

## Exhibit A

### 2019 Technical Memo

# MEMORANDUM

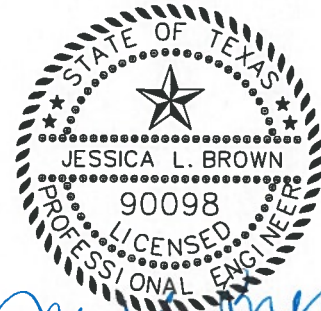


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**TO:** Caroline Waggoner, P.E.  
**FROM:** Jessica Brown, P.E.  
**SUBJECT:** Clarification on Water and Wastewater Impact Fee Service  
Unit Equivalency for Ordinance 3570  
**DATE:** August 6, 2019  
**PROJECT:** Water & Wastewater Impact Fee Study (NRH15536)



*Jim & John*  
8/17/19  
FREESE AND NICHOLS, INC.  
TEXAS REGISTERED  
ENGINEERING FIRM  
F-2144

The most recent impact fee ordinance for the City of North Richland Hills, Ordinance 3570, was adopted on March 4, 2019. The fee schedule was included as Table 1B in the ordinance and is included below.

## Ordinance No. 3570

### Chapter 110 – Appendix A – Fee Schedule

**TABLE 1B  
NORTH RICHLAND HILLS IMPACT FEES**

Program Year	Dates	Water	Wastewater
1	January 8, 2018 – January 7, 2019	\$1,429	\$685
2	January 8, 2019 – January 7, 2020	\$1,644	\$1,008
3	January 8, 2020 – January 7, 2021	\$1,851	\$1,210
4	January 8, 2021 – January 7, 2022	\$1,851	\$1,210
5	January 8, 2022 – January 7, 2023	\$1,851	\$1,210

Ordinance 3570 included the equivalency table Table 4-1 from the *Water & Wastewater Impact Fee Study*, as Table 4, as well as including the full Impact Fee Study as Exhibit A with the ordinance. Table 4-1 is included here for reference and shows the calculated service unit equivalencies (SUEs) as different for water and wastewater; however, that was only used in the calculations of the wastewater SUEs to account for the fact that the water system has some irrigation only water meters that would not be included in the SUE calculations for wastewater and not to decrease the SUE factor for wastewater. An exact count of irrigation meters was not available at the time of the study, so a ratio of 86% was applied to the number of water meters to determine the number of wastewater meters that should be multiplied by the equivalency factors (third column in Table 3-1) to calculate the wastewater SUEs. This is detailed in Section 4.1 on page 4-1. As an example, the SUEs for 3" meters for water would be calculated as:

$$\text{Water SUE} = \text{Number of 3" Water Meters} \times 10,$$

and the SUEs for 3" meters for wastewater would be calculated as:

$$\text{Wastewater SUEs} = (\text{Number of 3" Water Meters} \times 0.86) \times 10.$$

**Table 4-1 Service Unit Equivalency Table**

Meter Size	Base Volume	Water Service Unit Equivalents	Wastewater Service Unit Equivalents
3/4"	267	1.00	0.86
1"	446	1.67	1.44
1 1/2"	889	3.33	2.86
2"	1,423	5.33	4.58
3"	2,670	10.00	8.60
4"	4,450	16.67	14.34
6"	8,899	33.33	28.66
8"	16,020	60.00	51.60

For calculation of impact fees, the equivalencies shown under the "Water Service Unit Equivalencies" in Table 4-1 should be used for both water and wastewater as shown below. The impact fee schedule for all five years for each meter size is shown in the tables attached to this memorandum for additional clarification.

**NORTH RICHLAND HILLS  
WATER/WASTEWATER  
METER UNIT EQUIVALENCY (MUE)**

Meter Size	Meter Unit Equivalency
3/4"	1.00
1"	1.67
1-1/2"	3.33
2"	5.33
3"	10.00
4"	16.67
6"	33.33
8"	60.00