

***2018 Development of a
Wastewater Impact Fee
for the Village of Salado***

Prepared for:



Prepared by:

**HDR Engineering, Inc.
4401 West Gate Blvd, Suite 400
Austin, Texas 78745**



April 2018

Table of Contents

<u>Section</u>		<u>Page</u>
1.0	Introduction and Summary	1
2.0	Utility Service and Fee Application Area	2
3.0	Land Use Assumptions.....	3
4.0	Current and Projected Utility Demand and Supply.....	5
5.0	Identified Major Capital Improvement Needs and Costs.....	7
6.0	Consideration of Other Methods of Capital Payment	9
7.0	Alternative Maximum Impact Fee Calculations	9
8.0	Advisory Committee Actions and Recommendations	12
 <u>Appendix</u>		<u>Page</u>
A	Summary of 10-Year Wastewater CIP Projects	
B	Example Impact Fee Calculations	

List of Figures

<u>Figure</u>		<u>Page</u>
1	Wastewater Impact Fee Application Area.....	2

List of Tables

<u>Table</u>		<u>Page</u>
1	Current and Projected Land Use	3
2	Wastewater Service Area Connections and LUEs	4
3	Estimated Wastewater Service Demands and Available Capacity	6
4	Wastewater Capital Improvements Plan Inventory and Costing.....	8
5	Existing or Anticipated Debt to be Paid through Utility Rates	10
6	Derivation of Alternative Maximum Wastewater Impact Fee Amounts.....	10
7	Area Impact Fee Comparison.....	11

1.0 Introduction and Summary

The Village of Salado (Village) is in the process of creating a new wastewater impact fee to help fund the new wastewater collection and treatment system serving the downtown business district and adjoining areas. This report presents HDR Engineering, Inc.'s (HDR) maximum impact fee determination for consideration by the Village's Impact Fee Advisory Committee and the Salado Board of Aldermen.

The methodology to determine the maximum fee amount considers two options. Consistent with State law, each fee component is calculated with either: (1) consideration of a credit for other methods of payments for utility capital by a new customer, such as through utility rates or taxes, or alternatively, (2) a reduction of the maximum fee amount equal to 50% of the unit capital cost of providing new service. By maximum amounts, this means that the determined fee amount was calculated as the highest that can be lawfully levied by the Village, given the prospective land uses and capital improvements plan, the cost of existing and new utility capacity, and consideration of a credit to new customers for capital contributions made through rate payments. The Board of Aldermen can decide to enact fees less than the maximum amounts shown in this report.

As detailed later in this report, the maximum impact fees were developed in component pieces. For example, the overall wastewater fee is comprised of separate amounts for treatment, pumping and collection. This will facilitate the consideration of offsets or credits from the applicable fee if a developer builds and dedicates eligible facilities to the Village or the Village provides wholesale service to a neighboring utility and wishes to charge only certain portions of the fee. The maximum fee amounts do not include capital costs for facilities required to be provided by developers at their own expense.

Planning, service demand, and design factor assumptions used in the wastewater facility sizing and costing were provided by the Village and, in general, are based upon recently completed cost estimates for the project (see Appendix A). Data on projected utility demand, needed future facilities, and prospective cash versus debt financing were obtained from or coordinated with the Village of Salado staff. HDR combined these elements into the maximum impact fee calculations presented in this report.

2.0 Utility Service and Fee Application Area

This fee would only apply to the Village’s downtown business district and other adjoining areas as shown in Figure 1. This fee application area boundary will comprise the area in which Salado may levy the impact fee, in-part or in-full, if Village service is provided. The fee cannot be levied to areas outside of the proposed impact fee area. Further, this fee would only apply to all new connections to the system, including previously platted land unless a separate agreement has been previously established with the Village. This boundary does not mandate that the Village supply wastewater service to this area; however, if service is provided by the Village, any impact fee would be applicable to that parcel.

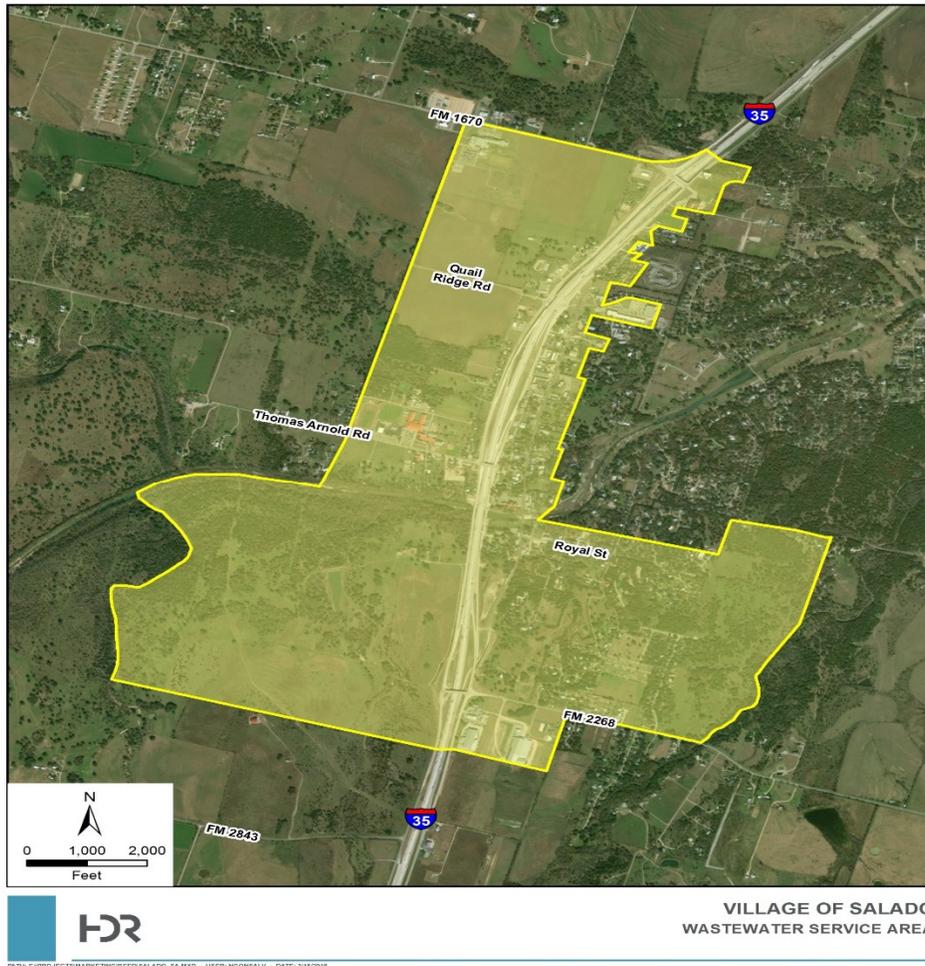


Figure 1. Wastewater Impact Fee Application Area

3.0 Land Use Assumptions

Table 1 provides an estimate of the current and future land use patterns of the potential service area with information provided by Village of Salado staff and a report by Kasberg, Patrick & Associates, LP¹. The estimated land area of the potential future service area is 1,808 acres. When the system is initially placed into operation in early 2019, it is estimated that the system will service 47 residential acres (2.6% of total land area) and 128 acres of commercial development (7.1% of total area). The remaining 1,633 acres of the potential wastewater service area will remain unserved until the system is expanded.

Over the next 10 years, some expansion of the system is forecasted, primarily to the areas south of Royal Street, although future expansion will be dictated by customer demand. At the end of the 10-year period, it is estimated that the wastewater system will serve 95 residential acres (5.3% of total area) and 160 acres of commercial development (14.1% of the total area). The remaining 1,553 acres will remain unserved until after this 10-year period.

Table 1.
Current and Projected Land Use

<i>Item</i>	<i>Current</i>		<i>Future (10-years)</i>	
	<i>Acres</i>	<i>%</i>	<i>Acres</i>	<i>%</i>
Residential (Served)	47	2.6%	95	5.3%
Non-Residential (Served)	128	7.1%	160	8.8%
Subtotal Served	175	9.7%	255	14.1%
Un-served	1,633	90.3%	1,553	85.9%
Total Land Use Acreage	1,808	100.0%	1,808	100.0%
Source: Village of Salado & KPA Report.				

Table 2 shows the anticipated number of service connections at the completion of the project as well as the projected future connections for the wastewater service area. This growth assumption includes a 1% growth rate in 2019, a 3% growth rate beginning in 2020 through 2025 and a 5% growth rate in 2026. This table also shows the number of Living Unit Equivalents (LUEs) for the same time period. The number of LUEs is based on an assessment of

¹ Kasberg, Patrick & Associates, LP., Update to Preliminary Design of the 2015 Wastewater System Improvements, January 2016.

the winter water use for each customer within the Village. It was determined that the average residential customer uses approximately 100 gallons of water per day during the winter months. This was assumed to be the standard use for determining the number of LUEs for all customers. This is the industry standard practice for determining a base LUE. For each potential customer, the average daily water use during the winter months (November through February) was determined.² This value was divided by 100 to determine the number of LUEs for that customer. If this calculation resulted in a value less than one, the number was rounded to one LUE. Each new customer will be charged for a minimum of one LUE. This system is being used, instead of using meter size, due to the fact that using meter size may under estimate the impact of residential and commercial developments on the wastewater system within the Village.

Table 2.
Wastewater Service Area Connections & LUEs

Year	Service Connections	LUEs
2018	0	0
2019	137	341
2020	138	344
2021	143	355
2022	147	365
2023	151	376
2024	156	388
2025	160	399
2026	165	411
2027	173	432

² Using the winter water average as a basis of determine impact fees only applies to the impact fee methodology. At the time of this report, the basis for actual wastewater use billing has not been determined and may be some other factor such as actual water use.

4.0 Current and Projected Utility Demand and Supply

Table 3 summarizes the Village's current and projected wastewater service demands and existing service capabilities by facility. Current and future service demands are also compared with the existing service capacity of the utility system. This table shows the projected service demands on the system once the system is completed, but shows no current capacity in 2018 as the project is still under construction and is anticipated to be completed in early 2019. Wastewater demand was forecast using historical data and technical studies of the Village's proposed system.

Table 3.
Estimated Wastewater Service Demands and Available Capacity

Facility Type	2018	2027	10-yr Demand Increment
Treatment			
Existing 2018 Capacity (mgd) *	0.000	0.000	
Est. Service Demand	0.063	0.080	0.017
Excess (Deficiency)	(0.063)	(0.080)	
Existing 2018 Capacity (LUEs) *	0	0	
Est. Service Demand	341	432	91
Excess (Deficiency)	(341)	(432)	
Pumping			
Existing 2018 Capacity (mgd)	0.000	0.000	
Est. Service Demand**	0.126	0.160	0.034
Excess (Deficiency)	(0.126)	(0.160)	
Existing 2018 Capacity (LUEs) *	0	0	
Est. Service Demand	341	432	91
Excess (Deficiency)	(341)	(432)	
Interceptors			
Existing 2018 Capacity (mgd)	0.000	0.000	
Est. Service Demand	0.126	0.160	0.034
Excess (Deficiency)	(0.126)	(0.160)	
Existing 2018 Capacity (LUEs) *	0	0	
Est. Service Demand	341	432	91
Excess (Deficiency)	(341)	(432)	
* Assume LUE conversion factor of :	185	gpd/LUE for ww treatment	
	370	gpd/LUE for ww pumping	
	370	gpd/LUE for interceptors	
These are average estimates of use over the 10-year period. It is felt that the average use may be less than these values in the early years of the system and greater than these value during the later portion of the 10-year period depending on customer response to having wastewater service available.			
** Assumes:	100.0%	of ww demand pumped	

5.0 Identified Major Capital Improvement Needs and Costs

Given the anticipated wastewater demands in the planning area, facilities have been identified to meet the projected wastewater needs for the next 10 years. The Village's 10-year capital need for new capacity totals \$9.993 million for wastewater (see Appendix A).

Specific projects that will be constructed as part of the wastewater project are identified in Table 4 along with their cost, capacity, unit cost, and allocation of existing and projected demand to these facilities. A weighted unit cost of service (\$ per SU) is then calculated by facility type, based on the proportionate share of use of existing versus new facility capacity by the growth anticipated over the next ten years.

TABLE 4								
WASTEWATER CIP INVENTORY AND COSTING								
VILLAGE OF SALADO								
Facility Name	Construction Cost	Capacity		Construction Cost per SU	Facility Capacity Allocations (LUEs)			Total Capacity
		Total	LUEs		Existing Customers	Growth Use in Next 10 Years	Excess Capacity after 10 Years	
TREATMENT								
<i>EXISTING FACILITIES</i>								
		mgd						
Subtotal Existing Facilities	\$ -	-	-	\$ -	-	-	-	-
<i>FUTURE FACILITIES</i>								
Treatment Plant	\$ 5,803,025	0.200	1,081					
Subtotal Future Facilities	\$ 5,803,025	0.200	1,081	\$ 5,368		432	649	1,081
TOTAL WASTEWATER TREATMENT	\$ 5,803,025	0.200	1,081			432	649	1,081
	AVERAGE CAPITAL COST PER NEW LUE = \$			5,368				
PUMPING								
<i>EXISTING FACILITIES</i>								
		mgd						
Subtotal Existing Facilities	\$ -	-	-	\$ -	-	-	-	-
<i>FUTURE FACILITIES</i>								
Two Lift Stations	\$ 750,095	1.200	3,243					
Subtotal Future Facilities	\$ 750,095	1.200	3,243	\$ 231		432	2,811	3,243
TOTAL PUMPING	\$ 750,095	1.200	3,243			432	2,811	3,243
	AVERAGE CAPITAL COST PER NEW LUE = \$			231				
INTERCEPTORS								
<i>EXISTING FACILITIES</i>								
		mgd						
Subtotal Existing Facilities	\$ -	-	-	\$ -	-	-	-	-
<i>FUTURE FACILITIES</i>								
Collection System	\$ 3,439,474	1.200						
Subtotal Future Facilities	\$ 3,439,474	1.200	3,243	\$ 1,061		432	2,811	3,243
TOTAL INTERCEPTORS	\$ 3,439,474	1.200	3,243			432	2,811	3,243
	AVERAGE COST PER NEW SU			\$ 1,061				
WASTEWATER TOTAL	\$ 9,992,594							
	AVERAGE CAPITAL COST PER NEW LUE = \$			6,660				

6.0 Consideration of Other Methods of Capital Payment

For utilities that charge an impact fee, the new customer pays for capital in two ways: (1) initially through the up-front impact fee, and (2) over the longer-term through utility rate payments, where typically some portion of customer rate payments also funds capital projects.

The 77th Texas Legislature amended Chapter 395 of the Local Government Code to require either: (1) a calculated credit for rate payments be reflected in the fee amount, or (2) a credit equal to 50% of the total projected cost of the capital improvements plan be given in calculating the maximum fee amount.

Table 5 indicates the estimated cost per LUE that is projected to be borne in the utility rates by the average new customer. The rate credit calculation considered: (1) existing debt, (2) future debt payments incurred in the year in which the facilities would be built and financed, and (3) the projected LUEs at the mid-point year of the weighted average life of the debt for the facilities that are part of the impact fee calculation for each utility.

7.0 Alternative Impact Fee Calculations

Table 6 summarizes the unit capital cost of providing new service and the two alternative credit calculations for new customers. The alternative approach that calculates a specific rate credit (Option A) results in the maximum impact fee calculation of \$5,152 per LUE for new wastewater service. See Appendix B for example impact fees calculated at the maximum impact fee amount derived from Option A.

As shown in Table 6, the alternative 50% of capital cost method for calculating a rate credit (Option B) results in a lesser wastewater impact fee of \$3,353 per LUE.

Table 5.
Existing or Anticipated Debt to be Paid through Utility Rates

Facility Type	Est. Debt in Rates	Mid-Point LUEs	Est. Debt in Rates per LUE
WASTEWATER UTILITY			
Treatment			
Existing Debt	\$ 0	386	\$ 0
New Debt ¹	327,664	386	848
Subtotal WWTP	327,664		848
Pumping			
Existing Debt	0	386	0
New Debt ¹	69,626	386	180
Subtotal Wastewater Pumping	69,626		180
Interceptors			
Existing Debt	0	386	0
New Debt ¹	194,207	386	503
Subtotal Interceptors	194,207		503
Total Wastewater			\$1,531
1. It is understood that the Village has already issued debt associated with this project; however, for purposes of calculating the impact fee, all debt associated with the project was shown as new debt since the facilities have not been placed into service.			

Table 6.
Derivation of Alternative Maximum Wastewater Impact Fee Amounts

Item	Capital Cost of New Service per LUE	Optional Adjustments		Option A	Option B	Highest of Option A or B
		Option A Rate Credit	Option B 50% Cost Adjustment			
WASTEWATER						
Treatment	\$ 5,368	\$ 848	\$ 2,684	\$ 4,520	\$ 2,684	
Pumping	231	180	116	51	116	
Interceptors	1,061	503	530	558	530	
Allocated Impact Fee Study Cost	23			23	23	
TOTAL WASTEWATER	\$6,683	\$1,531	\$3,330	\$5,152	\$3,353	\$5,152

For comparison purposes, the current impact fees of other near-by cities are listed in Table 8.

Table 7.
Area Impact Fee Comparison

City/Utility	Wastewater
Salado	\$5,152
Buda	\$3,515
Kyle	\$2,826
Pflugerville	\$2,725
Austin	\$2,200
Hutto	\$2,128
Round Rock	\$2,099
Jarrell	\$1,600
Taylor	\$1,230
Florence	\$575

8. Advisory Committee Actions and Recommendations

The following summarizes the Impact Fee Advisory Committee activities during the impact fee updating process:

- On 2/6/18, the Committee met to:
 - Review Chapter 395 Impact Fee process and requirements; and
 - Review methodology for maximum fee calculation.
- On 3/21/18, the Committee met to:
 - Review CIP information;
 - Review unit cost calculations and maximum fee calculation;
 - Receive draft report for review;
- On 4/12/18, the Committee met to:
 - Approve the Impact Fee Report. By approving this report the Committee found the following:
 - The land use assumptions used in the report are reasonable;
 - The CIP used in the report is reasonable; and
 - The method used to calculate the maximum impact fee of is reasonable.
 - In addition, the Committee recommends to Board of Alderman that the maximum impact fee amount of \$5,152/LUE in this document be adopted.

Appendix A
Summary of 10-Year Wastewater
CIP Projects

PROJECT EXPENDITURES	COST
Wastewater Treatment Plant	\$4,883,000.00
Wastewater Treatment Collection System	\$3,326,632.50
Construction Contingencies	\$410,000.00
Project Management	\$339,000.00
Engineering On-Site Deduction	-\$193,900.00
Engineering (Project Management Coord.)	\$35,000.00
Engineering Construction Services	\$496,641.00
Oncor 3 Phase Overhead Power to Plant	\$69,926.07
Oncor 3 Phase Overhead Power to Lift Stations	\$7,943.41
CCN Designation	\$18,850.00
Rate Study	\$40,000.00
Environmental Monitoring	\$25,000.00
Archeological Monitoring	\$8,500.00
Property Connection	\$156,000.00
Grinder Pumps for 30 Main Street properties	\$210,000.00
Decommissioning Stagecoach WW Plant	\$160,000.00
TOTAL	\$9,992,592.98

PROJECT EXPENDITURES SPLIT INTO SYSTEM COMPONENTS				
Cost Item	WWTP	Lift Station	Collection System	Total
Capital Cost	\$ 4,883,000	\$ 650,253	\$ 2,676,380	\$ 8,209,633
Construction Contingencies	\$ 243,864	\$ 32,475	\$ 133,662	\$ 410,000
Project Management	\$ 201,634	\$ 26,851	\$ 110,516	\$ 339,000
Engineering On-Site Deduction	\$ (115,330)	\$ (15,358)	\$ (63,212)	\$ (193,900)
Engineering (Project Management Coord.)	\$ 20,818	\$ 2,772	\$ 11,410	\$ 35,000
Engineering Construction Services	\$ 295,397	\$ 39,337	\$ 161,907	\$ 496,641
Oncor 3 Phase Overhead Power to Plant	\$69,926.07	\$ -	\$ -	\$ 69,926
Oncor 3 Phase Overhead Power to Lift Stations	\$ -	\$7,943.41	\$ -	\$ 7,943
CCN Designation	\$ -	\$ -	\$18,850.00	\$ 18,850
Rate Study	\$ 23,792	\$ 3,168	\$ 13,040	\$ 40,000
Environmental Monitoring	\$ 14,870	\$ 1,980	\$ 8,150	\$ 25,000
Archeological Monitoring	\$ 5,056	\$ 673	\$ 2,771	\$ 8,500
Property Connection	\$ -	\$ -	\$156,000.00	\$ 156,000
Grinder Pumps for 30 Main Street properties	\$ -	\$ -	\$210,000.00	\$ 210,000
Decommissioning Stagecoach WW Plant	\$160,000.00	\$ -	\$ -	\$ 160,000
Total	\$ 5,803,025	\$ 750,095	\$ 3,439,474	\$ 9,992,593

Appendix B
Example Impact Fee Calculations

Example 1 – Single Family Household with estimated use of 19,800 gallons during the winter (November through February).

- 19,800 gallons = an average daily use of 165 gallons ($19,800 / 120$)
- 165 gallons/day divided by 100 gallons/day (defined as one LUE) = 1.7 LUEs. Since this number is greater than 1.0, this is the number of LUEs that would be charged.
- *LUEs times \$5,152 = \$8,758 – this would be the impact fee paid.*

Example 2 – Single Family Household with estimated use of 10,500 gallons during the winter (November through February).

- 10,500 gallons = an average daily use of 87.5 gallons ($10,500 / 120$)
- 87.5 gallons/day divided by 100 gallons/day (defined as one LUE) = 0.88 LUEs. Since this number is less than 1.0, this number would be rounded up to 1.0 LUE. This is the number of LUEs that would be charged.
- *LUEs times \$5,152 = \$5,152 – this would be the impact fee paid.*

Example 3 – Commercial Customer with estimated annual use of 650,000 gallons.

- 650,000 gallons = an average daily use of 1,780.8 gallons ($650,000 / 365$)
- 1,780.8 gallons/day divided by 100 gallons/day (defined as one LUE) = 17.8 LUEs. Since this number is greater than 1.0, this is the number of LUEs that would be charged.
- *LUEs times \$5,152 = \$91,706 – this would be the impact fee paid.*

Example 4 – Commercial Customer with estimated annual use of 100,000 gallons.

- 100,000 gallons = an average daily use of 274 gallons ($100,000 / 365$)
- 274 gallons/day divided by 100 gallons/day (defined as one LUE) = 2.7 LUEs. Since this number is greater than 1.0, this is the number of LUEs that would be charged.
- *LUEs times \$5,152 = \$13,910 – this would be the impact fee paid.*

Example 5 – Commercial Customer with estimated annual use of 30,000 gallons.

- 30,000 gallons = an average daily use of 82.2 gallons ($30,000 / 365$)
- 82.2 gallons/day divided by 100 gallons/day (defined as one LUE) = 0.82 LUEs. Since this number is less than 1.0, this number would be rounded up to 1.0 LUE. This is the number of LUEs that would be charged.
- *LUEs times \$5,152 = \$5,152 – this would be the impact fee paid.*