CITY OF

DONNA

Water and Wastewater Impact Fee Study

Final Report / June 11, 2021

City of Donna

RAFTELIS

TRIMAD CONSULTANTS L.L.C.

GIC GARCIA INFRASTRUCTURE CONSULTANTS, LLC

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1. Introduction and Summary

The City of Donna (City) has completed an Impact Fee Study (Study) in accordance with Chapter 395 of the Texas Local Government Code (Chapter 395). The Study included the completion of land use assumptions and capital improvement plan (CIP). The CIP reflects the latest information about future projects needed to serve future growth. The time period of the study includes a ten-year period from 2022 - 2031. As part of the Study, an impact fee was calculated based on the CIP and future growth. This report establishes the maximum impact fee applicable to the City of Donna service area.

Chapter 395 defines the process for the calculation of the impact fee. The Study as completed calculated a maximum allowable impact fee based on this process. The maximum fee amount is the maximum fee the City may lawfully charge based on the given capital improvements, existing capacity, and the selected rate credit. As required, the Donna City Council appointed the Planning and Zoning Committee to serve as the Capital Improvement Advisory Committee (CIAC). The CIAC reviewed the Land Use Assumptions, CIP and Impact Fee calculation over several meetings and have made a recommendation to the City Council. This report outlines the details of the Study. The impact fee study must be updated at least every five years unless a determination is made and documented by the CIAC that an update is not necessary based on the requirements of Chapter 395.

The CIAC reviewed the overall water and wastewater maximum fees by classification. The water maximum fee is based on water supply, water treatment, storage, and transmission classifications. The wastewater maximum fee is based on wastewater treatment and interceptor classifications. By utilizing these classifications, the City may add or subtract categories to reflect a developer's contribution to specific infrastructure. For example, if a developer is constructing transmission lines, the water transmission portion of the impact fee may be removed. In the future, if the City chooses to provide wholesale service to utilities, then these classifications may be used to calculate impact fees for relevant customers. Local distribution lines to serve subdivisions are not included in the impact fee calculations. Typically, distribution lines are contributed by developers.

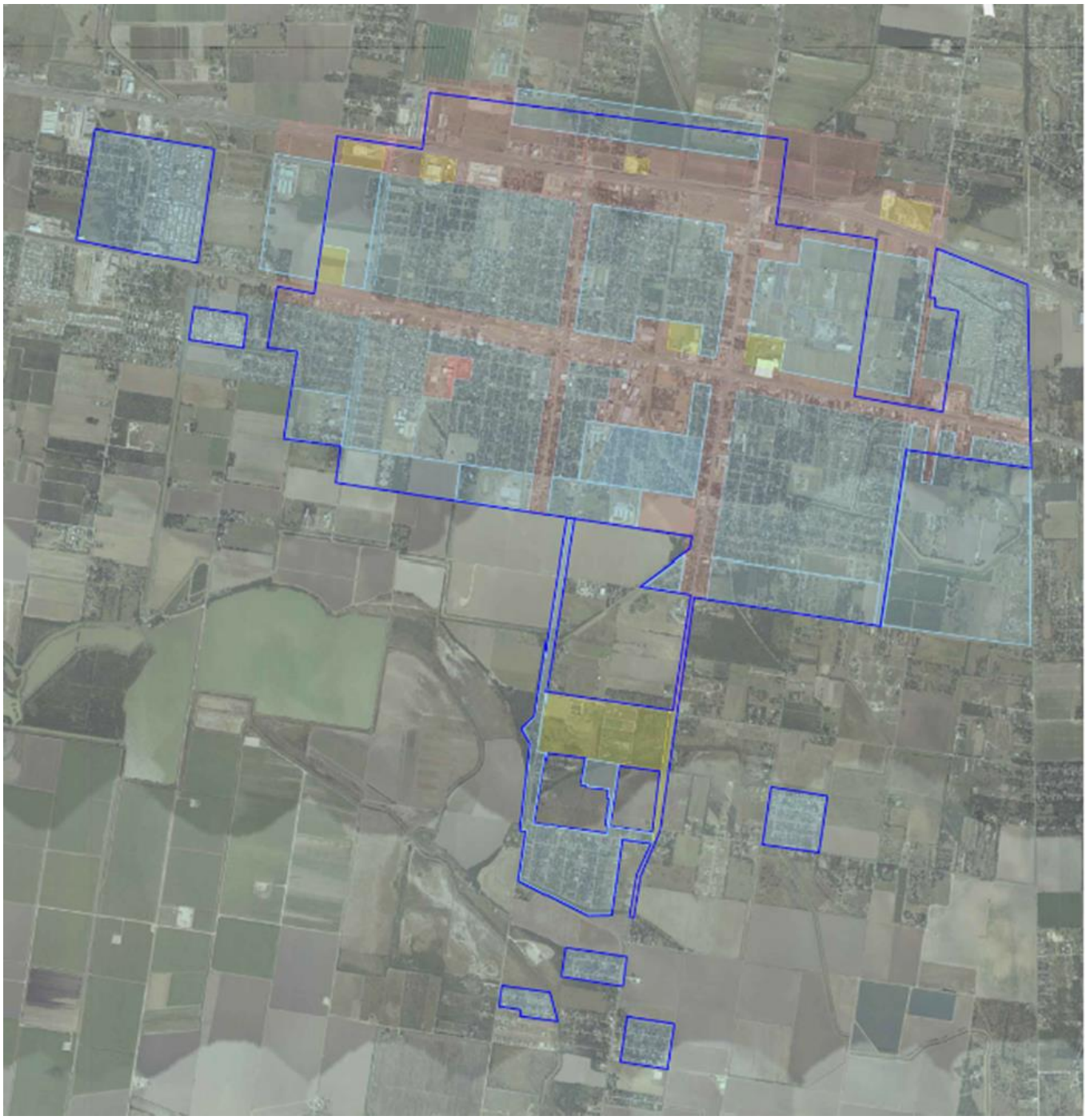
The design assumptions, service demand assumptions and planning costs were obtained in coordination with the City, Trimad Consultants and Garcia Infrastructure Consultants (GIC). The financial information of the City was provided by City staff. This information was utilized by Raftelis to calculate the impact fee.

2. Land Use Assumptions

Figure 1 and Figure 2 show the service area for the Study. This reflects the area where the impact fee will be applied. As shown, the wastewater service area is much larger than the water service area based on the City Certificate of Convenience and Necessity, or CCN. The CCN defines where the City can and will provide service.

The land use details are shown in Table 1. The acres served represent the City's certified water and wastewater service areas. The acreage is then further broken down into type of land use. The City's service area encompasses 13,549 acres.

Figure 1: Water Service Area



Map provided by Trimad Consulting

Figure 2: Wastewater Service Area

Map provided by Trimad Consulting

Table 1: Land Use Assumptions

Land Use Zone	Acreage
Residential	8,640
Commercial	1,243
Industrial	528
IBWC Levee	3,138
Total Acres	13,549

3. Current and Projected Utility Demand and Supply

Table 2 and Table 3 show the current number of water and wastewater meters within the service area. The meter counts were provided by the City. The table displays the number of meters along with the Living Unit Equivalent (LUE) conversion factor. The typical single-family household uses a 5/8" or ¾" meter. The 5/8" or ¾" meter represents one LUE. The LUE conversion factors are primarily based on standard AWWA meter equivalent ratios. Meters larger than 5/8" or ¾" are defined in terms of a 5/8" or ¾ meter. For example, a 2" meter has a conversion factor of 5.33 LUEs/meter. The 3" meter has a conversion factor of 10 LUEs. The conversion factors, along with the number of meters, are then used to determine the service demand for water and wastewater. This allows for an intuitive process when calculating correct impact fees for developments, especially for development with meters larger than 5/8" or ¾" meters.

Table 2: Existing Water Connections and LUEs

Meter Size	LUEs per Meter	Number of Meters	LUEs
5/8 or ¾"	1.00	5,743	5,743
1"	1.67	69	115
1 ½"	3.33	2	7
2"	5.33	138	736
3"	10.00	14	140
4"	16.67	7	117
6"	33.33	5	167
	Total	5,978	7,024

Table 3: Existing Wastewater Connections and LUEs

Meter Size	LUEs per Meter	Number of Meters	LUEs
5/8 or ¾"	1.00	6,186	6,186
1"	1.67	69	115
1 ½"	3.33	2	7
2"	5.33	133	709
3"	10.00	15	150
4"	16.67	4	67
6"	33.33	6	200
	Total	6,419	7,434

Table 4 and Table 5 below shows the projected growth of LUEs for the water and wastewater service areas in the ten-year period. Water connections are estimated to grow by 857 connections and the wastewater connections are expected to increase by 920 connections. The LUEs are projected at the same level as the connections.

Table 4: Estimated Water Growth

Year	Connections	LUEs
2021	5,978	7,024
2030	6,835	8,031
Increase	857	1,007

Table 5: Estimated Wastewater Growth

Year	Connections	LUEs
2021	6,415	7,434
2030	7,335	8,500
Increase	920	1,066

The impact fee can be calculated to recover costs of existing facilities that have capacity that can be utilized by future growth. In Table 6 and Table 7, the current and projected service demands are compared to the existing capacities. The existing water facilities have sufficient and excess capacity while the existing wastewater facilities are needing expansion to serve future growth.

4. Capital Improvement Needs and Costs

Based on the projected growth and capacity needs, Trimad and GIC identified impact fee eligible projects for the ten-year study period. The CIP includes existing facilities with available capacity for future growth as well as future projects that will be required to meet future capacity needs. The capital improvement projects were developed based on existing and future demands.

Table 8, below, shows the Water Capital Improvement Plan and Table 9 shows the Wastewater Capital Improvement Plan. Each table calculates the cost per LUE for each of the projects identified in the 10-year CIP. The tables show the estimated cost of the project, start date, and the amount of capacity added by the project or facilities. The weighted average unit cost of service is based on the share of the existing versus new capacity (based on the projected growth in population). For water transmission and wastewater interceptors, the growth in capacity is based on estimated total capacity added by all the projects. The additional lines all work together to produce the added capacity.

While there is sufficient capacity in the water facilities, there are additional facilities required that add additional capacity. These include a raw water reservoir at the water treatment plant, elevated storage tank upgrades and additional transmission mains to serve new growth.

The wastewater system requires more additional facilities than the water system. At the wastewater treatment plant this includes an expansion that will add 0.95 million gallons per day (mgd) of capacity. In addition, there are several interceptor projects that will be completed between 2023 and 2031. It should be noted that all the wastewater costs are attributed to the new facilities, as the existing facilities do not have any sufficient capacity to serve any of the ten-year growth.

Table 6: Existing Water Capacity

Facility Type	2021	2030	10-Yr Demand Increment	2021 LUE Conversion Factor	2030 LUE Conversion Factor
Supply					
Existing 2021 Capacity (mgd)	3.75	3.75			
Est. Service Demand	2.11	2.41	0.30	300	300
Excess (Deficiency)	1.64	1.34		gpd/LUE	gpd/LUE
Existing 2021 Capacity (LUEs)	12,500	12,500			
Est. Service Demand	7,024	8,031	1,007		
Excess (Deficiency)	5,476	4,469			
Treatment					
Existing 2021 Capacity (mgd)	4.50	4.50			
Est. Service Demand	2.11	2.41	0.30	300	300
Excess (Deficiency)	2.39	2.09		gpd/LUE	gpd/LUE
Existing 2021 Capacity (LUEs)	15,000	15,000			
Est. Service Demand	7,024	8,031	1,007		
Excess (Deficiency)	7,976	6,969			
Storage					
Existing 2021 Capacity (mg)	1.50	1.50			
Est. Service Demand	0.70	0.80	0.10	100	100
Excess (Deficiency)	0.80	0.70		gallons/LUE	gallons/LUE
Existing 2021 Capacity (LUEs)	15,000	15,000			
Est. Service Demand	7,024	8,031	1,007		
Excess (Deficiency)	7,976	6,969			
Transmission (>6 inch)					
Existing 2021 Capacity (mgd)	4.00	4.00			
Est. Service Demand	2.11	2.41	0.30	300	300
Excess (Deficiency)	1.89	1.59		gpd/LUE	gpd/LUE
Existing 2021 Capacity (LUEs)	13,333	13,333			
Est. Service Demand	7,024	8,031	1,007		
Excess (Deficiency)	6,310	5,302			

Table 7: Existing Wastewater Capacity

Facility Type	2021	2030	10-Yr Demand Increment	2021 LUE Conversion Factor	2030 LUE Conversion Factor
Treatment					
Existing 2021 Capacity (mgd)	1.80	1.80			
Est. Service Demand	1.86	2.12	0.27	250	250
Excess (Deficiency)	(0.06)	(0.32)		gpd/LUE	gpd/LUE
Existing 2021 Capacity (LUEs)	7,200	7,200			
Est. Service Demand	7,434	8,500	1,066		
Excess (Deficiency)	(234)	(1,300)			
Interceptors					
Existing 2021 Capacity (mgd)	4.50	4.50			
Est. Service Demand	4.65	5.31	0.67	625	625
Excess (Deficiency)	(0.15)	(0.81)		gpd/LUE	gpd/LUE
Existing 2021 Capacity (LUEs)	7,200	7,200			
Est. Service Demand	7,434	8,500	1,066		
Excess (Deficiency)	(234)	(1,300)			

Table 8: Water Capital Improvement Plan

Facility Name	Date of Need	Cost Original	Cost Installed[1]	Capacity Total	Capacity LUEs	Cost per LUE	Facility Capacity Allocations (LUEs) Existing Customers	Growth in Next 10 Yrs	Excess Capacity	Total Capacity
WATER SUPPLY										
Existing Facilities										
Total Existing Water Supply Facilities	N/A	$ 177,019	$ 177,019	3.75	12,500	$ 14	7,024	994	4,482	12,500
Total Water Supply		$ 177,019	$ 177,019	3.75	12,500	$ 14	7,024	1,007	4,469	12,500
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 14**				
WATER TREATMENT										
Existing Facilities										
Existing Water Treatment Facilities	N/A	$ 8,073,320	$ 8,073,320	4.50	15,000	$ 538	7,024	500	7,476	15,000
Future Facilities										
Raw Water Reservoir	2025	$ 837,000	$ 942,051	2.00	6,667					
Subtotal Future Facilities			$ 942,051	2.00	6,667	$ 141	-	507	6,160	6,667
Total Water Treatment		$ 8,073,320	$ 9,015,371	6.50	21,667	$ 416	7,024	1,007	13,636	21,667
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 338**				
Storage										
Existing Facilities										
Existing Elevated Storage Facilities	N/A	$ 3,045,826	$ 3,045,826	1.50	15,000	$ 203	7,024	994	6,982	15,000
Future Facilities										
Composite Elevated Storage Tank Upgrades	2025	$ 2,527,000	$ 2,844,161	0.25	2,500					
Subtotal Future Facilities			$ 2,844,161	0.25	2,500	$ 1,138	-	13	2,487	2,500
Total Elevated Storage		$ 3,045,826	$ 5,889,987	1.75	17,500	$ 337	7,024	1,007	9,469	17,500
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 215**				
TRANSMISSION										
Existing Facilities										
Existing Transmission Facilities	N/A	$ 3,861,435	$ 3,861,435	4.00	13,333	$ 290	7,024	500	5,810	13,333
Future Facilities										
From WTP To SW EST on Hester Ave.	2025	$ 2,247,924	$ 2,530,059							
From SW EST on Hester Ave. to NW EST	2025	$ 2,585,019	$ 2,909,462							
From Silver Ave to Stites Rd.	2025	$ 887,197	$ 998,548							
Subtotal Future Facilities		$ 5,720,140	$ 6,438,068	0.75	2,500	$ 2,575	-	507	1,993	2,500
Total Transmission		$ 9,581,575	$ 10,299,503	4.75	15,833	$ 650	7,024	1,007	7,802	15,833
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 1,441**				
		Existing Total	$ 15,157,601							
		Future Total	$ 10,224,280							
		Water Total	$ 25,381,880							
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 2,008**				

[1]Assumes inflation if installation occurs after current year; if facility already exists this number is equal to original cost.

Table 9: Wastewater Capital Improvement Plan

Facility Name	Date of Need	Cost		Capacity		Cost	Facility Capacity Allocations (LUEs)			
		Original	Installed[1]	Total	LUEs	per LUE	Existing Customers	Growth in Next 10 Yrs	Excess Capacity	Total Capacity
WASTEWATER TREATMENT										
Existing Facilities										
Existing Wastewater Treatment Facilities	N/A	$ 12,194,907	$12,194,907	1.80	7,200	$ 1,694	7,434	-	(234)	7,200
Future Facilities										
Expand Influent Lift Station	2025	$ 35,000	$ 39,393	0.95						
Demolition of Existing Headworks	2025	$ 40,000	$ 45,020							
New Headworks	2025	$ 1,800,000	$ 2,025,916							
Convert Oxidation Ditch to Fine Bubble	2025	$ 3,750,000	$ 4,220,658							
Rehabilitate Clarifier 1 and 3.	2025	$ 900,000	$ 1,012,958							
New Clarifier No. 2 (70-ft.Diameter)	2025	$ 800,000	$ 900,407							
Demolition of Clarifier No. 2 (70-ft Diameter)	2025	$ 25,000	$ 28,138							
RAS/WAS Pump Station	2025	$ 250,000	$ 281,377							
Sludge Thickener	2025	$ 480,000	$ 540,244							
Thickened Sludge PS	2025	$ 32,000	$ 36,016							
Demolition of Existing Drying Bed	2025	$ 25,000	$ 28,138							
New Mechanical Dewatering Facility	2025	$ 1,500,000	$ 1,688,263							
New Digesters	2025	$ 1,500,000	$ 1,688,263							
Other Ancillary Equipment	2025	$ 2,920,550	$ 3,287,105							
Subtotal Future Facilities		$ 14,057,550	$15,821,896	0.95	3,800	$ 2,082	-	1,066	2,734	3,800
Total Wastewater Treatment		$ 26,252,457	$28,016,804	2.75	11,000	$ 2,547	7,434	1,066	2,500	11,000
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$ 2,082**				
LIFT STATION/INTERCEPTORS										
Existing Facilities										
Existing Interceptor Facilities	N/A	$ 8,734,426	$ 8,734,426	4.50	7,200	$ 1,213	7,434	-	(234)	7,200
Future Facilities										
Phase A	2027	$ 3,020,441	$ 3,606,564							
Phase B	2027	$ 3,191,013	$ 3,810,237							
Phase C	2023	$ 9,724,333	$10,316,545							
Phase D	2023	$ 4,027,779	$ 4,273,071							
Phase E	2023	$ 4,773,946	$ 5,064,679							
Phase F	2023	$ 2,549,506	$ 2,704,771							
Phase G	2031	$ 3,835,176	$ 5,154,156							
Phase H	2031	$ 12,616,693	$16,955,780							
Phase I	2027	$ 1,793,770	$ 2,141,855							
Phase J	2031	$ 3,202,550	$ 4,303,959							
Subtotal Future Facilities			$58,331,617	2.38	1,520	$38,376	-	1,066	454	1,520
Total Interceptors		$ 8,734,426	$67,066,043	6.88	8,720	$ 7,691	7,434	1,066	220	8,720
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$38,376**				
		Existing Total	$20,929,333							
		Future Total	$74,153,513							
		Water Total	$95,082,847							
		WEIGHTED AVERAGE CAPITAL COST PER NEW LUE =				**$40,458**				

[1]Assumes inflation if installation occurs after current year; if facility already exists this number is equal to original cost.

5. Methods of Capital Payment

Chapter 395 allows for two ways to pay for capital improvements:

- An up-front impact fee that allows the new customer to buy into the system, and
- Monthly utility fees that go towards the debt service of the system.

To calculate the impact fee, the law allows the utility to either use a 50% credit of the total projected cost of capital for all projects or to apply a credit for rate payments. The utility may select the maximum fee amount after these credits have been assessed.

Table 10: Existing and Future Debt Paid through Rates

Facility Type	Est. Debt in Rates	Mid-Point LUEs	Est. Debt in Rates per LUE
WATER UTILITY			
Supply			
Existing Debt	$ 4,035	7,527	$ 1
Series 2020 - 2030 New Growth	$ -	7,527	$ -
Subtotal Water Supply	$ 4,035		$ 1
Treatment			
Existing Debt	$ -	7,527	$ -
Series 2020 - 2030 New Growth	$ 802,290	7,527	$ 107
Subtotal Treatment	$ 802,290		$ 107
Elevated Storage			
Existing Debt	$ 199,728	7,527	$ 27
Series 2020 - 2030 New Growth	$ 288,441	7,527	$ 38
Subtotal Elevated Storage	$ 488,169		$ 65
Transmission			
Existing Debt	$ 229,480	7,527	$ 30
Series 2020 - 2030 New Growth	$ 652,917	7,527	$ 87
Subtotal Transmission	$ 882,397		$ 117
TOTAL WATER	$ 2,176,890		$ 289
WASTEWATER UTILITY			
Treatment			
Existing Debt	$ 149,817	7,967	$ 19
Series 2020 - 2030 New Growth	$ -	7,967	$ -
Subtotal Wastewater Treatment	$ 149,817		$ 19
Interceptors			
Existing Debt	$ -	7,967	$ -
Series 2020 - 2030 New Growth	$ 3,317,792	7,967	$ 416
Subtotal Interceptors	$ 3,317,792		$ 416
TOTAL WASTEWATER	$ 3,467,609		$ 435
TOTAL WATER AND WASTEWATER	$ 5,644,500		$ 724

Table 10 summarizes the present value of the existing and projected debt. This represents the amount of debt that will be paid through rates. The debt projections are based on a 50% debt funding target assuming that the City will receive grant funding for the wastewater treatment plant projects. The total credit from existing and projected growth are then summed to arrive at a total rate credit number.

5.1. Impact Fee Calculation

Table 11 and Table 12 summarize the possible maximum impact fees. The maximum fee for each classification is selected to establish the recommended maximum impact fee. As can be seen in the tables using the rate credit results in a higher maximum allowable impact fee, while using the 50% credit results in a lower impact fee.

Table 11: Water Impact Fee Calculation

Facility Type	Weighted Capital Cost per LUE	Option A Rate Credit	Option A Impact Fee	Option B 50% Credit	Option B Impact Fee	Recommended Maximum Allowable
Supply	$14	($1)	$13	($7)	$7	$7
Treatment	338	(106)	233	(169)	169	169
Storage	215	(64)	151	(108)	108	108
Transmission	1,441	(116)	1,324	(720)	720	720
Study	72	(0)	72	(0)	72	72
Total	$2,080	($287)	$1,794	($1,004)	$1,076	$1,076

Table 12: Wastewater Impact Fee Calculation

Facility Type	Weighted Capital Cost per LUE	Option A Rate Credit	Option A Impact Fee	Option B 50% Credit	Option B Impact Fee	Recommended Maximum Allowable
Treatment	$2,082	($19)	$2,063	($1,041)	$1,041	$1,041
Interceptors	38,376	(416)	37,960	(19,188)	19,188	19,188
Study	72	(0)	72	(0)	72	72
Total	$40,530	($435)	$40,095	($20,229)	$20,301	$20,301

6. Advisory Committee Actions and Recommendations

The CIAC met on May 24, 2021, to review the Land Use Assumptions and Capital Improvement Plan. The CIAC verified the basis for the land use assumptions and that the CIP was reasonably defined.

On June 7, 2021, the CIAC met to review the impact fee calculation and found the calculation of the impact fee to be reasonable. The CIAC recommends that the City Council adopt the maximum allowable impact fee shown in Table 11 and Table 12 above. They also recommend that the City Council adopt a lesser impact fee amount to be assessed, or collected, for wastewater. The impact fees to be collected are presented below in Table 13 and Table 14.

Table 13 Water Impact Fee by Meter Size

Meter Size	LUEs	Impact Fee
5/8" or ¾"	1.00	$1,076
1"	1.67	$1,798
1 ½"	3.33	$3,584
2"	5.33	$5,737
3"	10.00	$10,764
4"	16.67	$17,943
6"	33.33	$35,876

Table 14: Wastewater Impact Fee by Meter Size

Meter Size	LUEs	Impact Fee
5/8" or ¾"	1.00	$10,000
1"	1.67	$16,667
1 ½"	3.33	$33,333
2"	5.33	$53,333
3"	10.00	$100,000
4"	16.67	$166,667
6"	33.33	$333,333