

CITY OF FLORENCE, TEXAS

Water Impact Fee Study

Presented

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Review of Texas Local Government Code Chapter 395

- Impact fee can only pay the costs of constructing capital improvements or facility expansions
- Comprehensive land use and capital improvements plan must be developed, reviewed and formally adopted before Impact Fee may be implemented
- Maximum impact fee may not exceed net cost of capital improvements divided by service units over a 10 year period

How is an Impact Fee Calculated?

5 Step Process

- Forecast total increase in customers and convert to equivalent living unit equivalents (LUEs)
- Determine percent of Capital Improvement Plan devoted to growth over the planning period
- Calculate debt component of CIP, if any
- Divide CIP by number of planning period service units to determine maximum impact fee
- Develop credit based on analysis of rate structure

History of Connection and LUE Growth

CITY OF FLORENCE, TEXAS								
WATER CONNECTION & LUE HISTORY								
CONNECTIONS								
Meter Size	5/8"	3/4"	1"	1 1/2"	2"	6"	TOTAL	LUEs PER CONNECT
FYE 2020	518	0	1	3	9	1	532	
FYE 2021	551	0	2	4	11	1	569	
FYE 2022	481	0	4	3	14	1	503	
FYE 2023	479	0	4	3	14	1	501	
LIVING UNIT EQUIVALENTS								
Meter to LUE Multiplier	1.00	1.00	2.50	5.00	8.00	50.00	TOTAL	
FYE 2020	518	0	3	16	72	50	658	1.24
FYE 2021	551	0	5	19	86	50	711	1.25
FYE 2022	481	0	10	15	115	50	671	1.33
FYE 2023	479	0	10	15	112	50	666	1.33

Development of Growth Scenarios

CITY OF FLORENCE, TEXAS			
TREATED WATER DEMAND FORECAST			
		Growth Scenario: HLA Forecast	
Growth Rate		12.12%	
	FYE	CONNECTS	LUES
	2024	501	666
1	2025	561	746
2	2026	629	837
3	2027	705	938
4	2028	791	1,052
5	2029	887	1,179
6	2030	994	1,322
7	2031	1,115	1,482
8	2032	1,250	1,662
9	2033	1,401	1,863
10	2034	1,571	2,089
Planning Period Growth		1,070	1,423

FLORENCE SUMMARY: WATER CIP

CITY OF FLORENCE, TEXAS				
CAPITAL IMPROVEMENT PLAN DETAIL - WATER				
CIP Element	Existing or Proposed Capacity for Planning Period Growth	Sub Total	Less Assumed Grant Proceeds	Net Recoverable Cost for Impact Fee Analysis
Georgetown Utilities Treatment Capacity	Proposed	\$2,736,370	\$0	\$2,736,370
Elevated & WTP Storage Projects - 300k Gallons New Capacity	Proposed	\$7,130,000	\$0	\$7,130,000
Gus Water Wholesale Meter to E Tomlinson & Future WTP - 16" Water Trans. Line	Proposed	\$990,000	\$0	\$990,000
FM 487 to Salado Creek Meadow - 12" Transmisson Line	Proposed	\$2,790,000	\$0	\$2,790,000
TOTAL		\$13,646,370	\$0	\$13,646,370

CITY OF FLORENCE, TEXAS
CURRENT AND FORECAST WATER SYSTEM DEMAND AND CAPACITY
WATER SYSTEM CAPACITY, DEMANDS, AND CIP COSTING

Function:	Georgetown Utilities Treatment Capacity	Forecast				Capacity		
		Connections		Living Unit Equivalents		Required MGD	Less Non CIP MGD	Surplus / (Deficit) MGD
		Connects	Target GPD / Connection	LUEs	Target GPD / LUE			
	Capacity Planning Criteria							
2024	Peak Day Demand	501	319	666	240	0.2	0.2	0.07
2025	Peak Day Demand	561	319	746	240	0.2	0.2	0.05
2026	Peak Day Demand	629	319	837	240	0.2	0.2	0.03
2027	Peak Day Demand	705	319	938	240	0.2	0.2	0.01
2028	Peak Day Demand	791	319	1,052	240	0.3	0.2	(0.02)
2029	Peak Day Demand	887	319	1,179	240	0.3	0.2	(0.05)
2030	Peak Day Demand	994	319	1,322	240	0.3	0.2	(0.08)
2031	Peak Day Demand	1,115	319	1,482	240	0.4	0.2	(0.12)
2032	Peak Day Demand	1,250	319	1,662	240	0.4	0.2	(0.17)
2033	Peak Day Demand	1,401	319	1,863	240	0.4	0.2	(0.21)
2034	Peak Day Demand	1,571	319	2,089	240	0.5	0.2	(0.27)

Capacity: CIP & Existing	Connects	LUEs	MGD	% CIP	Net Value
Non CIP Capacity	731	972	0.23		
Eligible Capacity Provided by Specific CIP Project	839	1,116	0.27		\$2,736,370
Total Capacity - Post CIP	1,570	2,088	0.50		
Existing Customers					
Total Capacity Requirement	-501	-666	(0.16)		
Add Supply from Existing / Non CIP Capacity	731	972	0.23		
Surplus / (Deficit)	231	307	0.07		
Add CIP Capacity	-	-	-	0%	\$0
Remaining Capacity Needs	-	-	-		
Remaining CIP Capacity	839	1,116	0.27		
2025-2034 Growth					
Total Capacity Requirement	-1,070	-1,423	(0.34)		
Add Supply from Existing / Non CIP Capacity	231	307	0.07		
Surplus / (Deficit)	(840)	(1,117)	(0.27)		
Add CIP Capacity	839	1,116	0.27	100%	\$2,736,370
Remaining Capacity Needs	(1)	(1)	(0.00)		
Remaining CIP Capacity	0	0	-		



**CITY OF FLORENCE, TEXAS
CURRENT AND FORECAST WATER SYSTEM DEMAND AND CAPACITY
WATER SYSTEM CAPACITY, DEMANDS, AND CIP COSTING**

Function:	Elevated & WTP Storage Projects - 300k Gallons New Capacity	Forecast				Capacity		
		Connections		Living Unit Equivalents		Required MG	Less Non CIP MG	Surplus / (Deficit) MG
		Connects	Target Gallons / Connection	LUEs	Target Gallons / LUE			
	Planning Criteria							
2024	100 Gallons per Connection	501	100	666	75	0.1	-	(0.05)
2025	100 Gallons per Connection	561	100	746	75	0.1	-	(0.06)
2026	100 Gallons per Connection	629	100	837	75	0.1	-	(0.06)
2027	100 Gallons per Connection	705	100	938	75	0.1	-	(0.07)
2028	100 Gallons per Connection	791	100	1,052	75	0.1	-	(0.08)
2029	100 Gallons per Connection	887	100	1,179	75	0.1	-	(0.09)
2030	100 Gallons per Connection	994	100	1,322	75	0.1	-	(0.10)
2031	100 Gallons per Connection	1,115	100	1,482	75	0.1	-	(0.11)
2032	100 Gallons per Connection	1,250	100	1,662	75	0.1	-	(0.12)
2033	100 Gallons per Connection	1,401	100	1,863	75	0.1	-	(0.14)
2034	100 Gallons per Connection	1,571	100	2,089	75	0.2	-	(0.16)

Capacity: CIP & Existing	Connects	LUEs	MG	% CIP	Net Value
Non CIP Capacity	0	0	-		
Eligible Capacity Provided by Specific CIP Project	1,500	1,995	0.15		\$7,130,000
Total Capacity - Post CIP	1,500	1,995	0.15		
Existing Customers					
Total Capacity Requirement	-501	-666	(0.05)		
Add Supply from Existing / Non CIP Capacity	0	0	-		
Surplus / (Deficit)	(501)	(666)	(0.05)		
Add CIP Capacity	501	666	0.05	33.37%	\$2,379,043
Remaining Capacity Needs					
Remaining CIP Capacity	1,000	1,329	0.10		
2025-2034 Growth					
Total Capacity Requirement	-1,070	-1,423	(0.11)		
Add Supply from Existing / Non CIP Capacity	0	0	-		
Surplus / (Deficit)	(1,070)	(1,423)	(0.11)		
Add CIP Capacity	1,000	1,329	0.10	66.63%	\$4,750,957
Remaining Capacity Needs	(71)	(94)	(0.01)		
Remaining CIP Capacity	0	0	-		
Capacity to Post 2034 Growth					
Remaining CIP Capacity	-	-	-	0.00%	\$0



**CITY OF FLORENCE, TEXAS
CURRENT AND FORECAST WATER SYSTEM DEMAND AND CAPACITY
WATER SYSTEM CAPACITY, DEMANDS, AND CIP COSTING**

Function:	Gus Water Wholesale Meter to E Tomlinson & Future WTP - 16" Water Trans. Line	Forecast				Capacity		
		Connections		Living Unit Equivalents		Required MGD	Less Non CIP MGD	Surplus / (Deficit) MGD
		Connects	Target GPD / Connection	LUEs	Target GPD / LUE			
	Capacity							
	Planning Criteria							
2024	Peak Hour Demand	501	1,080.00	666	812.23	0.54	0.54	0.00
2025	Peak Hour Demand	561	1,080.00	746	812.23	0.61	0.54	(0.07)
2026	Peak Hour Demand	629	1,080.00	837	812.23	0.68	0.54	(0.14)
2027	Peak Hour Demand	705	1,080.00	938	812.23	0.76	0.54	(0.22)
2028	Peak Hour Demand	791	1,080.00	1,052	812.23	0.85	0.54	(0.31)
2029	Peak Hour Demand	887	1,080.00	1,179	812.23	0.96	0.54	(0.42)
2030	Peak Hour Demand	994	1,080.00	1,322	812.23	1.07	0.54	(0.53)
2031	Peak Hour Demand	1,115	1,080.00	1,482	812.23	1.20	0.54	(0.66)
2032	Peak Hour Demand	1,250	1,080.00	1,662	812.23	1.35	0.54	(0.81)
2033	Peak Hour Demand	1,401	1,080.00	1,863	812.23	1.51	0.54	(0.97)
2034	Peak Hour Demand	1,571	1,080.00	2,089	812.23	1.70	0.54	(1.16)

Capacity: CIP & Existing	Connects	LUEs	MGD	% CIP	Net Value
Non CIP Capacity	501	666	0.5		
Eligible Capacity Provided by Specific CIP Project	4,512	6,000	4.9		\$990,000
Total Capacity - Post CIP	5,013	6,666	5.4		
Existing Customers					
Total Capacity Requirement	-501	-666	(0.5)		
Add Supply from Existing / Non CIP Capacity	501	666	0.5		
Surplus / (Deficit)	-	-	-		
Add CIP Capacity	-	-	-	0%	\$0
Remaining Capacity Needs	-	-	-		
Remaining CIP Capacity	4,512	6,000	4.9		
2025-2034 Growth					
Total Capacity Requirement	-1,070	-1,423	(1.16)		
Add Supply from Existing / Non CIP Capacity	0	0	-		
Surplus / (Deficit)	(1,070)	(1,423)	(1.16)		
Add CIP Capacity	1,070	1,423	1.16	23.7%	\$234,817
Remaining Capacity Needs	-	-	-		
Remaining CIP Capacity	3,442	4,577	3.7		
Capacity to Post 2034 Growth					
Remaining CIP Capacity	3,442	4,577	3.7	76%	\$755,183



**CITY OF FLORENCE, TEXAS
CURRENT AND FORECAST WATER SYSTEM DEMAND AND CAPACITY
WATER SYSTEM CAPACITY, DEMANDS, AND CIP COSTING**

Function:	FM 487 to Salado Creek Meadow - 12" Transmisson Line	Forecast				Capacity		
		Connections		Living Unit Equivalents		Required MGD	Less Non CIP MGD	Surplus / (Deficit) MGD
		Connects	Target GPD / Connection	LUEs	Target GPD / LUE			
	Capacity Planning Criteria							
2024	Peak Hour Demand	501	1080	666	812	0.54	0.54	(0.00)
2025	Peak Hour Demand	561	1080	746	812	0.61	0.54	(0.07)
2026	Peak Hour Demand	629	1080	837	812	0.68	0.54	(0.14)
2027	Peak Hour Demand	705	1080	938	812	0.76	0.54	(0.22)
2028	Peak Hour Demand	791	1080	1,052	812	0.85	0.54	(0.31)
2029	Peak Hour Demand	887	1080	1,179	812	0.96	0.54	(0.42)
2030	Peak Hour Demand	994	1080	1,322	812	1.07	0.54	(0.53)
2031	Peak Hour Demand	1,115	1080	1,482	812	1.20	0.54	(0.66)
2032	Peak Hour Demand	1,250	1080	1,662	812	1.35	0.54	(0.81)
2033	Peak Hour Demand	1,401	1080	1,863	812	1.51	0.54	(0.97)
2034	Peak Hour Demand	1,571	1080	2,089	812	1.70	0.54	(1.16)

Capacity: CIP & Existing	Connects	LUEs	MGD	% CIP	Net Value
Non CIP Capacity	500	665	0.54		
Eligible Capacity Provided by Specific CIP Project	3,400	4,521	3.7		\$2,790,000
Total Capacity - Post CIP	3,900	5,186	4.2		
Existing Customers					
Total Capacity Requirement	-501	-666	(0.54)		
Add Supply from Existing / Non CIP Capacity	500	665	0.54		
Surplus / (Deficit)	(0)	(0)	(0.00)		
Add CIP Capacity	0	0	0.0	0.00%	\$1
Remaining Capacity Needs	-	-	-		
Remaining CIP Capacity	3,400	4,521	3.7		
2025-2034 Growth					
Total Capacity Requirement	-1,070	-1,423	(1.16)		
Add Supply from Existing / Non CIP Capacity	0	0	-		
Surplus / (Deficit)	(1,070)	(1,423)	(1.16)		
Add CIP Capacity	1,070	1,423	1.16	31.48%	\$878,269
Remaining Capacity Needs	-	-	-		
Remaining CIP Capacity	2,330	3,098	2.5		
Capacity to Post 2034 Growth					
Remaining CIP Capacity	2,330	3,098	2.5	68.52%	\$1,911,731



CITY OF FLORENCE, TEXAS

CURRENT AND FORECAST WATER SYSTEM DEMAND AND CAPACITY

WATER SYSTEM CAPACITY, DEMANDS, AND CIP COSTING

Total CIP Value	\$13,646,370
Total CIP Value Allocated to Planning Period Growth	\$8,600,413
Total Planning Period LUEs	1,423
IF per LUE	\$6,043.29

**CITY OF FLORENCE, TEXAS
CAPITAL IMPROVEMENT PLAN SUMMARY -- WATER**

CIP Element	CIP Element 8	CIP Element 11	CIP Element 13	CIP Element 14	TOTAL
Function	Georgetown Utilities Treatment Capacity	Elevated & WTP Storage Projects - 300k Gallons New Capacity	Gus Water Wholesale Meter to E Tomlinson & Future WTP - 16" Water Trans. Line	FM 487 to Salado Creek Meadow - 12" Transmisson Line	
Project Value, Including Eng, Admin, & Contingency	\$2,736,370	\$7,130,000	\$990,000	\$2,790,000	\$13,646,370
Implementation Year	2025	2025	2025	2025	
Construction Period [Years]	1	1	1	1	
% Grant Funded	0.00%	0.00%	0.00%	0.00%	0.00%
% Attributable to Planning Period Growth	100.00%	66.63%	23.72%	31.48%	63%
Value Attributable to Planning Period Growth - Total	\$2,736,370	\$4,750,957	\$234,817	\$878,269	\$8,600,413
Pre Interest & Credit Value Attributable to Planning Period Growth - per LUE	\$1,923	\$3,338	\$165	\$617	\$6,043

Interest Expense Adjustment

CITY OF FLORENCE, TEXAS

WATER SYSTEM IMPACT FEE DEBT COMPONENT

CIP Element(s)	Total Interest Expense					Total
	Georgetown Utilities Treatment Capacity	Elevated & WTP Storage Projects - 300k Gallons New Capacity	Gus Water Wholesale Meter to E Tomlinson & Future WTP - 16" Water Trans. Line	FM 487 to Salado Creek Meadow - 12" Transmission Line		
Total Issued	\$0	\$7,130,000	\$990,000	\$2,790,000	\$10,910,000	
Term	30	30	30	30		
Interest Rate	0.0%	4.5%	4.5%	4.5%		
2025	\$0	\$320,850	\$44,550	\$125,550	\$490,950	
2026	\$0	\$315,591	\$43,820	\$123,492	\$482,903	
2027	\$0	\$310,095	\$43,057	\$121,341	\$474,493	
2028	\$0	\$304,352	\$42,259	\$119,094	\$465,705	
2029	\$0	\$298,350	\$41,426	\$116,746	\$456,522	
2030	\$0	\$292,078	\$40,555	\$114,292	\$446,925	
2031	\$0	\$285,524	\$39,645	\$111,727	\$436,896	
2032	\$0	\$278,675	\$38,694	\$109,047	\$426,416	
2033	\$0	\$271,518	\$37,700	\$106,246	\$415,465	
2034	\$0	\$264,039	\$36,662	\$103,320	\$404,021	
TOTAL CIP FINANCING						
Total Interest Expense	\$0	\$2,941,073	\$408,368	\$1,150,855	\$4,500,296	
Net Present Value	\$0	\$2,345,179	\$325,628	\$917,679	\$3,588,486	
2025-2034 Growth	100%	67%	24%	31%		
Total Interest Expense	\$0	\$1,959,735	\$96,860	\$362,279	\$2,418,875	
Net Present Value	\$0	\$1,562,671	\$77,235	\$288,878	\$1,928,784	
Total Impact Fee Eligible LUEs					1,423	
NPV Per Planning Period LUE					\$1,355.31	

Water Rate Credit Calculation: Step 1

CITY OF FLORENCE, TEXAS					
CIP REVENUE REQUIREMENTS FROM EXISTING LUES -- WATER					
	CIP Element 8	CIP Element 11	CIP Element 13	CIP Element 14	TOTAL
Function	Georgetown Utilities Treatment Capacity	Elevated & WTP Storage Projects - 300k Gallons New Capacity	Gus Water Wholesale Meter to E Tomlinson & Future WTP - 16"	FM 487 to Salado Creek Meadow - 12" Transmisson Line	
Forecast Value of CIP	\$2,736,370	\$7,130,000	\$990,000	\$2,790,000	\$13,646,370
Total Amount Financed	\$0	\$7,130,000	\$990,000	\$2,790,000	\$10,910,000
% Attributable to Planning Period Growth	100.00%	66.63%	23.72%	31.48%	
Value Attributable to Planning Period Growth	\$0	\$4,750,957	\$234,817	\$878,269	\$5,864,043
Value Attrib. to Non Impact Fee Eligible Connections	\$2,736,370	\$2,379,043	\$755,183	\$1,911,731	\$7,782,327
Implementation Year	2025	2025	2025	2025	
Amortization Period [Years]	0	30	30	30	
Interest Rate	0.00%	4.50%	4.50%	4.50%	
Debt Service from Existing Customers					
2025	\$0	\$146,053	\$46,362	\$117,364	\$309,779
2034	\$0	\$146,053	\$46,362	\$117,364	\$309,779
Total Value of P&I - Exist. LUEs	\$0	\$1,460,531	\$463,618	\$1,173,641	\$3,097,791
Current LUEs	666	666	666	666	
Total No. Planning Period Months	120	120	120	120	
Monthly Bills from Current LUEs over Planning Period	79,860	79,860	79,860	79,860	
Credit per LUE per Month	\$0.00	\$18.29	\$5.81	\$14.70	\$38.79

Water Rate Credit Calculation: Step 2

CITY OF FLORENCE, TEXAS		
IMPACT FEE PERIOD -- MONTHLY WATER LUEs		
Year	2025-2034 Growth	
	Annual	Cumulative
2025	81	81
2026	90	171
2027	101	272
2028	114	386
2029	127	513
2030	143	656
2031	160	817
2032	180	996
2033	201	1,197
2034	226	1,423
Total	1,423	6,513
Months		12
Bills		78,157

Water Rate Credit Calculation: Step 3

CITY OF FLORENCE, TEXAS			
TOTAL CIP CREDIT -- WATER			
Value of CIP Allocated to 10 Year Growth			\$8,600,413
NPV of Interest Expense Allocated to 10 Year Growth			\$1,928,784
Total Cost of CIP Allocated to 10 Year Growth			\$10,529,197
Credit per LUE per Month			\$38.79
Cumulative Monthly Bills (Growth in Service Units)			78,157
Total CIP Credit			\$3,031,732
Net Value of CIP to be Paid from Impact Fees			\$7,497,465
New Demand LUEs Over 10 Years			1,423
Maximum Impact Fee After Credit			\$5,268

Water Rate Credit Calculation: Step 4

CITY OF FLORENCE, TEXAS			
RECONCILIATION OF CIP FUNDING SOURCES			
Current LUEs			666
Credit per LUE per Month			\$38.79
10 Year Rate Revenue from Existing LUEs			\$3,097,791
Bills from New Demand LUEs Over 10 Years			78,157
Credit per LUE per Month			\$38.79
10 Year Rate Revenue from New Demand LUEs			\$3,031,732
New Demand LUEs Over 10 Years			1,423
Net Impact Fee per LUE			\$5,268.27
10 Year Impact Fee Revenue from New Demand LUEs			\$7,497,465
Total CIP Revenue from New Demand LUEs			\$10,529,197

Summary of Recommended Water Impact Fees by Equivalent Meter Size

CITY OF FLORENCE, TEXAS				
MAXIMUM WATER IMPACT FEES				
			Existing Water Impact Fee	Calculated Max. Water Impact Fee
	Water Service Unit	AWWA Meter Ratio		
	Standard Service Unit	1.0	\$0	\$5,268
	3/4"	1.0	\$0	\$5,268
	1"	2.5	\$0	\$13,171
	1 1/2"	5.0	\$0	\$26,341
	2"	8.0	\$0	\$42,146
	3"	17.5	\$0	\$92,195
	4"	25.0	\$0	\$131,707
	6"	50.0	\$0	\$263,414
	8"	90.0	\$0	\$474,145
	10"	350.0	\$0	\$1,843,896

Forecast Revenue Under Proposed Water Impact Fees

CITY OF FLORENCE, TEXAS						
FORECAST IMPACT FEE REVENUE -- WATER						
	Meter					Total
	5/8"	1"	1 1/2"	2"	6"	
Maximum Impact Fee	\$5,268	\$13,171	\$26,341	\$42,146	\$263,414	
2025	\$305,454	\$6,384	\$9,575	\$71,496	\$31,918	\$424,826
2026	\$342,465	\$7,157	\$10,736	\$80,159	\$35,785	\$476,302
2027	\$383,962	\$8,024	\$12,036	\$89,872	\$40,121	\$534,016
2028	\$430,487	\$8,997	\$13,495	\$100,762	\$44,983	\$598,723
2029	\$482,649	\$10,087	\$15,130	\$112,971	\$50,433	\$671,270
2030	\$541,131	\$11,309	\$16,963	\$126,660	\$56,545	\$752,608
2031	\$606,700	\$12,679	\$19,019	\$142,007	\$63,396	\$843,801
2032	\$680,214	\$14,216	\$21,323	\$159,214	\$71,078	\$946,044
2033	\$762,635	\$15,938	\$23,907	\$178,506	\$79,690	\$1,060,676
2034	\$855,044	\$17,869	\$26,804	\$200,136	\$89,346	\$1,189,199
Total						\$7,497,465