRF	364,844		164,635	
2022	TRA Denton Creek				
20	TRA Central			1	
	Total	364,844		164,635	
	Village Creek WRF	429,667	1.6%	185,300	1.2%
2031	TRA Denton Creek				
7(TRA Central			-	
	Total	429,667	1.6%	185,300	1.2%
	Village Creek WRF	490,403	1.3%	200,516	0.8%
.	TRA Denton Creek			1	
2041	TRA Central				
	Total	490,403	1.3%	200,516	0.8%

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



The Village Creek WRF wholesale service population is projected to increase 1.6% annually from 2022 to 2031 and 1.3% annually from 2031 to 2041. The total Village Creek WRF wholesale service employment is projected to increase 1.2% annually from 2022 to 2031 and 0.8% annually from 2031 to 2041. 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 customers. The total Village Creek WRF population is projected to increase 2.0% annually from 2022 to 2031 and 1.8% annually from 2031 to 2041. The employment is projected to increase 1.3% annually from 2022 to 2031 and 1.4% annually from 2031 to 2041.

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

	Fort Worth Wastewater Service Area Fort Worth Wastewater Service Area					
		Population		Employment		
Year	Area	Amount	Annual Growth Rate*	Amount	Annual Growth Rate*	
	Village Creek WRF	1,204,579		717,721		
2022	TRA Denton Creek	54,497		50,765		
7(TRA Central	17,738		11,158		
	Total	1,276,814		779,644		
	Village Creek WRF	1,472,904	2.0%	812,883	1.3%	
2031	TRA Denton Creek	70,672	2.6%	63,259	2.2%	
5(TRA Central	19,769	1.1%	13,199	1.7%	
	Total	1,563,345	2.0%	889,341	1.3%	
	Village Creek WRF	1,760,851	1.8%	937,269	1.4%	
11	TRA Denton Creek	91,385	2.6%	76,373	1.9%	
2041	TRA Central	20,114	0.2%	14,522	1.0%	
	Total	1,872,350	1.8%	1,028,164	1.5%	

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



Appendix A Wastewater Wholesale Customer Surveys



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: Benbrook Water Authority
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections				
2019	22,933			
2020	23,176			
2030	28,314			
2040	34,213			

Employment Projections				
2019	6,132			
2020	6,242			
2030	7,342			
2040	8,441			

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)		
2020	8	
2030	8	
2040	8	

Maximum Day Demand		
Projections (MGD)		
2020	15	
2030	15	
2040	15	

Percentage of Water				
Demands Served by FTW				
2020	0%			
2030	0%			
2040	0%			

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? Yes.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters			
Meter Size	Quantity		
5/8"	5,145		
3/4"	43		
1"	3,075		
1-1/2"	17		
2"	87		
3"	25		
4"	0		
6"	0		
8"	0		
10"	0		

Non-Residential Meters		
Meter Size	Quantity	
5/8"	138	
3/4"	4	
1"	221	
1-1/2"	54	
2"	107	
3"	11	
4"	3	
6"	2	
8"	0	
10"	0	

12. Are there any current ordinances concerning water impact fees within your utility? Resolutions and water impact fees.

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	
2030	
2040	

Peak Wet Weather	
Flow Pro	jection (MGD)
2020	
2030	
2040	

Percentage of Wastewater Flow Served by FTW		
2020	100%	
2030	100%	
2040	100%	

16. Existing number of wastewater customer	s SERVED	by Fort	Worth
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(Residential:_____, Non-Residential:______)

- 17. Will your service area boundaries be expanded in the next 20 years? (Y/N)
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"	5,145	
3/4"	43	
1"	3,075	
1-1/2"	17	
2"	87	
3"	25	
4"	0	
6"	0	
8"	0	
10"	0	

Non-Residential Meters		
Meter Size	Quantity	
5/8"	138	
3/4"	4	
1"	221	
1-1/2"	54	
2"	107	
3"	11	
4"	3	
6"	2	
8"	0	
10"	0	

20. Are there any current ordinances concerning wastewater impact fees within your utility?



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS

NICHOLS

FOR IMPACT FEE STUDY April 2020

LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: Bethesda Water Supply Corp.
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	31,563
2020	31,869
2030	35,099
2040	38,656

Employment Projections		
2019	0	
2020	0	
2030	0	
2040	0	

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	2,990,000
2030	3,290,000
2040	3,620,000

Maximum Day Demand Projections (MGD)	
2020	8,630,000
2030	9,502,000
2040	10,400,000

Percentage of Water		
Demands Served by FTW		
2020	68%	
2030	75%	
2040	79%	

- 8. Will you require a larger and/or additional meter within the next 20 years? Yes.
- 9. Will your service area boundaries be expanded within the next 20 years? Yes.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters		
Meter Size	Quantity	
5/8"	10,293	
3/4"	8	
1"	42	
1-1/2"	4	
2"	2	
3"	1	
4"	0	
6"	0	
8"	0	

Non-Residential Meters	
Meter Size	Quantity
5/8"	142
3/4"	8
1"	44
1-1/2"	13
2"	55
3"	1
4"	8
6"	1
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes; \$1,000.00 equity buy-in fee per 5/8" meter equivalent.

Wastewater Service Information

10"

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections	
2020	78,732
2030	78,732
2040	78,732

Peak Wet Weather	
Flow Projections	
2020	101,041
2030	101,041
2040	101,041

Percentage of Wastewater		
Flow Served by FTW		
2020	4%	
2030	4%	
2040	4%	

- 16. Existing number of wastewater customers SERVED by Fort Worth (Residential: 426_, Non-Residential: 0_)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	10,293
3/4"	8
1"	42
1-1/2"	4
2"	2
3"	1
4"	0
6"	0
8"	0
10"	n

Non-Residential Meters	
Meter Size	Quantity
5/8"	142
3/4"	8
1"	44
1-1/2"	13
2"	55
3"	1
4"	8
6"	1
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? No.



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

ODemographics Information

- 1. OWholesale Customer Name: City of Blue Mound
- 2. Wholesale Customer Type (Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	2,636
2020	2,700
2030	2,700
2040	2,700

Employment Projections		
2019	-	
2020	732	
2030	855	
2040	984	

- 5. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	0.145
2030	0.145
2040	0.145

Peak Wet Weather Flow		
Projections (MGD)		
2020	0.19	
2030	0.19	
2040	0.19	

Percentage of Wastewater Flow Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Existing number of wastewater customers SERVED by Fort Worth (Residential: 807_, Non-Residential: 26_)
- 9. Will your service area boundaries be expanded in the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	807
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	n

Non-Residential Meters	
Meter Size	Quantity
5/8"	24
3/4"	0
1"	1
1-1/2"	0
2"	1
3"	0
4"	0
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Burleson
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	
2020	49,981
2030	77,949
2040	108,681

Employment Projections	
2019	22,925
2020	23,382
2030	26,700
2040	30,700

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	8.22
2030	9.68
2040	10.30

Maximum Day Demand		
Projections (MGD)		
2020	18.08	
2030	21.29	
2040	22.65	

Percentage of Water		
Demands Served by FTW		
2020	93%	
2030	76%	
2040	62%	

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	13,746
3/4"	3
1"	202
1-1/2"	8
2"	1
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	484
3/4"	5
1"	287
1-1/2"	140
2"	285
3"	58
4"	6
6"	1
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes.

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	5.78
2030	8.94
2040	10.61

Peak Wet Weather Flow		
Projections (MGD)		
2020	17.22	
2030	27.97	
2040	33.63	

Percentage of Wastewater		
Flow Served by FTW		
2020	100%	
2030	100%	
2040	100%	

16. Existing number of wastewater customers S	ERVED by Fort Worth
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(Residential:_____, Non-Residential:_____)

- 17. Will your service area boundaries be expanded in the next 20 years? Yes.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	13,746
3/4"	2
1"	3
1-1/2"	3
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	385
3/4"	0
1"	139
1-1/2"	101
2"	210
3"	20
4"	3
6"	1
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue

City Responses in Red

April 2020

Demographics Information

1. Wholesale Customer Name: City of Crowley

2. Wholesale Customer Type (Water and Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	16,721
2020	18,053
2030	25,000
2040	35,000

Employment Projections	
2019	-
2020	3,089
2030	3,907
2040	4,861

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	3
2030	4
2040	5

Maximum Day Demand	
Projections (MGD)	
2020	7
2030	8
2040	10

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	6,467
3/4"	0
1"	35
1-1/2"	16
2"	30
3"	2
4"	0
6"	0
8"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	0
1"	59
1-1/2"	14
2"	48
3"	15
4"	0
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility?

Ordinances in place.

Wastewater Service Information

10"

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	4
2030	12
2040	14

Peak Wet Weather Flow	
Projections (MGD)	
2020	5
2030	13
2040	15

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

- 16. Existing number of wastewater customers SERVED by Fort Worth (Residential: 6,162 , Non-Residential: 660)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	6,467
3/4"	0
1"	35
1-1/2"	16
2"	30
3"	2
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	0
1"	59
1-1/2"	14
2"	48
3"	15
4"	0
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility?



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: Town of Edgecliff Village
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	3,220
2020	3,240
2030	3,260
2040	3,260

Employment Projections	
2019	1
2020	1,622
2030	1,810
2040	1,912

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Projections (MGD)	
2020	0.44
2030	0.44
2040	0.44

Maximum Day Demand	
Projections (MGD)	
2020	1.15
2030	1.15
2040	1.15

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? (Y/N)
- Will your service area boundaries be expanded within the next 20 years? (Y/N)
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	78
3/4"	1,257
1"	33
1-1/2"	5
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	3
1"	4
1-1/2"	0
2"	7
3"	0
4"	0
6"	1
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections	
2020	0.32
2030	0.33
2040	0.33

Peak Wet Weather Flow Projections	
2020	1.28
2030	1.32
2040	1.32

Percentage of Wastewater Flow Served by FTW	
2020	100%
2030	100%
2040	100%

16. Existing number of wastewater customers SERVED by Fort	Worth
--	-------

(Residential:_____, Non-Residential:_____)

- 17. Will your service area boundaries be expanded in the next 20 years? (Y/N)
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"	78	
3/4"	1,257	
1"	33	
1-1/2"	5	
2"	0	
3"	0	
4"	0	
6"	0	
8"	0	
10"	0	

Non-Residential Meters		
Meter Size	Quantity	
5/8"	0	
3/4"	3	
1"	4	
1-1/2"	0	
2"	7	
3"	0	
4"	0	
6"	1	
8"	0	
10"	0	

20. Are there any current ordinances concerning wastewater impact fees within your utility?



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS

FREESE NICHOLS

FOR IMPACT FEE STUDY April 2020

LEGEND

City Responses in Red

FNI Responses in Blue

Demographics Information

1. Wholesale Customer Name: City of Everman

2. Wholesale Customer Type (Water and Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections		
2019	6,250	
2020	6,500	
2030	7,500	
2040	8,000	

Employment Projections	
2019	-
2020	1,652
2030	1,724
2040	1,793

Water Service Information

5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	0
2030	0
2040	0

Maximum Day Demand	
Projections (MGD)	
2020	0
2030	0
2040	0

Percentage of Water	
Demands Served by FTW	
2020	0%
2030	0%
2040	0%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")





MPACT	FEE	STU
April	2020)

Residential Meters		
Meter Size	Quantity	
5/8"	0	
3/4"	1,817	
1"	0	
1-1/2"	0	
2"	0	
3"	0	
4"	0	
6"	0	
8"	0	
10"	0	

Non-Residential Meters		
Meter Size	Quantity	
5/8"	0	
3/4"	156	
1"	14	
1-1/2"	5	
2"	11	
3"	3	
4"	1	
6"	0	
8"	0	
10"	0	

12. Are there any current ordinances concerning water impact fees within your utility? Yes.

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	400,000
2030	600,000
2040	700,000

Peak Wet Weather Flow	
Projections (MGD)	
2020	300,000
2030	500,000
2040	600,000

Percentage of Wastewater		
Flow S	Flow Served by FTW	
2020	100%	
2030	100%	
2040	100%	

- 16. Existing number of wastewater customers SERVED by Fort Worth
 - (Residential: 1,810 , Non-Residential: 153)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	1,817
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	156
1"	14
1-1/2"	5
2"	11
3"	3
4"	1
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS

FREESE NICHOLS

FOR IMPACT FEE STUDY April 2020

LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: Forest Hill
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	13,000
2020	13,100
2030	13,150
2040	13,200

Employment Projections	
2019	9,550
2020	9,600
2030	9,712
2040	9,907

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Projections (MGD)	
2020	2.200
2030	2.200
2040	2.300

Maximum Day Demand	
Projections (MGD)	
2020	2.700
2030	2.800
2040	2.805

Percentage of Water Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? Yes.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	4,559
1"	10
1-1/2"	38
2"	55
3"	1
4"	1
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	10
1"	7
1-1/2"	2
2"	6
3"	1
4"	1
6"	1
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes, see attached form.

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	2.281
2030	2.200
2040	2.300

Peak Wet Weather	
Flow Projection (MGD)	
2020	2.180
2030	2.100
2040	2.100

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

16. Existing number of

wastewater customers SERVED by Fort Worth

(Residential: 4,329 , Non-Residential: 333)

- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	4,559
1"	10
1-1/2"	38
2"	55
3"	1
4"	1
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	10
1"	7
1-1/2"	2
2"	6
3"	1
4"	1
6"	1
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes, see attached documentation.



WHOLESALE CUSTOMER SURVEY

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue

City Responses in Red

April 2020

Demographics Information

- 1. Wholesale Customer Name: City of Haltom City
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	43,000
2020	43,500
2030	50,000
2040	50,000

Employment Projections	
2019	21,000
2020	21,300
2030	24,500
2040	24,500

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	4.4
2030	4.9
2040	4.9

Maximum Day Demand	
Projections (MGD)	
2020	8.8
2030	9.8
2040	9.8

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? (Y/N)
- Will your service area boundaries be expanded within the next 20 years? (Y/N)
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters		
Meter Size	Quantity	
5/8"	11,369	
3/4"	0	
1"	4	
1-1/2"	0	
2"	37	
3"	1	
4"	0	
6"	0	
8"	0	
10"	0	

Non-Residential Meters		
Meter Size	Quantity	
5/8"	1,584	
3/4"	0	
1"	5	
1-1/2"	0	
2"	18	
3"	1	
4"	1	
6"	2	
8"	0	
10"	0	

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	
2030	
2040	

Peak Wet Weather Flow Projections (MGD)		
2020		
2030		
2040		

Percentage of Wastewater Flow Served by FTW		
2020	100%	
2030	100%	
2040	100%	

16. l	Existing nu	ımber of v	wastewater	customers	SERVED b	y Fort	Worth
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(Residential:_____, Non-Residential:_____)

- 17. Will your service area boundaries be expanded in the next 20 years? (Y/N)
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"	11,369	
3/4"	0	
1"	4	
1-1/2"	0	
2"	37	
3"	1	
4"	0	
6"	0	
8"	0	
10"	0	

Non-Residential Meters		
Meter Size	Quantity	
5/8"	1,584	
3/4"	0	
1"	5	
1-1/2"	0	
2"	18	
3"	1	
4"	1	
6"	2	
8"	0	
10"	0	

20. Are there any current ordinances concerning wastewater impact fees within your utility?



April 2020

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Hurst
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections		
2019	38,187	
2020	38,510	
2030	39,637	
2040	40,817	

Employment Projections		
2019	26,296	
2020	26,711	
2030	30,861	
2040	32,936	

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	5
2030	5
2040	6

Maximum Day Demand		
Projections (MGD)		
2020	10	
2030	10	
2040	11	

Percentage of Water	
Demands Served by FTW	
2020	99%
2030	99%
2040	99%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	9,454
3/4"	1
1"	1,517
1-1/2"	33
2"	4
3"	0
4"	1
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	465
3/4"	0
1"	367
1-1/2"	251
2"	239
3"	32
4"	18
6"	4
8"	1
10"	0

12. Are there any current ordinances concerning water impact fees within your utility?

Ordinance #2353.

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	4
2030	4
2040	5

Peak Wet Weather Flow	
Projections (MGD)	
2020	16
2030	16
2040	20

Percentage of Wastewater	
Flow Served by FTW	
2020	92%
2030	92%
2040	92%

- 16. Existing number of wastewater customers SERVED by Fort Worth (Residential: <u>10.477</u>, Non-Residential: <u>1,377</u>)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	9,454
3/4"	1
1"	1,517
1-1/2"	33
2"	4
3"	0
4"	1
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	465
3/4"	0
1"	367
1-1/2"	251
2"	239
3"	32
4"	18
6"	4
8"	1
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Ordinance #2353.



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS

NICHOLS

FOR IMPACT FEE STUDY April 2020

LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Kennedale
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	
2020	7,670
2030	10,820
2040	15,263

Employment Projections	
2019	
2020	4,616
2030	5,864
2040	7,119

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Projections (MGD)	
2020	0.21
2030	0.23
2040	0.21

Maximum Day Demand	
Projections (MGD)	
2020	0.47
2030	0.50
2040	0.47

Percentage of Water Demands Served by FTW	
2020	20%
2030	15%
2040	10%

- 8. Will you require a larger and/or additional meter within the next 20 years?
- 9. Will your service area boundaries be expanded within the next 20 years?
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters		
Meter Size	Quantity	
5/8"		
3/4"	2,543	
1"	313	
1-1/2"	5	
2"	4	
3"		
4"		
6"		
8"		
10"		

Non-Residential Meters		
Meter Size	Quantity	
5/8"		
3/4"	229	
1"	57	
1-1/2"	13	
2"	38	
3"	44	
4"	3	
6"		
8"		
10"		

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)		
2020	0.69	
2030	0.97	
2040	1.37	

Peak Wet Weather Flow Projection (MGD)	
2020	2.76
2030	3.88
2040	5.48

Percentage of Wastewater		
Flow Served by FTW		
2020	4%	
2030	4%	
2040	4%	

16. Existing number of

wastewater	customers	SEKVED	by Fo	rt wortn

(Residential:____, Non-Residential:____)

- 17. Will your service area boundaries be expanded in the next 20 years?
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"		
3/4"		
1"		
1-1/2"		
2"		
3"		
4"		
6"		
8"		
10"		

Non-Residential Meters		
Meter Size	Quantity	
5/8"		
3/4"		
1"		
1-1/2"		
2"		
3"		
4"		
6"		
8"		
10"		

20. Are there any current ordinances concerning wastewater impact fees within your utility?



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Lake Worth
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	4,584
2020	4,957
2030	5,831
2040	6,468

Employment Projections		
2019	3,125	
2020	3,137	
2030	3,779	
2040	3,850	

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)		
2020	600,000	
2030	1,000,000	
2040	1,250,000	

Maximum Day Demand		
Projec	Projections (MGD)	
2020	1,200,000	
2030	1,800,000	
2040	2,250,000	

Percentage of Water	
Demands Served by FTW	
2020	81%
2030	90%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? Yes.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")





April	2020

Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	1,663
1"	171
1-1/2"	0
2"	1
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	123
1"	129
1-1/2"	46
2"	108
3"	15
4"	7
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes.

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	800,000
2030	1,000,000
2040	1,250,000

Peak Wet Weather Flow	
Projections (MGD)	
2020	1,700,000
2030	2,000,000
2040	2,250,000

Percentage of Wastewater		
Flow S	Flow Served by FTW	
2020	100%	
2030	100%	
2040	100%	

- 16. Existing number of wastewater customers SERVED by Fort Worth (Residential: 2.030 , Non-Residential: 0)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	1,663
1"	171
1-1/2"	0
2"	1
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	123
1"	129
1-1/2"	46
2"	108
3"	15
4"	7
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of North Richland Hills
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	71,269
2020	72,000
2030	79,000
2040	88,000

Employment Projections	
2019	23,738
2020	23,964
2030	26,240
2040	28,764

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	6
2030	6
2040	7

Maximum Day Demand	
Projections (MGD)	
2020	11
2030	11
2040	12

Percentage of Water Demands Served by FTW	
2020	58%
2030	58%
2040	58%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS



FOR IMPACT FEE STUDY April 2020

Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	19,429
1"	960
1-1/2"	8
2"	17
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	683
1"	404
1-1/2"	64
2"	827
3"	29
4"	18
6"	4
8"	2
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes.

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	2
2030	2
2040	2

Peak Wet Weather Flow	
Projections (MGD)	
2020	7
2030	7
2040	7

Percentage of Wastewater Flow Served by FTW	
2020	80%
2030	80%
2040	80%

16. Existing number of wastewater customers SERVED by Fort Worth

(Residential: <u>18,979</u>, Non-Residential: <u>2,031</u>)

- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	19,429
1"	960
1-1/2"	8
2"	17
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	683
1"	404
1-1/2"	64
2"	827
3"	29
4"	18
6"	4
8"	2
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue

City Responses in Red

April 2020

Demographics Information

1. Wholesale Customer Name: Town of Pantego

2. Wholesale Customer Type (Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	
2020	2,415
2030	2,465
2040	2,515

Employment Projections	
2019	
2020	1,826
2030	2,067
2040	2,294

Wastewater Service Information

- 5. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	0.18
2030	0.18
2040	0.19

Peak Wet Weather	
Flow Projection (MGD)	
2020	0.72
2030	0.72
2040	0.72

Percentage of Wastewater		
Flow Served by FTW		
2020	75%	
2030	75%	
2040	75%	

8. Existing number of

wastewater customers SERVED by Fort Worth

(Residential:_____, Non-Residential:_____)

- 9. Will your service area boundaries be expanded in the next 20 years?
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	655
1"	58
1-1/2"	5
2"	0
3"	0
4"	0
6"	0
8"	0

0

10"

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	439
1"	15
1-1/2"	13
2"	19
3"	3
4"	3
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning wastewater impact fees within your utility?



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Richland Hills
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	8,300
2020	8,300
2030	8,300
2040	8,300

Employment Projections	
2019	1
2020	8,937
2030	9,495
2040	10,072

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	1,200,000
2030	1,200,000
2040	1,200,000

Maximum Day Demand	
Projections (MGD)	
2020	2,500,000
2030	2,500,000
2040	2,500,000

Percentage of Water	
Demands Served by FTW	
2020	75%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? Yes.
- 9. Will your service area boundaries be expanded within the next 20 years? Yes.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	2
3/4"	2,778
1"	79
1-1/2"	17
2"	11
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	165
1"	85
1-1/2"	31
2"	42
3"	3
4"	2
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	1,500,000
2030	1,500,000
2040	1,500,000

Peak Wet Weather Flow Projections (MGD)	
2020	600,000
2030	600,000
2040	600,000

Percentage of Wastewater		
Flow Served by FTW		
2020	100%	
2030	100%	
2040	100%	

16. Existing number of wastewater customers SERVED by Fort Worth

(Residential: 2,686 Non-Residential: 260)

- 17. Will your service area boundaries be expanded in the next 20 years? Yes.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	2
3/4"	2,778
1"	79
1-1/2"	17
2"	11
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	165
1"	85
1-1/2"	31
2"	42
3"	3
4"	2
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility?



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of River Oaks
- 2. Wholesale Customer Type (Emergency Connection Water, 100% Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	7,427
2020	7,600
2030	8,152
2040	8,200

Employment Projections	
2019	7,619
2020	7,700
2030	8,200
2040	8,200

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040) (Emergency Connection Only) City of River Oaks has a surface water plant.

Average Day Demand Projections (MGD)	
2020	0
2030	0
2040	0

Maximum Day Demand	
Projections (MGD)	
2020	0
2030	0
2040	0

Percent	Percentage of Water Demands	
Served by FTW		
2020	0% (Emergency Only)	
2030	0% (Emergency Only)	
2040	0% (Emergency Only)	

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") 2,723 Residential Connections
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") 203 Non-Residential Customers





Residential Meters	
Meter Size	Quantity
5/8"	2,529
3/4"	15
1"	49
1-1/2"	9
2"	2
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	274
3/4"	0
1"	66
1-1/2"	41
2"	36
3"	2
4"	2
6"	5
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
 Cannot be measured. City of River Oaks and the City of Fort Worth have 14 interconnects. See attached contract and map for calculations.
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	0.76
2030	0.82
2040	0.82

Peak Wet Weather		
Flow Projection (MGD)		
2020	3.04	
2030	3.28	
2040	3.28	

Percentage of Wastewater		
Flow Served by FTW		
2020	100%	
2030	100%	
2040	100%	

16. Existing number of

wastewater customers SERVED by Fort Worth

(Residential: 2,711 , Non-Residential: 191)

- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.



April 2020



19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") – Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"		
3/4"		
1"		
1-1/2"		
2"		
3"		
4"		
6"		
8"		
10"		

Non-Residential Meters	
Meter Size	Quantity
5/8"	
3/4"	
1"	
1-1/2"	
2"	
3"	
4"	
6"	
8"	
10"	

20. Are there any current ordinances concerning wastewater impact fees within your utility? No, City of River Oaks collects only Fort Worth Impact Fee under any new development.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



FNI Responses in Blue

City Responses in Red

April 2020 LEGEND

Demographics Information

1. Wholesale Customer Name: City of Saginaw

2. Wholesale Customer Type (Water and Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	22,380
2020	22,940
2030	29,364
2040	33,000

Employment Projections	
2019	11,311
2020	11,640
2030	15,195
2040	17,900

Water Service Information

5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Projections (MGD)	
2020	3.27
2030	4.18
2040	4.70

Maximum Day Demand	
Projections (MGD)	
2020	6.41
2030	8.21
2040	9.22

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	7,950
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	333
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Total: 7,950

Total: 333

12. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	2.57
2030	3.29
2040	3.70

Peak Wet Weather		
Flow Projection (MGD)		
2020	10.28	
2030	13.16	
2040	14.8	

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

16. Existing number of

wastewater	customers	SERVED	by	Fort	Worth

(Residential:____, Non-Residential:____) Total: 8,283

- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters		
Meter Size	Quantity	
5/8"	7,950	
3/4"	0	
1"	0	
1-1/2"	0	
2"	0	
3"	0	
4"	0	
6"	0	
8"	0	
10"	0	

Total	l: '	7	a	5	N
Total	٠.	,,	•	J	v

Non-Residential Meters		
Meter Size	Quantity	
5/8"	333	
3/4"	0	
1"	0	
1-1/2"	0	
2"	0	
3"	0	
4"	0	
6"	0	
8"	0	
10"	0	

Total: 333

20. Are there any current ordinances concerning wastewater impact fees within your utility? Ordinance 2011-21 and Amending Ordinance 2011-22.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: City of Sansom Park
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections		
2019	5,075	
2020	5,575	
2030	5,845	
2040	6,147	

Employment Projections		
2019		
2020	1,139	
2030	1,219	
2040	1,306	

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Project	tions (MGD)
2020	
2030	
2040	

Maximum Day Demand		
Project	tions (MGD)	
2020		
2030		
2040		

Percentage of Water Demands Served by FTW	
2020	0%
2030	0%
2040	0%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	1,413
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
4.011	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	110
3/4"	0
1"	1
1-1/2"	0
2"	1
3"	4
4"	0
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes.

Wastewater Service Information

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	410,000
2030	500,000
2040	600,000

Peak Wet Weather	
Flow Projection (MGD)	
2020	460,000
2030	570,000
2040	680,000

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

16. Existing number of

wastewater customers SERVED by Fort Worth

(Residential: 1,413, Non-Residential: 116)

- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	1,413
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	110
3/4"	0
1"	1
1-1/2"	0
2"	1
3"	4
4"	0
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGENDFNI Responses in Blue

City Responses in Red

April 2020

Demographics Information

1. Wholesale Customer Name: City of Watauga

2. Wholesale Customer Type (Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	23,770
2020	24,793
2030	27,387
2040	30,000

Employment Projections	
2019	-
2020	4,284
2030	4,838
2040	4,938

Wastewater Service Information

- 5. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040) 100%
- 6. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040) 100%
- 7. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	2.48
2030	2.74
2040	2.76

Peak Wet Weather	
Flow Projection (MGD)	
2020	9.92
2030	10.96
2040	11.04

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

8. Existing number of

wastewater customers SERVED by Fort Worth

(Residential:_____, Non-Residential:_____) 8,315 connections.

- 9. Will your service area boundaries be expanded in the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section. 344 total meters.



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	6,377
1"	1,925
1-1/2"	5
2"	120
3"	3
4"	4
6"	0
8"	1
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	0
1"	0
1-1/2"	0
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning wastewater impact fees within your utility? Fort Worth Impact Fee.



April 2020

WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue City Responses in Red

Demographics Information

- 1. Wholesale Customer Name: Town of Westover Hills
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	682
2020	682
2030	682
2040	682

Employment Projections	
2019	576
2020	576
2030	576
2040	576

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	1
2030	1
2040	1

Maximum Day Demand	
Projections (MGD)	
2020	1
2030	1
2040	1

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years? No.
- 9. Will your service area boundaries be expanded within the next 20 years? No.
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS



FOR IMPACT FEE STUDY April 2020

Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	7
1"	110
1-1/2"	149
2"	41
3"	2
4"	1
6"	0
8"	0
10"	0

Non-Residential Meters	
Meter Size	Quantity
5/8"	2
3/4"	0
1"	0
1-1/2"	1
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

12. Are there any current ordinances concerning water impact fees within your utility? Yes, ordinance replicating those of Fort Worth.

- 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	0
2030	0
2040	0

Peak Wet Weather Flow	
Projections (MGD)	
2020	0
2030	0
2040	0

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

- 16. Existing number of wastewater customers SERVED by Fort Worth (Residential: 219_, Non-Residential: 0_)
- 17. Will your service area boundaries be expanded in the next 20 years? No.
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	7
1"	110
1-1/2"	149
2"	41
3"	2
4"	1
6"	0
8"	0
10"	n

Non-Residential Meters	
Meter Size	Quantity
5/8"	2
3/4"	0
1"	0
1-1/2"	1
2"	0
3"	0
4"	0
6"	0
8"	0
10"	0

20. Are there any current ordinances concerning wastewater impact fees within your utility? Yes, matches what the City of Fort Worth has.



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY April 2020



FNI Responses in Blue

City Responses in Red

LEGEND

Demographics Information

1. Wholesale Customer Name: Westworth Village

2. Wholesale Customer Type (Water and Wastewater)

3. City-Wide Population Projections (2019, 2020, 2030, 2040)

4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	
2020	3,157
2030	3,214
2040	3,272

Employment Projections	
2019	
2020	1,683
2030	1,778
2040	1,863

Water Service Information

5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)

7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand Projections (MGD)	
2020	0.34
2030	0.35
2040	0.36

Maximum Day Demand	
Projections (MGD)	
2020	0.85
2030	0.87
2040	0.90

Percentage of Water	
Demands Served by FTW	
2020	100%
2030	100%
2040	100%

- 8. Will you require a larger and/or additional meter within the next 20 years?
- 9. Will your service area boundaries be expanded within the next 20 years?
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 12. Annual residential consumption per meter (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 13. Annual non-residential consumption per meter (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



WHOLESALE CUSTOMER SURVEY WATER/WASTEWATER SERVICE PROJECTIONS

FREESE

FOR IMPACT FEE STUDY April 2020

Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	543
1"	6
1-1/2"	0
2"	3
3"	0
4"	0
6"	0
8"	0
10"	

Non-Residential Meters	
Meter Size	Quantity
5/8"	0
3/4"	3
1"	15
1-1/2"	6
2"	18
3"	2
4"	1
6"	1
8"	0
10"	0

14. Are there any current ordinances concerning water impact fees within your utility?

Wastewater Service Information

- 15. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 16. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
- 17. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow	
Projections (MGD)	
2020	0.32
2030	0.32
2040	0.33

Peak Wet Weather	
Flow Projection (MGD)	
2020	1.28
2030	1.28
2040	1.32

Percentage of Wastewater	
Flow Served by FTW	
2020	100%
2030	100%
2040	100%

18. Existing number of

wastewater cust	tomers SERVED by Fort Worth
(Residential:	, Non-Residential:)

- 19. Will your service area boundaries be expanded in the next 20 years?
- 20. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 21. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters	
Meter Size	Quantity
5/8"	
3/4"	
1"	
1-1/2"	
2"	
3"	
4"	
6"	
8"	
10"	

Non-Residential Meters	
Meter Size	Quantity
5/8"	
3/4"	
1"	
1-1/2"	
2"	
3"	
4"	
6"	
8"	
10"	

22. Are there any current ordinances concerning wastewater impact fees within your utility?



WATER/WASTEWATER SERVICE PROJECTIONS FOR IMPACT FEE STUDY



LEGEND

FNI Responses in Blue

City Responses in Red

April 2020

Demographics Information

- 1. Wholesale Customer Name: City of White Settlement
- 2. Wholesale Customer Type (Water and Wastewater)
- 3. City-Wide Population Projections (2019, 2020, 2030, 2040)
- 4. City-Wide Employment Projections (2019, 2020, 2030, 2040)

Population Projections	
2019	
2020	16,997
2030	17,522
2040	17,530

Employment Projections	
2019	
2020	8,216
2030	9,458
2040	10,353

- 5. Average Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 6. Maximum Day Demand Projections SERVED by Fort Worth (2020, 2030, 2040)
- 7. What percentage of your projected water demands are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Demand	
Projections (MGD)	
2020	1.14
2030	1.18
2040	1.18

Maximum Day Demand Projections (MGD)	
2020	1.94
2030	2.01
2040	2.01

Percentage of Water Demands Served by FTW	
2020	55%
2030	55%
2040	55%

- 8. Will you require a larger and/or additional meter within the next 20 years?
- 9. Will your service area boundaries be expanded within the next 20 years?
- 10. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")
- 11. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10")



April 2020



Residential Meters	
Meter Size	Quantity
5/8"	2,760
3/4"	
1"	
1-1/2"	
2"	
3"	
4"	
6"	
8"	
10"	

Non-Residential Meters	
Meter Size	Quantity
5/8"	125
3/4"	0
1"	6
1-1/2"	25
2"	57
3"	7
4"	2
6"	1
8"	
10"	

- 12. Are there any current ordinances concerning water impact fees within your utility? Wastewater Service Information
 - 13. Average Day Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
 - 14. Peak Wet Weather Flow Projections SERVED by Fort Worth (2020, 2030, 2040)
 - 15. What percentage of your projected wastewater flows are anticipated to be served by Fort Worth? (2020, 2030, 2040)

Average Day Flow Projections (MGD)	
2020	1.70
2030	1.75
2040	1.75

Peak Wet Weather Flow Projection (MGD)	
2020	6.80
2030	7.00
2040	7.00

Percentage of Wastewater Flow Served by FTW						
2020	100%					
2030	100%					
2040	100%					

16. Existing number of

wastewater cust	tomers SERVED by For	t worth
(Residential:	, Non-Residential:)

- 17. Will your service area boundaries be expanded in the next 20 years?
- 18. Existing number of residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.
- 19. Existing number of non-residential water meters (5/8", 3/4", 1", 1-1/2", 2", 3", 4", 6", 8", 10") Skip if you provided information in the previous section.





Residential Meters									
Meter Size	Quantity								
5/8"	5,156								
3/4"									
1"									
1-1/2"									
2"									
3"									
4"									
6"									
8"									
10"									

Non-Residential Meters								
Meter Size	Quantity							
5/8"	236							
3/4"								
1"	74							
1-1/2"	46							
2"	113							
3"	13							
4"	4							
6"	1							
8"								
10"								

20. Are there any current ordinances concerning wastewater impact fees within your utility?



Appendix B Population and Employment Projections



Appendix B Wastewater Wholesale Customer Population and Employment Projections City of Fort Worth



		Population	ı	I	Employmen	ıt	Portion Served by Fort Worth			Se	rved Popula	ation	Served Employment		
Wholesale Customer	2022	2031	2041	2022	2031	2041	2022	2031	2041	2022	2031	2041	2022	2031	2041
Benbrook Water Authority	24,204	29,494	35,393	6,462	7,562	8,661	100%	100%	100%	24,204	29,494	35,393	6,462	7,562	8,661
Bethesda Water Supply Corp.	32,515	35,810	39,367	0	0	0	4%	4%	4%	1,301	1,432	1,575	0	0	0
Blue Mound	2,700	2,700	2,700	756	881	1,010	100%	100%	100%	2,700	2,700	2,700	756	881	1,010
Burleson	55,575	84,095	114,827	24,046	27,500	31,500	100%	100%	100%	55,575	84,095	114,827	24,046	27,500	31,500
Crowley	19,442	27,000	37,000	3,253	4,098	5,052	100%	100%	100%	19,442	27,000	37,000	3,253	4,098	5,052
Edgecliff Village	3,244	3,260	3,260	1,659	1,830	1,932	100%	100%	100%	3,244	3,260	3,260	1,659	1,830	1,932
Everman	6,700	7,600	8,100	1,667	1,738	1,807	100%	100%	100%	6,700	7,600	8,100	1,667	1,738	1,807
Forest Hill	13,110	13,160	13,210	9,622	9,751	9,946	100%	100%	100%	13,110	13,160	13,210	9,622	9,751	9,946
Haltom City	44,800	50,000	50,000	21,940	24,500	24,500	100%	100%	100%	44,800	50,000	50,000	21,940	24,500	24,500
Hurst	38,735	39,873	41,053	27,541	31,276	33,351	92%	92%	92%	35,636	36,683	37,769	25,338	28,774	30,683
Kennedale	8,300	11,709	16,152	4,866	6,115	7,370	4%	4%	4%	332	468	646	195	245	295
Lake Worth	5,132	5,958	6,595	3,265	3,793	3,864	100%	100%	100%	5,132	5,958	6,595	3,265	3,793	3,864
North Richland Hills	73,400	80,800	89,800	24,419	26,745	29,269	80%	80%	80%	58,720	64,640	71,840	19,535	21,396	23,415
Pantego ¹	2,425	2,475	2,525	1,874	2,112	2,339	75%	75%	75%	1,819	1,856	1,894	1,406	1,584	1,754
Richland Hills	8,300	8,300	8,300	9,048	9,610	10,187	100%	100%	100%	8,300	8,300	8,300	9,048	9,610	10,187
River Oaks	7,710	8,162	8,210	7,800	8,200	8,200	100%	100%	100%	7,710	8,162	8,210	7,800	8,200	8,200
Saginaw	24,225	30,091	33,727	12,351	15,736	18,441	100%	100%	100%	24,225	30,091	33,727	12,351	15,736	18,441
Sansom Park	5,629	5,905	6,207	1,155	1,236	1,323	100%	100%	100%	5,629	5,905	6,207	1,155	1,236	1,323
Trinity River Authority	0	0	0	0	0	0	0%	0%	0%	0	0	0	0	0	0
Watauga	25,312	27,431	27,652	4,395	4,858	4,958	100%	100%	100%	25,312	27,431	27,652	4,395	4,858	4,958
Westover Hills	682	682	682	576	576	576	100%	100%	100%	682	682	682	576	576	576
Westworth Village ¹	3,169	3,226	3,284	1,702	1,795	1,880	100%	100%	100%	3,169	3,226	3,284	1,702	1,795	1,880
White Settlement ¹	17,102	17,524	17,532	8,464	9,637	10,532	100%	100%	100%	17,102	17,524	17,532	8,464	9,637	10,532
TOTAL	422,411	495,255	565,576	176,861	199,549	216,698				364,844	429,667	490,403	164,635	185,300	200,516

¹Survey not received, data taken from the 2016 Impact Fee Update

Exhibit B: Land Use Assumptions - Wastewater FREESE AND NICHOLS, INC. FREESE AND NICHOLS, INC. 801 CHERRY STREET, SUITE 2800 FORT WORTH, TEXAS 76102 817-735-7300 www.freese.com