

September 2022

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CITY OF MESQUITE, TEXAS

2022 Water and Wastewater Impact Fee Study Update

PREPARED BY

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PROJECT NUMBER: 061056026

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2022 Water and Wastewater Impact Fee Update

Prepared for:

City of Mesquite, Texas



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Executive Summary

2022 Water and Wastewater Impact Fee Study Update



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EXECUTIVE SUMMARY

INTRODUCTION

Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. Across the country, they are used to fund police and fire facilities, parks, schools, roads, and utilities. In Texas, the legislature has allowed their use for roadway, drainage, water, and wastewater facilities. In 2022, the City of Mesquite began exploring an update to the Water and Wastewater Impact Fees originally developed in 2015 as a funding tool for infrastructure needs as a result of growth in the City.

In the most basic terms, impact fees are meant to recover the incremental cost of the impact of each new unit of development towards new infrastructure needs. Impact Fees are a mathematical calculation that determine a maximum fee that would be equivalent to growth paying for growth. This study's purpose is to calculate the maximum impact fee per service unit of new growth.

The Maximum Impact Fee is considered an appropriate measure of the impacts generated by a new unit of development on a City's infrastructure system. An impact fee program is anticipated to be designed so that it is predictable for both the development community and City. An impact fee program is transparent. This report describes in detail how the fee is calculated and how the Capital Improvements Advisory Committee (CIAC) monitors the Impact Fee program. An impact fee program is flexible in that funds can be used on priority projects and not just on projects adjacent to a specific development. An impact fee program is both equitable and proportional in that every new development pays an equal fee that is directly related to its systemwide impact.

IMPACT FEE BASICS

Service Areas

A Service Area is a geographic area within which a unique maximum impact fee is determined. All fees collected within the Service Area must be spent on eligible improvements within the same Service Area. For Water and Wastewater Impact Fees, a Service Area can be defined for both water and wastewater facilities that consists of the City Limits and extends throughout the Extraterritorial Jurisdiction (ETJ). Therefore, this study utilizes a singular Service Area for the Water and Wastewater components respectively.

Land Use Assumptions

The Impact Fee determination is required to be based on the projected growth and corresponding capacity needs in a 10-year window. This study considers the years 2022-2032 for the projected 10-year residential unit growth of 8,706 or a population of 26,553. These projections set the basis for determining demands to serve new growth.

Service Units

The “service unit” is a measure of consumption or use of the capital facilities by new development. In other words, it is the unit of measure used to quantify the supply and demand for utilities in the City. Service units are attributable to an individual unit of development and utilized to calculate the maximum impact fee of a development.

The service unit for water and wastewater impact fees is based on the size of the individual water meters used to serve growth related development. The base water service unit is the water demand associated with the smallest water meter issued for a new residential unit. The base wastewater service unit is the wastewater flow associated with the smallest water meter issued for a new residential unit. The smallest water meter issued for a new residential unit in the City of Mesquite is a 5/8-inch meter.

Capital Improvement Plans

The City has identified the Water and Wastewater projects needed to accommodate the projected growth over the next ten (10) years within the City of Mesquite. These projects include existing, proposed, and recently completed projects that were determined based on their current or anticipated impact on each defined Service Area.

Water Impact Fee Capital Improvements Plan

The Water Impact Fee Capital Improvements Plan was developed for the City of Mesquite based on recommended capital improvements outlined in the *2021 Water System Master Plan*, input from City Staff, and the population growth projections shown in the Land Use Assumptions. The recommended improvements will provide the required capacity and reliability to meet projected water demand through 2032. Elements of the water system, including storage facilities, pumping facilities, and the transmission and distribution network were evaluated against industry standards as outlined in the Design Criteria section of Water Impact Fee Chapter of this report.

A total of six (6) existing projects, thirteen (13) proposed projects, and the Water Impact Fee Study were identified to develop the Water Impact Fee Capital Improvements Plan. The total project cost (not impact fee eligible cost) to be evaluated is \$91,897,691.

Wastewater Impact Fee Capital Improvements Plan

Similar to the Water Impact Fee Capital Improvements Plan, the Wastewater Impact Fee Capital Improvements Plan was developed to address system improvements driven by growth. Elements of the wastewater system, including gravity pipes, force mains, and lift stations were evaluated against industry standards as outlined in the Design Criteria section of the Wastewater Impact Fee Chapter of this Report.

Two (2) existing, thirteen (13) proposed projects, and the Wastewater Impact Fee Study were identified to develop the Wastewater Impact Fee Capital Improvements Plan. The total project cost (not impact fee eligible cost) to be evaluated is \$76,918,000.

Recoverable Project Costs

Impact Fees are a one-time fee meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs within a ten-year window. With this consideration, the maximum assessable impact fee does not specifically cover the entire cost of a water or wastewater project. The calculations that determine the percentage of a project's cost that is impact fee eligible are defined as the project's *recoverable cost*.

Water Recoverable Project Costs

The recoverable costs for water projects are calculated by determining the increase in water demand due to growth over the 10-year window. The City's current and future water demand were utilized to calculate the percent utilization of each identified impact fee eligible project. The change in utilization of each project is multiplied by the total project cost to determine total recoverable project cost. The total recoverable costs for the water distribution system is \$64,949,147 (pre-finance).

Wastewater Recoverable Project Costs

The recoverable costs for wastewater projects are calculated by determining the increase in wastewater flows due to growth over the 10-year window. The City's current and future flow projections were utilized to calculate the percent utilization of each identified impact fee eligible project. The change in utilization of each project is multiplied by the total project cost to determine total recoverable project cost. The total recoverable costs for the wastewater collection system is \$47,459,806 (pre-finance).

Maximum Assessable Impact Fee Calculation

In simplest terms, the maximum impact fee allowable by law is calculated by dividing the recoverable cost of the Capital Improvement Plans by the number of new service units of development. In accordance with state law, both the cost of the Capital Improvement Plan and the number of new service units of development used in the equation are based on the growth and corresponding capacity needs projected to occur within a 10-year window.

In practice, there are many factors that complicate this calculation. The 2022 maximum impact fee allowable by law for each service area is shown in the following table:

| Water Maximum Fee Per Service Unit (5/8-inch Meter) | Wastewater Maximum Fee Per Service Unit (5/8-inch Meter) |
|--|---|
| \$7,759 | \$5,809 |

Adoption Process

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption of impact fees. A Capital Improvements Advisory Committee (CIAC) is required to review the Land Use Assumptions and the Impact Fee Capital Improvements Plan used in calculating the maximum fee, and to provide the Committee’s findings for consideration by the City Council. This CIAC also reviews the calculation and resulting maximum fees and provides its findings to the City Council. The composition of the CIAC is required to have adequate representation of the building and development communities. In Mesquite, the CIAC members include real estate, development, and building industry professionals including an ETJ representative. The City Council then conducts a public hearing on the Land Use Assumptions, Impact Fee Capital Improvements Plan, and Impact Fee Ordinance.

Following policy adoption, the CIAC is tasked with advising the City Council of the need to update the Land Use Assumptions or the Impact Fee Capital Improvements Plan at any time within five years of adoption. Finally, the CIAC oversees the proper administration of the Impact Fee, once in place, and advises the Council as necessary.

Chapter 395 of the Texas Local Government Code requires a minimum of one (1) public hearing before Council to amend an existing impact fee program. The public hearing to discuss the land use assumptions, capital improvements plan, and present a proposal for impact fee calculations will be held on October 17, 2022.

Chapter 1
Land Use Assumptions for the
2022 Water and Wastewater Impact Fee Study Update



Sept
2022

Prepared for the City of Mesquite

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1.1 INTRODUCTION

Chapter 395 of the Texas Local Government Code describes the procedure Texas cities must follow in order to create and implement impact fees. Senate Bill 243 (SB 243) amended Chapter 395 to define 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 mandates that impact fees be reviewed and updated at least every five (5) years. The City of Mesquite’s Water and Wastewater Impact Fee Program was established in 2015. The 2015 water and wastewater impact fee ordinance was adopted on August 1, 2015 and became effective January 1, 2016. Accordingly, the City of Mesquite has initiated a review of its Land Use Assumptions, Impact Fee Capital Improvements Plan, and Impact Fees. The City has retained Kimley-Horn and Associates, Inc. to provide professional services for the update to the adopted 2015 Water and Wastewater Impact Fee Study. The Land Use Assumptions, which include population projections, form the basis for the development of the Impact Fee Capital Improvements Plans for water and wastewater facilities.

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. In addition, these assumptions are useful in assisting the City of Mesquite in determining the need and timing of capital improvements to serve future development.

In accordance with Chapter 395, information from the following sources was compiled to complete the Land Use Assumptions:

- City of Mesquite’s Comprehensive Plan (2019);
- Wastewater Master Plan (2020);
- Water Master Plan (2021);
- Population Data from US Census (2020);
- City of Mesquite Staff.

1.2 COMPONENTS OF THE LAND USE ASSUMPTIONS CHAPTER

The Land Use Assumptions include the following components

METHODOLOGY AND 10-YEAR GROWTH ASSUMPTIONS

An overview of the general methodology used to generate the land use assumptions and walk through of the growth projections for 2022-2032.

IMPACT FEE STUDY AREAS

Explanation of the distribution of service areas within Mesquite for water and wastewater facilities.

LAND USE ASSUMPTIONS SUMMARY

A synopsis of the land use assumptions.

1.3 METHODOLOGY AND 10-YEAR GROWTH ASSUMPTIONS

The population growth projections formulated in this report were done using reasonable and generally accepted planning principles. The following documents and factors were considered in developing these projections:

- Character, type, density, location and quantity of existing development
- Probable future developments
- Availability of land for future expansion
- The Future Land Use Plan Diagram (from the 2019 Comprehensive Plan)
- Population Projections (Figure 2.3 from the 2019 Comprehensive Plan)
- Population Projections (from the 2020 Wastewater Master Plan and 2021 Water Master Plan)

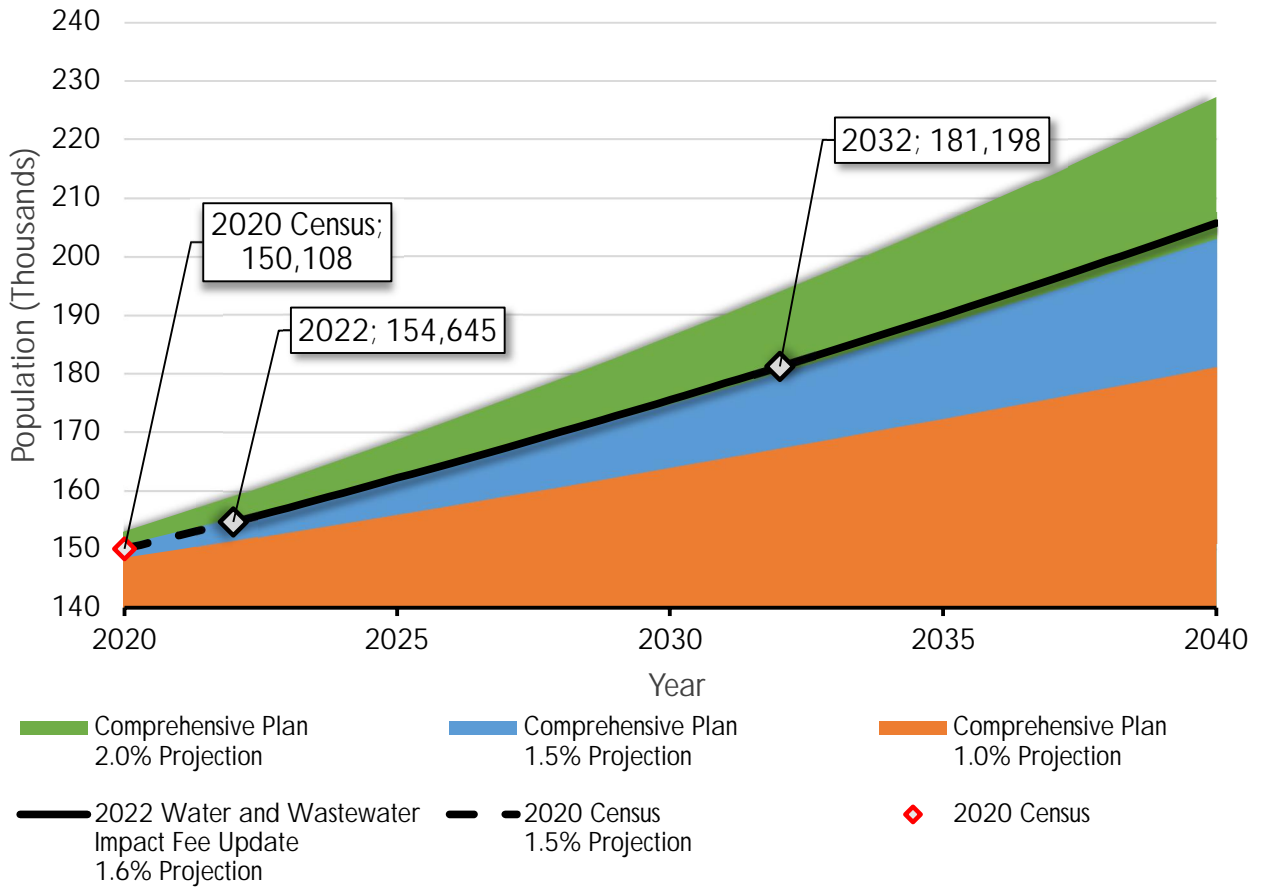
The 2019 Comprehensive Plan provided growth projections through 2040 of 1.0%, 1.5%, and 2.0% for the City of Mesquite. The 2020 Census established a resident population of 150,108 for the City of Mesquite with an average household size of 3.05. In addition, the City provided development plans for thirteen (13) planned developments that identified 8,706 single-family units in built out potential from 2022-2032 as shown in Table 1.1.

Table 1.1 Probable Future Developments

| Subdivision | Units | |
|-----------------------------------|-------|---------------|
| Polo Ridge | 1,007 | single-family |
| Ridge Ranch | 181 | single-family |
| Iron Horse | 18 | single-family |
| Solterra | 3,900 | single-family |
| Valley Brooke | 235 | single-family |
| Skymark | 540 | single-family |
| Spradley Farms | 2,500 | single-family |
| Camden Homes | 45 | single-family |
| Caldwell Farms | 36 | single-family |
| Cloverleaf | 93 | single-family |
| Hagan Hill | 21 | single-family |
| Kanyon Springs (635 & New Market) | 85 | single-family |
| Range Townhomes | 45 | single-family |

Growth projections from 2022-2032 for the City of Mesquite were established using growth trendlines, growth averages, probable future developments, and generally accepted planning principles. Figure 1.1 shows the projected growth rate assumption of 1.6% used in this impact fee study compared against the Comprehensive Plan projected growth rates.

Figure 1.1 City of Mesquite Growth Assumptions



Base residential growth projections for the City, summarizing population and dwelling units from 2022 to 2032, are projected to be:

- 8,706 New Single-Family Units = Population of 26,553

Future land use for the City of Mesquite was determined using established information such as the Future Land Use Plan from the 2019 Comprehensive Plan shown in Exhibit 1.1 of this report, available vacant land, probable future developments, and generally accepted principles. The base employment (non-residential) 10-year growth projections were based on City-provided probable future developments and an aerial overview determining the location of vacant land and future land use assumptions.

- Basic Land Use = 13,513,800 ft²
- Service Land Use = 1,511,100 ft²
- Retail Land use = 502,500 ft²

MESQUITE

COMPREHENSIVE PLAN



CONNECTING THE COMMUNITY

Future Land Use

- Corridor Development
- Alternative Residential Land Use

Special Planning Areas

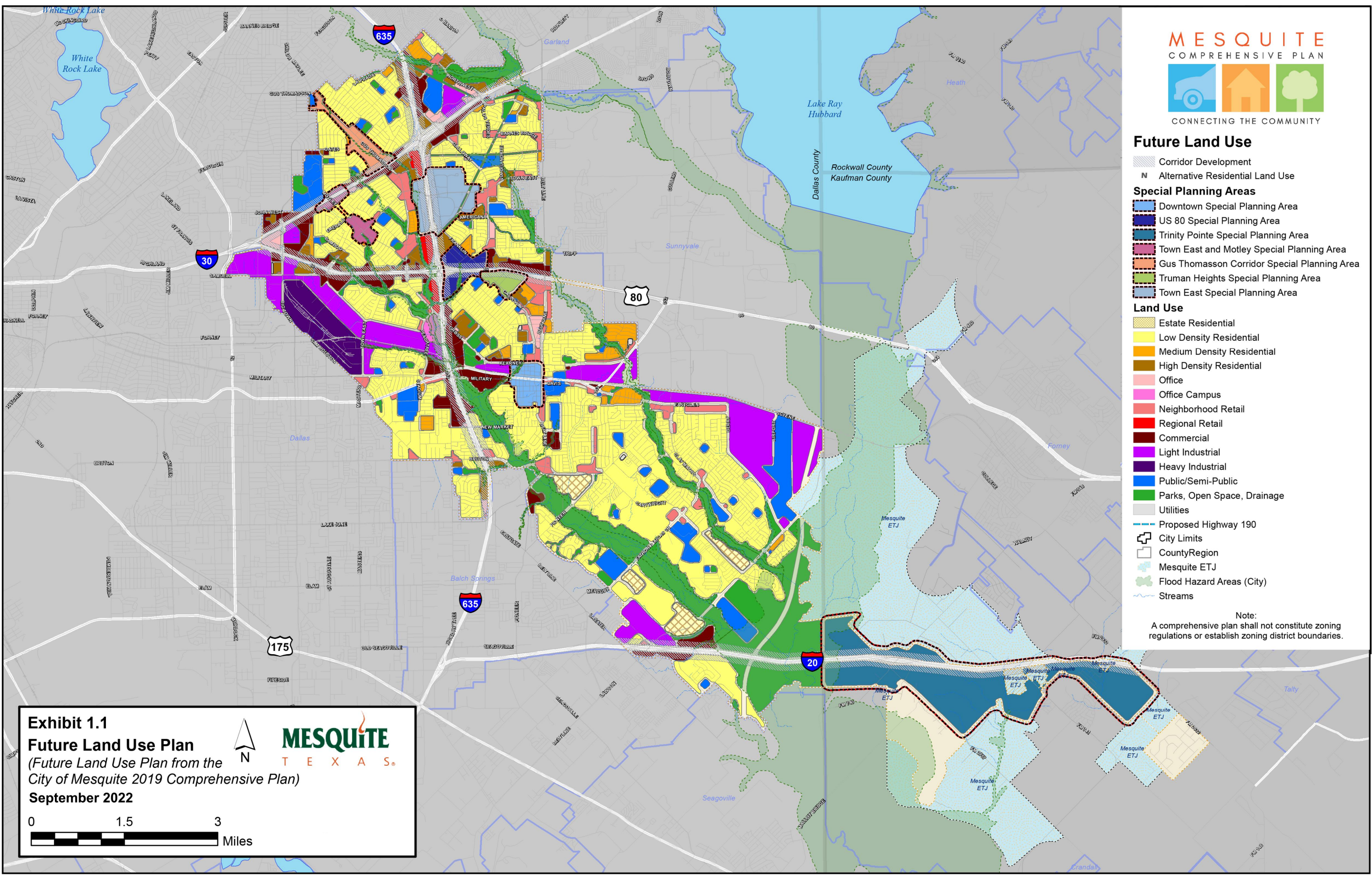
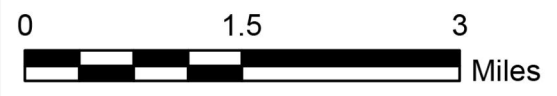
- Downtown Special Planning Area
- US 80 Special Planning Area
- Trinity Pointe Special Planning Area
- Town East and Motley Special Planning Area
- Gus Thomasson Corridor Special Planning Area
- Truman Heights Special Planning Area
- Town East Special Planning Area

Land Use

- Estate Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Office
- Office Campus
- Neighborhood Retail
- Regional Retail
- Commercial
- Light Industrial
- Heavy Industrial
- Public/Semi-Public
- Parks, Open Space, Drainage
- Utilities
- Proposed Highway 190
- City Limits
- County Region
- Mesquite ETJ
- Flood Hazard Areas (City)
- Streams

Note:
A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

Exhibit 1.1
Future Land Use Plan
(Future Land Use Plan from the
City of Mesquite 2019 Comprehensive Plan)
September 2022



1.4 IMPACT FEE SERVICE AREAS




SERVICE AREA DEFINITION

According to Chapter 395 of the Local Government Code, a Service Area refers to the area within the corporate boundaries or extraterritorial jurisdiction of the political subdivision to be served by the capital improvement or facilities specified in the Capital Improvement Plan. Funds collected in the specific service areas must be spent in the service area collected.

WATER AND WASTEWATER IMPACT FEE SERVICE AREAS

The geographic boundary of the proposed water and wastewater impact fee service areas for water and wastewater facilities is shown in Exhibit 1.2 and Exhibit 1.3, respectively. The water and wastewater impact fee service areas include the City Limits and extends throughout the ETJ.

Legend

-  ETJ
-  City Limits
-  Water Service Area

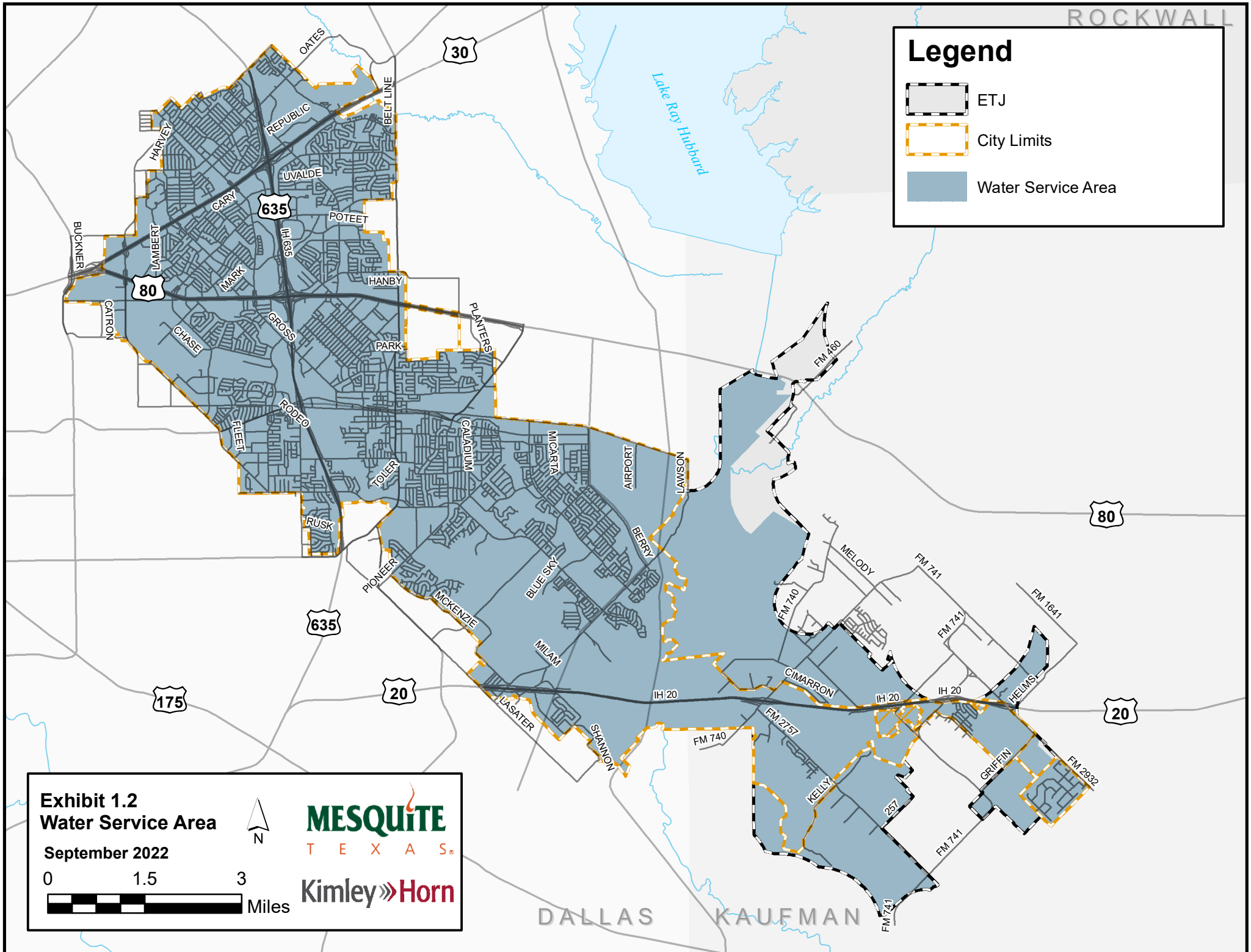




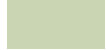
Exhibit 1.2
Water Service Area
 September 2022




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Legend

-  ETJ
-  City Limits
-  Wastewater Service Area

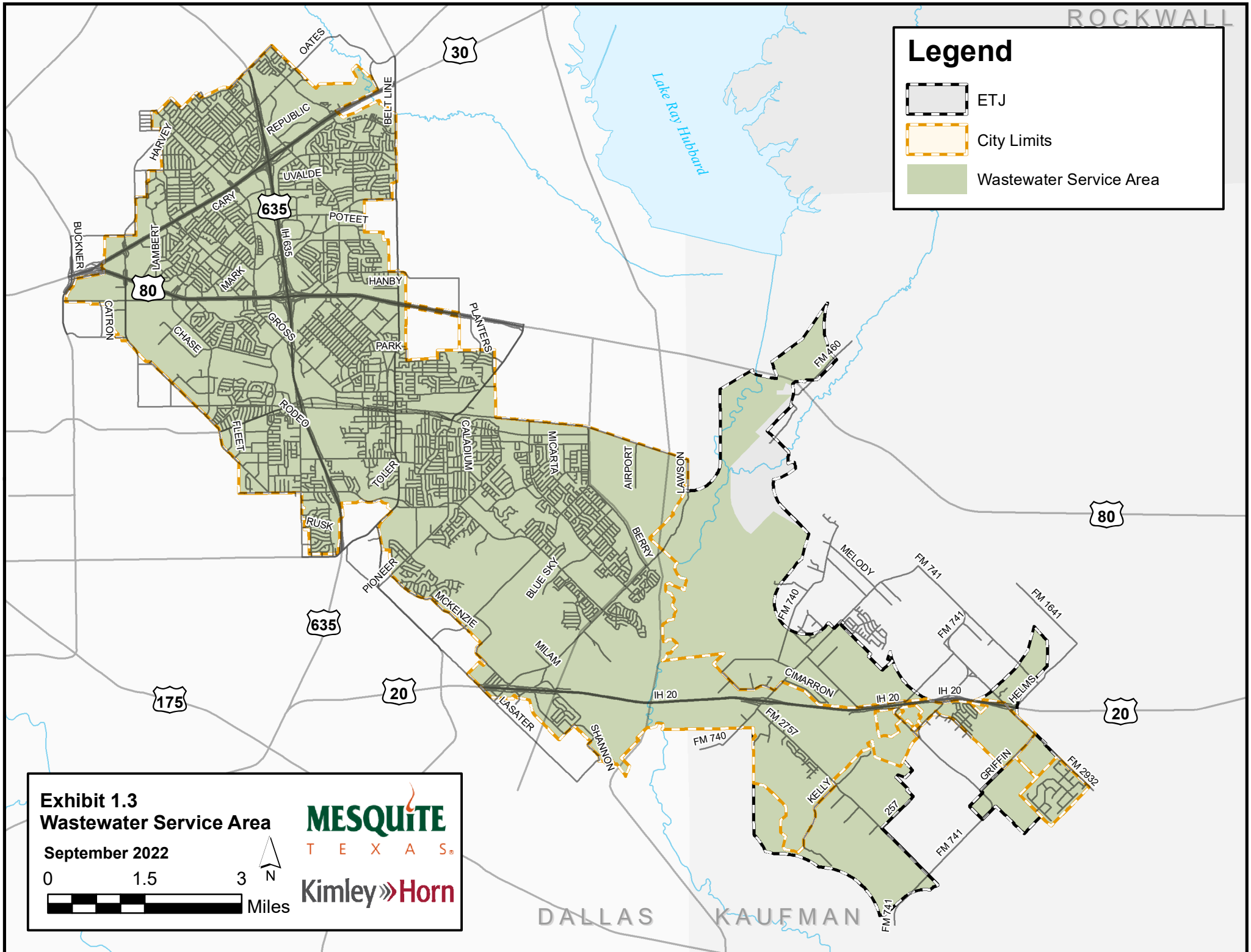
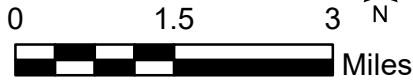



Exhibit 1.3
Wastewater Service Area
 September 2022



0 1.5 3 Miles



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1.5 DATA FORMAT

The population and employment estimates were all compiled in accordance with the following categories and format:

IMPACT FEE SERVICE AREAS:

Large zones, which correspond to the water and wastewater facilities service area (as described in the previous section).

UNITS:

Number of dwelling units based on person per dwelling unit.

EMPLOYMENT:

Square feet of building area based on three different classifications:

Basic

Land use activities which provide for the retail sale of goods and services, including those that are exported outside the local economy (i.e. manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.)

Service

Land use activities which provide personal and professional services such as government and other professional offices.

Retail

Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented towards the household sector (i.e. grocery stores and restaurants)

1.6 SUMMARY

The impact fee land use assumptions were developed using the City’s Comprehensive Plan, 2020 Census data, undeveloped land, probable future development, and consultation with City staff. The residential and employment 10-year growth projections from 2022 to 2032 are shown in Table 1.2.

Table 1.2 Residential and Employment Land Use Assumptions Growth Projections (2022-2032)

| Service Area | Residential Units | Employment Units | | |
|----------------------|-------------------|------------------|----------------|---------------|
| | | Basic Sq. Ft | Service Sq. Ft | Retail Sq. Ft |
| Water and Wastewater | 8,706 | 13,513,800 | 1,511,100 | 502,500 |

Chapter 2
Water Impact Fee Study for the
2022 Water and Wastewater Impact Fee Study Update



Sept
2022

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2.1 INTRODUCTION

The City of Mesquite retained the services of Kimley-Horn and Associates, Inc., for the purpose of updating the impact fees for water system improvements required to serve new development. These fees were originally developed in 2015 in accordance with Chapter 395 of the *Local Government Code* (impact fees).

The purpose of this report is to satisfy the requirements of the law and provide the City with an impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

- (a) *The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:*
- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (3) *a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (4) *a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;*
 - (5) *the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;*
 - (6) *the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and*

(7) plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The impact fee study includes information from the latest *2021 Draft Water System Master Plan* completed by Freeman-Millican, Inc. (FMI). The impact fees are based on recommended capital improvements outlined in the *2021 Draft Water System Master Plan*, input from City Staff, and the population growth projections shown in the *Land Use Assumptions Report*.

The study process was comprised of four tasks:

A. LAND USE ASSUMPTIONS

The land use assumptions used for this report were created by Kimley-Horn with input provided by the City of Mesquite and the *Mesquite Comprehensive Plan*. The development of land use assumptions included the following:

- Establishing impact fee service areas (SA) for water and wastewater;
- Collection/determination of population by SA; and
- Projection of the ten-year population by SA.

A detailed discussion is outlined in the *Land Use Assumptions Chapter* of this report.

B. EVALUATION OF WATER SYSTEM MASTER PLAN

This task involved reviewing the *2021 Draft Water System Master Plan* and its growth projection compatibility with the *Land Use Assumptions Report*. The water demand projections were then used to determine the additional service units.

C. IMPACT FEE CAPITAL IMPROVEMENTS PLAN

This task involved reviewing the wastewater capital improvements plan outlined in *2015 Impact Fee Study* and the *2021 Water Master Plan*. Discussions were also held with City engineering staff to identify projects that will be constructed in the 10-year planning window and meet the design criteria.

D. IMPACT FEE ANALYSIS AND REPORT

This task included calculating the additional service units, the service unit equivalents, and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable wastewater impact fee by meter size.

2.2 DESIGN CRITERIA

In accordance with Chapter 290 of the Texas Administrative Code (Public Drinking Water) and the design criteria in the 2021 *Water Master Plan* completed by FMI, the following design criteria is followed when planning for future water infrastructure.

A. WATER LINES

Water distribution and transmission lines shall be sized to maintain a minimum of 35 pounds per square inch (psi) throughout the system during peak hour demands conditions. In addition to this, the transmission lines shall be designed for a maximum 8.0 feet per second.

B. STORAGE TANKS

(a) Elevated Storage Tanks

Elevated storage serves three purposes:

- Functionally, elevated storage equalizes the pumping rate to compensate for daily variations in demand and to maintain a fairly constant pumping rate (usually referred to as operational storage), or a pumping rate that conforms to the requirements of the electrical rate structure.
- Provides pressure maintenance and protection against surges created by instantaneous demand, such as fire flow and main breaks, and instantaneous change in supply, such as pumps turning on and off.
- Maintains a reserve capacity for fire protection and pressure maintenance in case of power failure to one or more pump stations. Sufficient storage should be maintained to provide four hours of fire flow demand during a loss of power to the pump station.

Suggested storage capacities are established by the TCEQ. Adequate operational storage is established by determining the required volume to equalize the daily fluctuations in flow during the maximum day demand, plus the reserve volume required for fire protection.

The minimum requirements for storage, according to Chapter 290 of the Texas Administrative Code, are as follows:

- Total Storage - Equal to 200 gallons per connection.
- Elevated Storage - Equal to 100 gallons per connection; or
- Elevated Storage – Equal to 200 gallons per connection for a firm pumping capacity reduction from 2.0 gallons per connection to 0.6 gallons per connection.

(b) Ground Storage Tanks

Ground storage serves two functions:

- Equalization for differing feed rates between the water supply and pumping to the system; and
- Emergency capacity in the event of temporary loss of water supply.

Generally, ground storage facilities are located at water supply points or at each pump station within the water distribution system. The design criteria recommended to size ground storage tank capacity within each pressure plane is to provide adequate storage volume to meet 8 hours of maximum day demand. In addition to these criteria for elevated and ground storage, the City must also meet TCEQ total storage capacity requirements of 200 gallons per connection.

C. PUMP STATIONS

Pumping capacities must provide the maximum demand, or the peak hour demand required by the water system or the suggested capacities established by the TCEQ. Pumping capacity should supply the maximum demand with sufficient redundancy to allow for the largest pump at the pump station to be out of service. This is known as firm pumping capacity.

Each pump station or pressure plane must have two or more pumps that have a total capacity of 2.0 gallons per minute per connection, or have a total capacity of at least 1,000 gallons per minute and the ability to meet peak hour demand with the largest pump out of service, whichever is less. If the system provides elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 gpm per connection are required

2.3 IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The City Council commissioned FMI to update the *Water Master Plan*. The purpose of the plan is to provide the City with a logical strategy for upgrading and expanding its water distribution system to accommodate future growth and for addressing existing system deficiencies. FMI completed the *Draft Water System Master Plan* in 2021 and recommended the system improvements to accommodate growth through the City's build-out.

The impact fee capital improvements plan is developed using projects identified during the master planning process and through discussions with engineering staff. State law only allows cost recovery associated with eligible projects in a ten (10) year planning window from the time of the impact fee study. The following details the projects and the eligible recoverable cost.

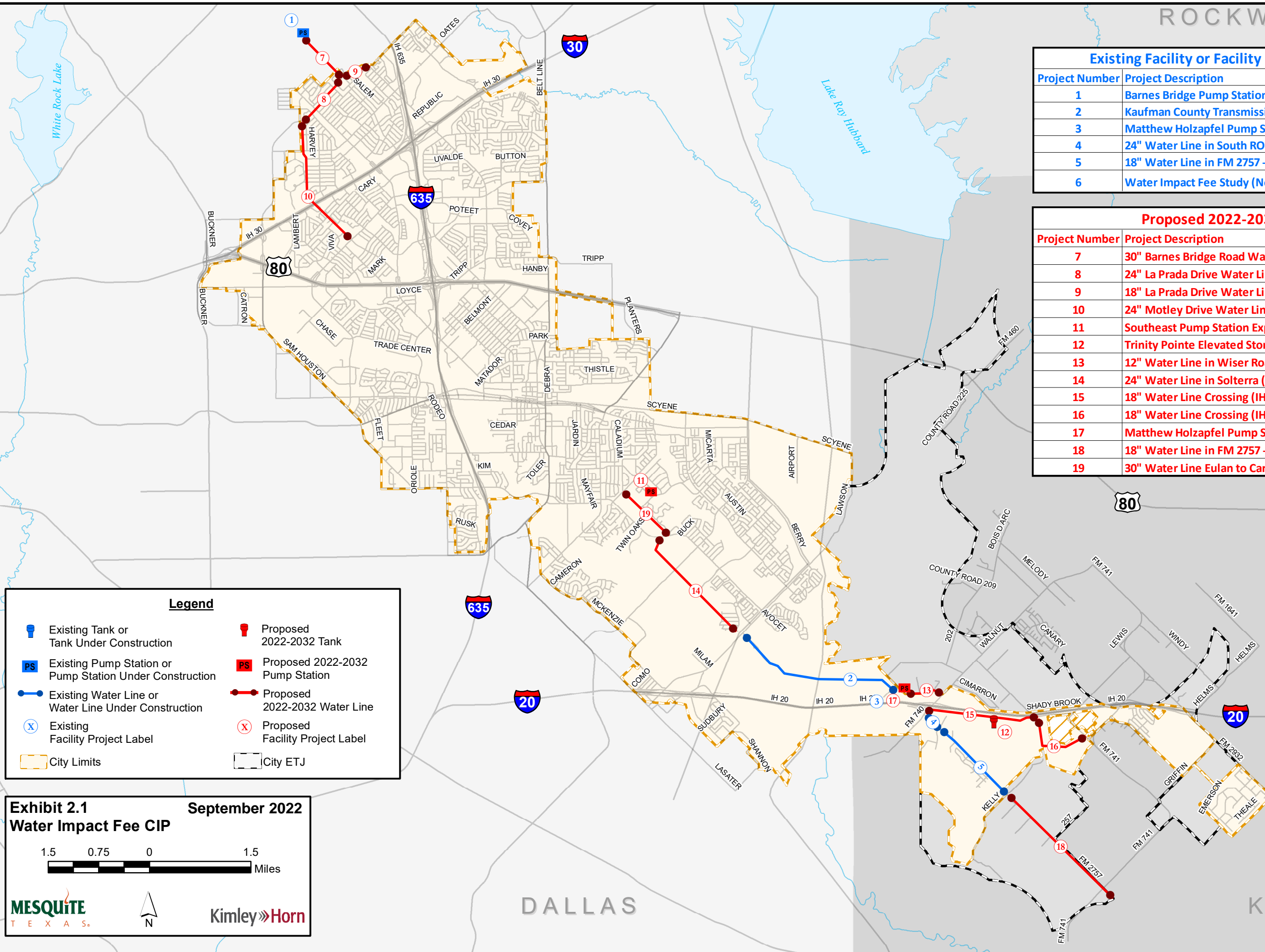
Five (5) existing projects, thirteen (13) proposed projects, and the Water Impact Fee Study are determined eligible for recoverable cost through impact fees over the next 10 years. The total cost of these projects is \$91,897,691. The projected total recoverable through impact fees is \$64,949,147. After debt service costs are added and the credit reduction calculation is complete, \$85,666,849 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 2.1 and illustrated in Exhibit 2.1.

Table 2.1 Water Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

| Project # | Description | 2022 Required Capacity (Percent Utilization) | 2032 Required Capacity (Percent Utilization) | 2022-2032 Required Capacity (Percent Utilization) | 2031 Projected Recoverable Cost | Total Project Cost |
|-------------------|--|--|--|---|---------------------------------|--------------------|
| EXISTING | | | | | | |
| 1 | Barnes Bridge Pump Station | 74% | 89% | 15% | \$ 1,083,063 | \$ 7,220,422 |
| 2 | Kaufman County Transmission Line | 0% | 74% | 74% | \$ 7,542,697 | \$ 10,192,834 |
| 3 | Matthew Holzapfel Pump Station | 0% | 100% | 100% | \$ 13,163,725 | \$ 13,163,725 |
| 4 | 24" Water Line along FM 2757 | 0% | 74% | 74% | \$ 353,246 | \$ 477,360 |
| 5 | 18" Water Line in FM 2757 - Phase I | 0% | 74% | 74% | \$ 1,335,641 | \$ 1,804,920 |
| 6 | Water Impact Fee Study | 0% | 100% | 100% | \$ 91,350 | \$ 91,350 |
| Existing Subtotal | | | | | \$ 23,569,723 | \$ 32,950,611 |
| PROPOSED | | | | | | |
| 7 | 30" Barnes Bridge Road Water Line | 0% | 89% | 89% | \$ 3,621,410 | \$ 4,069,000 |
| 8 | 24" La Prada Drive Water Line | 0% | 89% | 89% | \$ 3,120,963 | \$ 3,506,700 |
| 9 | 18" La Prada Drive Water Line | 0% | 89% | 89% | \$ 1,557,500 | \$ 1,750,000 |
| 10 | 24" Motley Drive Water Line | 0% | 89% | 89% | \$ 8,722,000 | \$ 9,800,000 |
| 11 | Southeast Pump Station Expansion | 0% | 74% | 74% | \$ 12,321,000 | \$ 16,650,000 |
| 12 | Trinity Pointe Elevated Storage Tank | 0% | 40% | 40% | \$ 3,600,000 | \$ 9,000,000 |
| 13 | 12" Water Line in Wisser Road | 0% | 74% | 74% | \$ 315,536 | \$ 426,400 |
| 14 | 24" Water Line in Solterra (Cartwright to Lawson) | 0% | 90% | 90% | \$ 1,521,000 | \$ 1,690,000 |
| 15 | 18" Water Line Crossing (IH 20 near Trinity Pointe) - Phase I | 0% | 74% | 74% | \$ 1,620,748 | \$ 2,190,200 |
| 16 | 18" Water Line Crossing (IH 20 near Trinity Pointe) - Phase II | 0% | 74% | 74% | \$ 1,030,376 | \$ 1,392,400 |
| 17 | Matthew Holzapfel Pump Station Expansion | 0% | 13% | 13% | \$ 594,750 | \$ 4,575,000 |
| 18 | 18" Water Line in FM 2757 - Phase II | 0% | 74% | 74% | \$ 709,941 | \$ 959,380 |
| 19 | 30" Water Line Eulan to Cartwright | 0% | 90% | 90% | \$ 2,644,200 | \$ 2,938,000 |
| Proposed Subtotal | | | | | \$ 41,379,424 | \$ 58,947,080 |
| Total | | | | | \$ 64,949,147 | \$ 91,897,691 |

| Existing Facility or Facility Under Construction | |
|--|--|
| Project Number | Project Description |
| 1 | Barnes Bridge Pump Station |
| 2 | Kaufman County Transmission Line |
| 3 | Matthew Holzapfel Pump Station |
| 4 | 24" Water Line in South ROW of IH 20 along FM 2757 |
| 5 | 18" Water Line in FM 2757 - Phase I |
| 6 | Water Impact Fee Study (Not Shown on Map) |

| Proposed 2022-2032 Facilities | |
|-------------------------------|--|
| Project Number | Project Description |
| 7 | 30" Barnes Bridge Road Water Line |
| 8 | 24" La Prada Drive Water Line |
| 9 | 18" La Prada Drive Water Line |
| 10 | 24" Motley Drive Water Line |
| 11 | Southeast Pump Station Expansion |
| 12 | Trinity Pointe Elevated Storage Tank |
| 13 | 12" Water Line in Wisner Road |
| 14 | 24" Water Line in Solterra (Cartwright to Lawson) |
| 15 | 18" Water Line Crossing (IH 20 near Trinity Pointe) - Phase I |
| 16 | 18" Water Line Crossing (IH 20 near Trinity Pointe) - Phase II |
| 17 | Matthew Holzapfel Pump Station Expansion |
| 18 | 18" Water Line in FM 2757 - Phase II |
| 19 | 30" Water Line Eulan to Cartwright |



Legend

| | |
|--|---------------------------------|
| Existing Tank or Tank Under Construction | Proposed 2022-2032 Tank |
| Existing Pump Station or Pump Station Under Construction | Proposed 2022-2032 Pump Station |
| Existing Water Line or Water Line Under Construction | Proposed 2022-2032 Water Line |
| Existing Facility Project Label | Proposed Facility Project Label |
| City Limits | City ETJ |

Exhibit 2.1 **September 2022**
Water Impact Fee CIP

1.5 0.75 0 1.5
 Miles

2.4 WATER IMPACT FEE CALCULATION

SERVICE UNITS

Chapter 395 of the Local Government Code defines a service unit as follows, "Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."

SERVICE UNIT CALCULATION

The service unit for Mesquite's water impact fees is the 5/8-inch meter. A service unit is the water demand of flow associated with the 5/8-inch meter, which is typically used by a single-family residence. All meters greater than 5/8-inch have a service unit multiplier determined by the ratio of each larger meter's capacity to the capacity of the 5/8-inch meter. The current service unit multipliers (service units/meter) are shown in Table 3.2.

Table 2.2 Meter Capacity Ratios

| Meter Size | Service Units/ Meter |
|------------|-------------------------|
| 5/8" | 1 |
| 1" | 2.5 |
| 1-1/2" | 5 |
| 2" | 8 |
| 3" | 17.5 |
| 4" | 30 |
| 6" | 67.5 |
| 8" | 90 |
| 10" | 350 |

Multiplying the number of existing connections for each meter size by the number of service units per meter yields the total service units for that meter size. Summing all meter sizes yields the total number of water service units connected to the City’s water system as shown in Table 2.3. The current population in the water service area is divided by the total number of service units yielding a Persons per Service Unit number.

Table 2.3 Persons per Water Service Unit

| Meter Size | Existing Connections ¹ | Service Units/ Meter | Service Units |
|-----------------------------|-----------------------------------|-------------------------|----------------------------------|
| 5/8" | 40,412 | 1 | 40,412 |
| 1" | 1,186 | 2.5 | 2,965 |
| 1-1/2" | 525 | 5 | 2,625 |
| 2" | 1,735 | 8 | 13,880 |
| 3" | 66 | 17.5 | 1,155 |
| 4" | 62 | 30 | 1,860 |
| 6" | 6 | 67.5 | 405 |
| 8" | 0 | 90 | 0 |
| 10" | 1 | 350 | 350 |
| Total Existing Connections: | | 43,993 | Total Service Units: 63,652 |
| | | | Total Served Population: 152,360 |
| | | | Persons per Service Unit: 2.39 |

(1) Data Sources: City of Mesquite

In accordance with Chapter 395 of the Texas Local Government Code, the City of Mesquite defines a service unit based on historical water demand over the past 10 years. The service unit is the development type that predominately uses a 5/8-inch meter. The measure of consumption per service unit is based on a 5/8-inch meter and the data shown in Table 2.4.

Table 2.4 Water Service Unit Consumption Calculation

| Year | Population ¹ | Service Units (2.39 person/unit) | Water Average Day Demand (MGD) ² | Demand per Service Unit (GPD) |
|--|-------------------------|-------------------------------------|---|-------------------------------------|
| 2012 | 139,950 | 58,556 | 16.83 | 287 |
| 2013 | 140,240 | 58,678 | 15.88 | 271 |
| 2014 | 142,210 | 59,502 | 15.23 | 256 |
| 2015 | 143,453 | 60,022 | 16.59 | 276 |
| 2016 | 144,707 | 60,547 | 16.05 | 265 |
| 2017 | 145,971 | 61,076 | 15.80 | 259 |
| 2018 | 147,246 | 61,609 | 16.62 | 270 |
| 2019 | 148,533 | 62,148 | 16.50 | 265 |
| 2020 | 150,108 | 62,807 | 17.31 | 276 |
| 2021 | 152,360 | 63,749 | 16.72 | 262 |
| Average Historical Demand per Service Unit | | | | 269 |

(1) Data Source: Mesquite Comprehensive Plan

(2) Data Source: City of Mesquite

Based on the City’s 10-year growth projections and the resulting water demand projections, water service will be required for an additional 11,041 Service Units by the year 2031 as shown in Table 2.5. The calculation is as follows:

- A service unit, which is a unit of development that consumes approximately 269 gallons per day (GPD), is a typical residential connection that uses a 5/8-inch meter.

Table 2.5 10-year Additional Service Unit Calculation

| Year | Average Day Demand (MGD) ¹ | Service Unit Demand (GPD) | Projected Service Units |
|----------------------------------|---|---------------------------------|----------------------------|
| 2022 | 17.32 | 269 | 64,387 |
| 2032 | 20.29 | 269 | 75,428 |
| 10-year Additional Service Units | | | 11,041 |

(1) Data Sources: City of Mesquite

2.5 PLAN FOR AWARDING IMPACT FEE CREDIT

Impact fee law allows for a credit calculation to credit back the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the City from double charging development for future capital improvements via impact fees and utility rates. If the City chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The City chose to perform a financial analysis.

MAXIMUM ASSESSABLE IMPACT FEE DETERMINATION

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model that recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of utility revenues. In developing the components of the financial model, assumptions must be made that include the following:

- Financing
 - Method of financing (i.e. cash or debt financing)
 - The level of financing (e.g. 100% debt)
 - Cost of financing
 - Debt repayment structure
- Timing and Level of Expenditures and Revenues
- Interest Earnings
- Annual Service Unit Growth
- Portion of Utility Revenue Used to Fund Impact Fee Water Improvements

While the assumptions employed in determining the maximum assessable impact fee are a reasonable basis for forecasting, these assumptions may not reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Capital Improvement Advisory Committee (CIAC) who can then update or revise impact fees to reflect the actual implementation of the impact fee program.

FINANCING

Once the cost of capacity added that is attributable to growth is determined, a City must decide how the cost will be financed: cash and/or debt. Actual costs of capital for any previously funded projects, whether partially or fully funded, are also included.

Based on discussions with City staff, it is assumed that the City will debt finance 99.8% of the future project costs and the remaining .2% with funds through sources other than debt. For debt financing, the cost of financing is based on the City's Financial Advisor's estimates of future debt costs for bonds issued with

20-year terms as shown in the Water Financial Analysis Appendix of this report. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

TIMING AND LEVEL OF EXPENDITURES AND REVENUES

The exact timing and annual level of cash capital expenditures over the forecast period is currently indeterminate, therefore it is assumed that capital expenditures will occur in amounts over the 10-year program period. It is also assumed that the City will expand debt proceeds over a 3-year timeframe for debt-financed capital projects. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. In order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of years eight, nine, and ten are assumed to be spend in the final three years.

INTEREST EARNINGS

While debt is issued over 20-year terms and impact fees developed are to be charged over a 10-year period, a sufficient fund balance must be generated to meet the future debt service obligations. Fund balances were identified for each service area as a potential source for the current Impact Fee CIP. Because of the generation of the fund balance, excess monies will be available for interest earnings.

Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. In order to recognize that interest earnings are used to fund only impact fee eligible improvements, interest earnings are credited against the costs recoverable through impact fees. Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination. To acknowledge the time value of the impact fee payer's monies, interest earnings have been credited. For this analysis, interest is assumed to be earned at an annual rate of 0.396% per 10-year historical average.

ANNUAL SERVICE UNIT GROWTH

The timing and annual level of service unit growth over the 10-year program period is currently indeterminate, therefore it is assumed that service unit growth will be consistent over the 10-year forecast.

PORTION OF UTILITY REVENUE USED TO FUND IMPACT FEE WATER IMPROVEMENTS

Credit for the portion of ad valorem tax and/or utility service revenues generated by new service units during the program period are used for payment of the improvements included in the Water Impact Fee CIP. The credit is not a determination to recognize the total utility revenue generated by new service units, but is a credit for the portion of utility revenue that is used for payment of the improvements included in the Water Impact Fee CIP. Theoretically, the credit determination could be zero (\$0) if the City does not

utilize any of the new service unit utility revenue to fund improvements that are included in the Water Impact Fee CIP.

To be conservative and recognize potential cash flow issues that can occur with the funding of major capital improvement projects, it is assumed that the debt-funded projects (99.8% of the improvement costs included in the Water Impact Fee CIP but not otherwise funded) could potentially be funded by utility revenue.

When an impact fee program is in place, payments made through utility revenue will consist of revenue generated by new service units in the defined service area and existing service units throughout the City; therefore, the portion attributable to the new service units in the defined service area must be isolated. The credit calculation illustrating how the credit is isolated is shown in the Water Financial Analysis Appendix of this report.

2.6 MAXIMUM ASSESSABLE IMPACT FEE

A breakdown of the 10-year recoverable costs and the associated impact fee per service unit is as follows:

Table 2.6 10-Year Recoverable Cost Breakdown

| | | |
|--|----|--------------|
| Recoverable Impact Fee CIP Costs | \$ | 64,949,147 |
| Financing Costs | \$ | 36,998,809 |
| Interest Earnings | \$ | (3,079,131) |
| Pre Credit Recoverable Cost for Impact Fee | \$ | 98,868,825 |
| Credit for Utility Revenues | \$ | (13,201,976) |
| Maximum Recoverable Cost for Impact Fee | \$ | 85,666,849 |

(1) Represents the projected interest costs associated with debt financing the new impact fee project costs.

$$\text{Impact fee per service units} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{10-year recoverable cost} = \$85,666,849$$

$$\text{Impact fee per service units} = \frac{\$85,666,849}{11,041}$$

$$\text{Impact fee per service units} = \$7,759$$

Therefore, the maximum assessable water impact fee per service unit is \$7,759.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8-inch meter. The maximum impact fee that could be assessed for other meter sizes is based on the Equivalency Table (Table 2.7).

Table 2.7 Maximum Assessable Water Impact Fee for Commonly Used Meters

| Meter Size | Maximum Continuous Operating Capacity (GPM)* | Service Unit Equivalent | Maximum Assessable Water Impact Fee |
|------------|--|-------------------------|-------------------------------------|
| 5/8" | 10 | 1 | \$7,759 |
| 1" | 25 | 2.5 | \$19,398 |
| 1-1/2" | 50 | 5 | \$38,795 |
| 2" | 80 | 8 | \$62,072 |
| 3" | 175 | 17.5 | \$135,783 |
| 4" | 300 | 30 | \$232,770 |
| 6" | 675 | 67.5 | \$523,733 |
| 8" | 900 | 90 | \$698,310 |
| 10" | 3500 | 350 | \$2,715,650 |

*Operating capacities obtained from American Water Works Association (AWWA) C-700-20, C701-19, and C-702-19

Chapter 3

Wastewater Impact Fee Study for the 2022 Water and Wastewater Impact Fee Study Update



Sept
2022

Prepared for the City of Mesquite

Prepared by:

Kimley-Horn and Associates, Inc.

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Fort Worth, TX 76102

Phone 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061056026

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3.1 INTRODUCTION

The City of Mesquite retained the services of Kimley-Horn and Associates, Inc., for the purpose of developing the impact fees for wastewater system improvements required to serve new development. These fees were developed in accordance with Chapter 395 of the *Local Government Code* (impact fees). The purpose of this report is to satisfy the requirements of the law and provide the City with an impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

- (a) *The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:*
- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (3) *a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
 - (4) *a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;*
 - (5) *the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;*
 - (6) *the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and*

(7) plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The study process was comprised of four tasks:

A. LAND USE ASSUMPTIONS

The land use assumptions used for this report were created by Kimley-Horn with input provided by the City of Mesquite and the *Mesquite Comprehensive Plan*. The development of land use assumptions included the following:

- Establishing impact fee service areas (SA) for water and wastewater;
- Collection/determination of population by SA; and
- Projection of the ten-year population by SA.

A detailed discussion is outlined in the *Land Use Assumptions Chapter* of this report.

B. EVALUATION OF WASTEWATER SYSTEM MASTER PLAN

This task involved reviewing the *2020 Wastewater Master Plan* completed by Garver and its growth projection compatibility with the *Land Use Assumptions Chapter* of this report. The wastewater flow projections were then used to determine the additional service units.

C. IMPACT FEE CAPITAL IMPROVEMENTS PLAN

This task involved reviewing the wastewater capital improvements plan outlined in *2015 Impact Fee Study* and the *2020 Wastewater Master Plan*. Discussions were also held with City engineering staff to identify projects that will be constructed in the 10-year planning window and meet the design criteria.

D. IMPACT FEE ANALYSIS AND REPORT

This task included calculating the additional service units, the service unit equivalents, and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable wastewater impact fee by meter size.

3.2 DESIGN CRITERIA

In accordance with the Chapter 217 of the Texas Administrative Code (Design Criteria for Domestic Wastewater Systems) and the design criteria in the 2020 Wastewater Master Plan completed by Garver, the following design criteria is followed when planning for future wastewater infrastructure.

A. SEWER TRUNK LINES (INTERCEPTORS)

The design criteria for sewer trunk lines or interceptors is based on the TCEQ requirements that meet peak wet weather design flows with no overflows while maintaining a minimum of 2 ft/sec cleaning velocity and a maximum of 10 ft/sec velocity.

B. LIFT STATIONS PUMPING CAPACITY

The design criteria for lift station pumping shall be to provide firm pumping capacity to meet 125% of the peak wet weather design flows. The firm pumping capacity is defined as the available total pumping capacity with the largest pump out of service.

C. LIFT STATION WET WELL CAPACITY

The design criteria for lift station wet wells are to provide adequate volumes to limit pump cycling to once every 10 minutes. Based on this criterion, the required operating volume for each pump can be calculated as

$$V = tQ/4 \quad \text{where,}$$

$$t = \text{Maximum pump cycling time} = 10 \text{ minutes}$$

$$Q = \text{Lead pump discharge rate in gallons per minute (gpm)}$$

$$V = \text{Required wet well volume between pump start and stop elevation}$$

D. FORCE MAINS

The design criteria recommended for force mains is to meet the required pumping capacity of the lift station at a velocity less than 7 feet per second and a maximum discharge pressure of 100 psi and to allow a minimum of 3 feet per second scouring velocity during a single pump operation.

3.3 IMPACT FEE CAPITAL IMPROVEMENTS PLAN

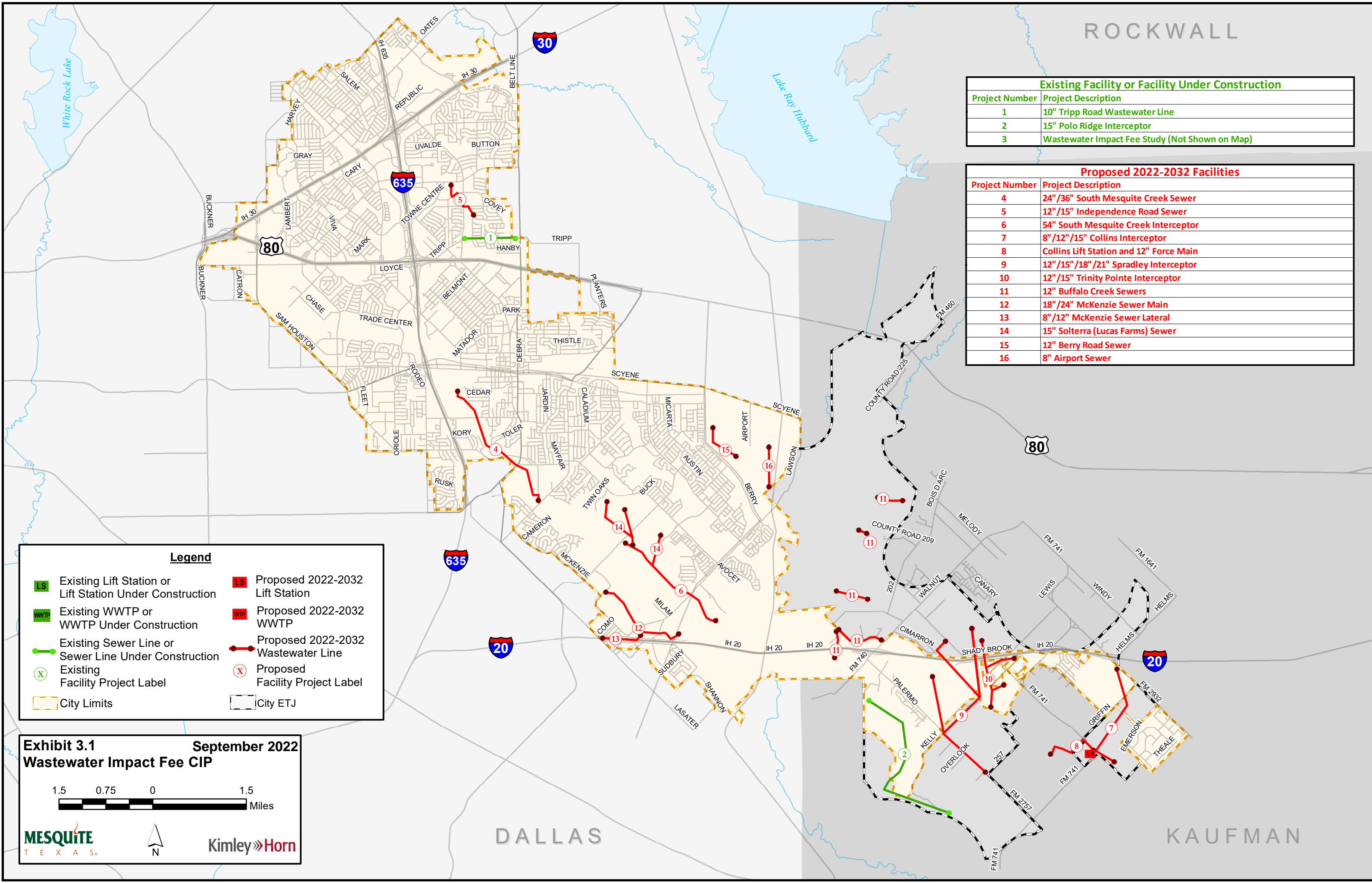
The City Council commissioned Garver to update the *Wastewater Master Plan*. The purpose of the plan is to provide the City with a logical strategy for upgrading and expanding its wastewater collection system to accommodate future growth and for addressing existing system deficiencies. Garver completed the *Wastewater Master Plan* and recommended system improvements to accommodate growth through the City's build-out.

The impact fee capital improvements plan is developed using projects identified during the master planning process and through discussions with engineering staff. State law only allows cost recovery associated with eligible projects in a ten (10) year planning window from the time of the impact fee study. The following details the projects and the eligible recoverable cost.

Two (2) existing projects, thirteen (13) proposed projects, and the Wastewater Impact Fee Study are determined eligible for recoverable cost through impact fees over the next 10 years. The total cost of these projects is \$76,918,000. The projected total recoverable through impact fees is \$47,459,806. After debt service costs are added and the credit reduction calculation is complete, \$64,448,442 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 3.1 and illustrated in Exhibit 3.1.

Table 3.1 Wastewater Impact Fee Capital Improvements
Project Cost and 10-Year Recoverable Cost

| Project # | Description | 2022 Required Capacity (Percent Utilization) | 2032 Required Capacity (Percent Utilization) | 2022-2032 Required Capacity (Percent Utilization) | 2032 Projected Recoverable Cost | Total Project Cost |
|-------------------|---|--|--|---|---------------------------------|--------------------|
| EXISTING | | | | | | |
| 1 | 10" Tripp Road Wastewater Line | 82% | 89% | 7% | \$ 49,000 | \$ 700,000 |
| 2 | 15" Polo Ridge Interceptor | 0% | 74% | 74% | \$ 4,060,972 | \$ 5,487,800 |
| 3 | Wastewater Impact Fee Study | 0% | 100% | 100% | \$ 91,300 | \$ 91,300 |
| Existing Subtotal | | | | | \$ 4,201,272 | \$ 6,279,100 |
| PROPOSED | | | | | | |
| 4 | 24"/36" South Mesquite Creek Sewer | 34% | 74% | 40% | \$ 4,404,680 | \$11,011,700 |
| 5 | 12"/15" Independence Road Sewer | 34% | 74% | 40% | \$ 1,050,720 | \$ 2,626,800 |
| 6 | 54" South Mesquite Creek Interceptor | 73% | 89% | 16% | \$ 1,848,256 | \$11,551,600 |
| 7 | 8"/12"/15" Collins Interceptor | 0% | 74% | 74% | \$ 2,969,990 | \$4,013,500 |
| 8 | Collins Lift Station and 12" Force Main | 0% | 89% | 89% | \$ 3,629,865 | \$ 4,078,500 |
| 9 | 12"/15"/18"/21" Spradley Interceptor | 0% | 74% | 74% | \$ 9,210,780 | \$12,447,000 |
| 10 | 12"/15" Trinity Pointe Interceptor | 0% | 74% | 74% | \$ 3,376,916 | \$ 4,563,400 |
| 11 | 12" Buffalo Creek Sewers | 0% | 74% | 74% | \$ 4,336,622 | \$ 5,860,300 |
| 12 | 18"/24" McKenzie Sewer Main | 0% | 89% | 89% | \$ 4,931,134 | \$ 5,540,600 |
| 13 | 8"/12" McKenzie Sewer Lateral | 0% | 89% | 89% | \$ 1,340,963 | \$ 1,506,700 |
| 14 | 15" Solterra (Lucas Farms) Sewer | 0% | 89% | 89% | \$ 4,361,890 | \$ 4,901,000 |
| 15 | 12" Berry Road Sewer | 34% | 89% | 55% | \$ 747,230 | \$ 1,358,600 |
| 16 | 8" Airport Sewer | 0% | 89% | 89% | \$ 1,049,488 | \$ 1,179,200 |
| Proposed Subtotal | | | | | \$43,258,534 | \$70,638,900 |
| Total | | | | | \$ 47,459,806 | \$ 76,918,000 |



| Existing Facility or Facility Under Construction | |
|--|--|
| Project Number | Project Description |
| 1 | 10" Tripp Road Wastewater Line |
| 2 | 15" Polo Ridge Interceptor |
| 3 | Wastewater Impact Fee Study (Not Shown on Map) |

| Proposed 2022-2032 Facilities | |
|-------------------------------|---|
| Project Number | Project Description |
| 4 | 24"/36" South Mesquite Creek Sewer |
| 5 | 12"/15" Independence Road Sewer |
| 6 | 54" South Mesquite Creek Interceptor |
| 7 | 8"/12"/15" Collins Interceptor |
| 8 | Collins Lift Station and 12" Force Main |
| 9 | 12"/15"/18"/21" Spradley Interceptor |
| 10 | 12"/15" Trinity Pointe Interceptor |
| 11 | 12" Buffalo Creek Sewers |
| 12 | 18"/24" McKenzie Sewer Main |
| 13 | 8"/12" McKenzie Sewer Lateral |
| 14 | 15" Solterra (Lucas Farms) Sewer |
| 15 | 12" Berry Road Sewer |
| 16 | 8" Airport Sewer |

Legend

| | |
|--|------------------------------------|
| Existing Lift Station or Lift Station Under Construction | Proposed 2022-2032 Lift Station |
| Existing WWTP or WWTP Under Construction | Proposed 2022-2032 WWTP |
| Existing Sewer Line or Sewer Line Under Construction | Proposed 2022-2032 Wastewater Line |
| Existing Facility Project Label | Proposed Facility Project Label |
| City Limits | City ETJ |

Exhibit 3.1 **September 2022**
Wastewater Impact Fee CIP

1.5 0.75 0 1.5
 Miles

MESQUITE **Kimley»Horn**
 TEXAS

ROCKWALL

DALLAS

KAUFMAN

3.4 WASTEWATER IMPACT FEE CALCULATION

SERVICE UNITS

Chapter 395 of the Local Government Code defines a service unit as follows, "Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."

SERVICE UNIT CALCULATION

The service unit for Mesquite's wastewater impact fees is the 5/8-inch water meter size. A service unit is the wastewater discharge or flow associated with the 5/8-inch water meter, which is typically used by a single-family residence. While there are no wastewater meters, utilizing AWWA water meter equivalents is an equitable method for distributing the 10-year wastewater service demand.

All meters greater than 5/8-inch have a service unit multiplier determined by the ratio of each larger meter's capacity to the capacity of the 5/8-inch meter. The current service unit multipliers (service units/meter) are shown in Table 3.2.

Table 3.2 Meter Capacity Ratios

| Meter Size | Service Units/ Meter |
|------------|-------------------------|
| 5/8" | 1 |
| 1" | 2.5 |
| 1-1/2" | 5 |
| 2" | 8 |
| 3" | 17.5 |
| 4" | 30 |
| 6" | 67.5 |
| 8" | 90 |
| 10" | 350 |

Using the methodology from the water calculations in Chapter 2, multiplying the number of existing connections for each meter size by the number of service units per meter yields the total service units for that meter size. Summing for all meter sizes yields the total number of water service units connected to the City's water system as shown in Table 3.3. The current population in the wastewater service area is divided by the total number of service units yielding a Persons per Service Unit number.

Table 3.3 Persons per Wastewater Service Unit

| Meter Size | Existing Connections ¹ | Service Units/ Meter | Service Units | |
|-----------------------------|-----------------------------------|-------------------------|---------------------------|---------|
| 5/8" | 40,412 | 1 | 40,412 | |
| 1" | 1,186 | 2.5 | 2,965 | |
| 1-1/2" | 525 | 5 | 2,625 | |
| 2" | 1,735 | 8 | 13,880 | |
| 3" | 66 | 17.5 | 1,155 | |
| 4" | 62 | 30 | 1,860 | |
| 6" | 6 | 67.5 | 405 | |
| 8" | 0 | 90 | 0 | |
| 10" | 1 | 350 | 350 | |
| Total Existing Connections: | | 43,993 | Total Service Units: | 63,652 |
| | | | Total Served Population: | 152,360 |
| | | | Persons per Service Unit: | 2.39 |

(1) Data Sources: City of Mesquite

In accordance with Chapter 395 of the Texas Local Government Code, the City of Mesquite defines a service unit based on historical wastewater discharge over the past 10 years. The service unit is the development type that predominately uses a 5/8-inch water meter. The measure of flow per service unit is based on a 5/8-inch meter and the data shown in Table 3.4.

Table 3.4 Wastewater Service Unit Consumption Calculation

| Year | Population ¹ | Service Units (2.39 person/unit) | Wastewater Average Day Flow (MGD) ² | Flow per Service Unit (GPD) |
|--|-------------------------|----------------------------------|--|-----------------------------|
| 2012 | 139,950 | 58,556 | 11.24 | 192 |
| 2013 | 140,240 | 58,678 | 10.86 | 185 |
| 2014 | 142,210 | 59,502 | 10.55 | 177 |
| 2015 | 143,453 | 60,022 | 11.70 | 195 |
| 2016 | 144,707 | 60,547 | 13.57 | 224 |
| 2017 | 145,971 | 61,076 | 11.50 | 188 |
| 2018 | 147,246 | 61,609 | 12.83 | 208 |
| 2019 | 148,533 | 62,148 | 15.09 | 243 |
| 2020 | 150,108 | 62,807 | 11.96 | 190 |
| 2021 | 152,360 | 63,749 | 12.99 | 204 |
| Average Historical Flow per Service Unit | | | | 201 |

(1) Data Source: Mesquite Comprehensive Plan

(2) Data Source: City of Mesquite

Based on the City’s 10-year growth projections and the resulting wastewater flow projections, wastewater service will be required for an additional 11,094 Service Units by the year 2032 as shown in Table 3.5.

The calculation is as follows:

- A service unit, which is a unit of development that discharges approximately 201 gallons per day (GPD), is a typical residential connection that uses a 5/8-inch meter.

Table 3.5 10-year Additional Service Unit Calculation

| Year | Average Day Flow (MGD) ¹ | Service Unit Flow (GPD) | Projected Service Units |
|----------------------------------|-------------------------------------|-------------------------|-------------------------|
| 2022 | 12.99 | 201 | 64,627 |
| 2033 | 15.22 | 201 | 75,721 |
| 10-year Additional Service Units | | | 11,094 |

(1) Data Sources: City of Mesquite

3.5 PLAN FOR AWARDING IMPACT FEE CREDIT

Impact fee law allows for a credit calculation to credit back the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the City from double charging development for future capital improvements via impact fees and utility rates. If the City chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The City chose to perform a financial analysis.

MAXIMUM ASSESSABLE IMPACT FEE DETERMINATION

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model that recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of utility revenues. In developing the components of the financial model, assumptions must be made that include the following:

- Financing
 - Method of financing (i.e. cash or debt financing)
 - The level of financing (e.g. 100% debt)
 - Cost of financing
 - Debt repayment structure
- Timing and Level of Expenditures and Revenues
- Interest Earnings
- Annual Service Unit Growth
- Portion of Utility Revenue Used to Fund Impact Fee Wastewater Improvements

While the assumptions employed in determining the maximum assessable impact fee are a reasonable basis for forecasting, these assumptions may not reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Capital Improvement Advisory Committee (CIAC) who can then update or revise impact fees to reflect the actual implementation of the impact fee program.

FINANCING

Once the cost of capacity added that is attributable to growth is determined, a City must decide how the cost will be financed: cash and/or debt. Actual costs of capital for any previously funded projects, whether partially or fully funded, are also included.

Based on discussions with City staff, it is assumed that the City will debt finance 99.8% of the future project costs and the remaining .2% with funds through sources other than debt. For debt financing, the cost of financing is based on the City's Financial Advisor's estimates of future debt costs for bonds issued

issued with 20-year terms as shown in the Wastewater Financial Analysis Appendix of this report. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

TIMING AND LEVEL OF EXPENDITURES AND REVENUES

The exact timing and annual level of cash capital expenditures over the forecast period is currently indeterminate, therefore it is assumed that capital expenditures will occur in amounts over the 10-year program period. It is also assumed that the City will expand debt proceeds over a 3-year timeframe for debt-financed capital projects. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. In order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of years eight, nine, and ten are assumed to be spend in the final three years.

INTEREST EARNINGS

While debt is issued over 20-year terms and impact fees developed are to be charged over a 10-year period, a sufficient fund balance must be generated to meet the future debt service obligations. Fund balances were identified for each service area as a potential source for the current Impact Fee CIP. Because of the generation of the fund balance, excess monies will be available for interest earnings.

Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. In order to recognize that interest earnings are used to fund only impact fee eligible improvements, interest earnings are credited against the costs recoverable through impact fees. Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination. To acknowledge the time value of the impact fee payer's monies, interest earnings have been credited. For this analysis, interest is assumed to be earned at an annual rate of 0.396% per 10-year historical average.

ANNUAL SERVICE UNIT GROWTH

The timing and annual level of service unit growth over the 10-year program period is currently indeterminate, therefore it is assumed that service unit growth will be consistent over the 10-year forecast.

PORTION OF UTILITY REVENUE USED TO FUND IMPACT FEE WASTEWATER IMPROVEMENTS

Credit for the portion of ad valorem tax and/or utility service revenues generated by new service units during the program period are used for payment of the improvements included in the Wastewater Impact Fee CIP. The credit is not a determination to recognize the total utility revenue generated by new service units, but is a credit for the portion of utility revenue that is used for payment of the improvements included in the Wastewater Impact Fee CIP. Theoretically, the credit determination could be zero (\$0) if the City

does not utilize any of the new service unit utility revenue to fund improvements that are included in the Wastewater Impact Fee CIP.

To be conservative and recognize potential cash flow issues that can occur with the funding of major capital improvement projects, it is assumed that the debt-funded projects (99.8% of the improvement costs included in the Wastewater Impact Fee CIP but not otherwise funded) could potentially be funded by utility revenue.

When an impact fee program is in place, payments made through utility revenue will consist of revenue generated by new service units in the defined service area and existing service units throughout the City; therefore, the portion attributable to the new service units in the defined service area must be isolated. The credit calculation illustrating how the credit is isolated is shown in the Wastewater Financial Analysis Appendix of this report.

3.6 MAXIMUM ASSESSABLE IMPACT FEE

A breakdown of the 10-year recoverable costs and the associated impact fee per service unit is as follows:

Table 3.6 10-Year Recoverable Cost Breakdown

| | |
|--|-----------------|
| Recoverable Impact Fee CIP Costs | \$ 47,459,806 |
| Financing Costs | \$ 29,856,476 |
| Interest Earnings | \$ (2,635,327) |
| Pre Credit Recoverable Cost for Impact Fee | \$ 74,680,955 |
| Credit for Utility Revenues | \$ (10,232,513) |
| Maximum Recoverable Cost for Impact Fee | \$ 64,448,442 |

(1) Represents the projected interest costs associated with debt financing the new impact fee project costs.

$$\text{Impact fee per service units} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$10\text{-year recoverable cost} = \$64,448,442$$

$$\text{Impact fee per service units} = \frac{\$64,448,442}{11,094}$$

$$\text{Impact fee per service units} = \$5,809$$

Therefore, the maximum assessable wastewater impact fee per service unit is \$5,809.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 5/8-inch meter. The maximum impact fee that could be assessed for other meter sizes is based on the Equivalency Table (Table 3.7).

Table 3.7 Maximum Assessable Wastewater Impact Fee for Commonly Used Meters

| Meter Size | Maximum Continuous Operating Capacity (GPM)* | Service Unit Equivalent | Maximum Assessable Wastewater Impact Fee |
|------------|--|-------------------------|--|
| 5/8" | 10 | 1 | \$5,809 |
| 1" | 25 | 2.5 | \$14,523 |
| 1-1/2" | 50 | 5 | \$29,045 |
| 2" | 80 | 8 | \$46,472 |
| 3" | 175 | 17.5 | \$101,658 |
| 4" | 300 | 30 | \$174,270 |
| 6" | 675 | 67.5 | \$392,108 |
| 8" | 900 | 90 | \$522,810 |
| 10" | 3500 | 350 | \$2,033,150 |

*Operating capacities obtained from American Water Works Association (AWWA) C-700-20 and C-702-19

APPENDIX

WATER FINANCIAL ANALYSIS

WASTEWATER FINANCIAL ANALYSIS

WATER FINANCIAL ANALYSIS

City of Mesquite - 2022 Water Impact Fee Study

Capital Improvement Plan for Impact Fees

Maximum Fee Summary Table

Water Service Area

| | | |
|----|--|-----------------|
| 0 | Existing Fund Balance | \$ - |
| 1 | Existing Number of Service Units | 64,387 |
| 2 | Total Number of Services Units for Planning Period | 75,428 |
| 3 | Additional Service Units Added During Planning Period (Line 2 - Line 1) | 11,041 |
| 4 | Total Cost of the Water Impact Fee CIP | \$ 91,897,691 |
| 5 | Recoverable Cost for Impact Fee Planning Period | \$ 64,949,147 |
| 6 | Percent Recoverable for Water Impact Fee Planning Period (Line 5 / Line 4) | 70.68% |
| 7 | Financing Costs (From Financial Analysis) | \$ 36,998,809 |
| 8 | Interest Earnings (From Financial Analysis) | \$ (3,079,131) |
| 9 | Recoverable Cost of Water Impact Fee and Financing Costs Less Balance (Line 5 + Line 7 + Line 8 - Line 0) | \$ 98,868,825 |
| 10 | Pre-Credit Maximum Fee (Line 9 / Line 3) | \$ 8,955 |
| 11 | Credit for Utility Revenues (From Financial Analysis) | \$ (13,201,976) |
| 12 | Recoverable Cost of Water Impact Fee and Financing (Line 9 + Line 11) | \$ 85,666,849 |
| 13 | Maximum Assessable Fee (Line 12 / Line 3) | \$ 7,759 |

SUMMARY OF WATER IMPACT FEE DETERMINATION

Water Service Area

| | | |
|---|----------------------|---------------------------|
| Recoverable Impact Fee CIP Costs | \$ 64,949,147 | Table 2.1 |
| Financing Cost | 36,998,809 | See Detail Below |
| Existing Fund Balance | - | Water Appendices - page 1 |
| Interest Earnings | (3,079,131) | Water Appendices - page 3 |
| Pre Credit Recoverable Cost for Impact Fee | \$ 98,868,825 | Sum of Above |
| Credit for Utility Revenues | (13,201,976) | Water Appendices - page 6 |
| Maximum Recoverable Cost for Impact Fee | \$ 85,666,849 | |

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees. Reference is the Table 2.1 Water Impact Fee Capital Improvements.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. Interest costs are derived from existing debt issues and forecasted debt issues.

| | | |
|---|---------------|---------------------------|
| New Annual Debt Service | \$ 68,824,701 | Water Appendices - page 2 |
| Existing Annual Debt Service | 33,031,905 | Water Appendices - page 2 |
| Principal Component (New and Existing Debt) | (64,857,797) | Water Appendices - page 1 |
| Financing Costs | \$ 36,998,809 | |

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Assuming all existing fund balance is already encumbered for projects from prior impact fee studies. Reference is page 1 of Water Appendices.

Interest Earnings

Represents the interest earned on cash flows and assumes a 0.396% annual interest rate. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Water Appendices.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Existing Fund Balance and Interest Earnings.

Credit for Utility Revenues

In 2001, the Local Government Code Chapter 395 was amended to include a credit for ad valorem and/or utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund impact fee eligible projects. Reference is page 6 of Water Appendices.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Revenues. This is the maximum cost that can be recovered through impact fees.

City of Mesquite - 2022 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Water Service Area

I. General Assumptions

| | |
|--|----------------------|
| Annual Interest Rate on Deposits ⁽¹⁾ | 0.396% |
| Annual Service Unit Growth ⁽²⁾ | 1,104 |
| Existing Fund Balance ⁽³⁾ | - |
| Portion of Projects Funded by Existing Debt ⁽⁴⁾ | \$ 23,478,373 |
| Non-debt Funded Project Cost ⁽⁵⁾ | 91,350 |
| New Project Cost Funded Through New Debt ⁽⁶⁾ | 41,379,424 |
| Total Recoverable Project Cost ⁽⁷⁾ | \$ 64,949,147 |

II. New Debt Issues Assumptions

| <u>Year</u> | <u>Principal ⁽⁸⁾</u> | <u>Interest ⁽⁹⁾</u> | <u>Term</u> |
|--------------|---------------------------------|--------------------------------|-------------|
| 1 | \$ 4,137,942 | 5.00% | 20 |
| 2 | 4,137,942 | 5.25% | 20 |
| 3 | 4,137,942 | 5.50% | 20 |
| 4 | 4,137,942 | 5.50% | 20 |
| 5 | 4,137,942 | 5.50% | 20 |
| 6 | 4,137,942 | 5.50% | 20 |
| 7 | 4,137,942 | 5.50% | 20 |
| 8 | 4,137,942 | 5.50% | 20 |
| 9 | 4,137,942 | 5.50% | 20 |
| 10 | 4,137,942 | 5.50% | 20 |
| Total | \$ 41,379,424 | | |

III. Capital Expenditure Assumptions

| <u>Year</u> | <u>Annual Capital Expenditures ⁽¹⁰⁾</u> |
|--------------|--|
| 1 | \$ 9,135 |
| 2 | 1,388,449 |
| 3 | 2,767,763 |
| 4 | 4,147,077 |
| 5 | 4,147,077 |
| 6 | 4,147,077 |
| 7 | 4,147,077 |
| 8 | 4,147,077 |
| 9 | 4,147,077 |
| 10 | 4,147,077 |
| 11 | 4,137,942 |
| 12 | 2,758,628 |
| 13 | 1,379,314 |
| Total | 41,470,774 |

- (1) Average City Yield for FY 2022 as of 8/1/2022
- (2) Derived from Table 2.5 Water 10-Year Additional Service Unit Calculation
- (3) Assumes all existing fund balances are already encumbered and assigned
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Table 2.1 Water Impact Fee Capital Improvements
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from City Staff based on recent Utility Revenue Bond
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated per discussions with City Staff

City of Mesquite - 2022 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Debt Service and Expense Summary
Water Service Area

I. New Debt Service Detail

| <u>Year</u> | <u>Series 1</u> | <u>Series 2</u> | <u>Series 3</u> | <u>Series 4</u> | <u>Series 5</u> | <u>Series 6</u> | <u>Series 7</u> | <u>Series 8</u> | <u>Series 9</u> | <u>Series 10</u> | <u>Total Annual New Debt Service</u> |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|--------------------------------------|
| 1 | \$ 332,039 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 332,039 |
| 2 | 332,039 | 339,114 | - | - | - | - | - | - | - | - | 671,153 |
| 3 | 332,039 | 339,114 | 346,260 | - | - | - | - | - | - | - | 1,017,413 |
| 4 | 332,039 | 339,114 | 346,260 | 346,260 | - | - | - | - | - | - | 1,363,674 |
| 5 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | - | - | - | - | - | 1,709,934 |
| 6 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | - | - | - | - | 2,056,194 |
| 7 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | - | - | - | 2,402,454 |
| 8 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | - | - | 2,748,715 |
| 9 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | - | 3,094,975 |
| 10 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 11 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 12 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 13 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 14 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 15 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 16 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 17 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 18 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 19 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 20 | 332,039 | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,441,235 |
| 21 | - | 339,114 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 3,109,196 |
| 22 | - | - | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 2,770,082 |
| 23 | - | - | - | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 2,423,822 |
| 24 | - | - | - | - | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 2,077,561 |
| 25 | - | - | - | - | - | 346,260 | 346,260 | 346,260 | 346,260 | 346,260 | 1,731,301 |
| 26 | - | - | - | - | - | - | 346,260 | 346,260 | 346,260 | 346,260 | 1,385,041 |
| 27 | - | - | - | - | - | - | - | 346,260 | 346,260 | 346,260 | 1,038,781 |
| 28 | - | - | - | - | - | - | - | - | 346,260 | 346,260 | 692,520 |
| 29 | - | - | - | - | - | - | - | - | - | 346,260 | 346,260 |
| | \$ 6,640,784 | \$ 6,782,277 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 6,925,205 | \$ 68,824,701 |

II. Summary of Annual Expenses

| <u>Year</u> | <u>New Annual Debt Service⁽¹⁾</u> | <u>Annual Capital Expenditures⁽²⁾</u> | <u>Annual Bond Proceeds⁽²⁾</u> | <u>Existing Annual Debt Service⁽³⁾</u> | <u>Annual Credit⁽⁴⁾</u> | <u>Total Expense</u> |
|-------------|--|--|---|---|------------------------------------|----------------------|
| 1 | \$ 332,039 | \$ 9,135 | \$ (4,137,942) | \$ 1,203,944 | \$ (25,895) | \$ (2,618,719) |
| 2 | 671,153 | 1,388,449 | (4,137,942) | 816,184 | (49,318) | (1,311,474) |
| 3 | 1,017,413 | 2,767,763 | (4,137,942) | 2,172,326 | (156,063) | 1,663,497 |
| 4 | 1,363,674 | 4,147,077 | (4,137,942) | 1,781,793 | (201,903) | 2,952,698 |
| 5 | 1,709,934 | 4,147,077 | (4,137,942) | 1,854,389 | (281,470) | 3,291,988 |
| 6 | 2,056,194 | 4,147,077 | (4,137,942) | 1,776,073 | (357,508) | 3,483,894 |
| 7 | 2,402,454 | 4,147,077 | (4,137,942) | 1,773,000 | (447,487) | 3,737,102 |
| 8 | 2,748,715 | 4,147,077 | (4,137,942) | 1,391,674 | (499,472) | 3,650,051 |
| 9 | 3,094,975 | 4,147,077 | (4,137,942) | 1,389,793 | (599,601) | 3,894,302 |
| 10 | 3,441,235 | 4,147,077 | (4,137,942) | 1,737,154 | (758,002) | 4,429,522 |
| 11 | 3,441,235 | 4,137,942 | - | 1,739,232 | (758,306) | 8,560,103 |
| 12 | 3,441,235 | 2,758,628 | - | 1,739,945 | (758,411) | 7,181,398 |
| 13 | 3,441,235 | 1,379,314 | - | 1,495,546 | (722,636) | 5,593,459 |
| 14 | 3,441,235 | - | - | 1,491,444 | (722,036) | 4,210,643 |
| 15 | 3,441,235 | - | - | 1,493,263 | (722,302) | 4,212,196 |
| 16 | 3,441,235 | - | - | 1,494,118 | (722,427) | 4,212,926 |
| 17 | 3,441,235 | - | - | 1,491,386 | (722,027) | 4,210,594 |
| 18 | 3,441,235 | - | - | 1,494,489 | (722,481) | 4,213,243 |
| 19 | 3,441,235 | - | - | 1,288,849 | (692,380) | 4,037,704 |
| 20 | 3,441,235 | - | - | 1,288,252 | (692,293) | 4,037,194 |
| 21 | 3,109,196 | - | - | 1,107,947 | (617,297) | 3,599,846 |
| 22 | 2,770,082 | - | - | 626,053 | (497,119) | 2,899,015 |
| 23 | 2,423,822 | - | - | 385,053 | (411,158) | 2,397,718 |
| 24 | 2,077,561 | - | - | - | (304,109) | 1,773,452 |
| 25 | 1,731,301 | - | - | - | (253,424) | 1,477,877 |
| 26 | 1,385,041 | - | - | - | (202,740) | 1,182,301 |
| 27 | 1,038,781 | - | - | - | (152,055) | 886,726 |
| 28 | 692,520 | - | - | - | (101,370) | 591,151 |
| 29 | 346,260 | - | - | - | (50,685) | 295,575 |
| | \$ 68,824,701 | \$ 41,470,774 | \$ (41,379,424) | \$ 33,031,905 | \$ (13,201,976) | \$ 88,745,980 |

(1) Water Appendices - page 2 Section I
(2) Water Appendices - page 1
(3) Eligible debt funded projects as a percent of total principal times original annual debt service
(4) Water Appendices - page 6

City of Mesquite - 2022 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Revenue Test
Water Service Area

| <u>Year</u> | <u>Impact Fee</u> | <u>Service Units</u> | <u>Impact Fee Revenue</u> | <u>Annual Expenses</u> | <u>Sub-Total</u> | <u>Accumulated Interest</u> | <u>Estimated Fund Balance</u> |
|----------------|-------------------|----------------------|---------------------------|------------------------|------------------|-----------------------------|-------------------------------|
| Initial | | | | | | | \$ - |
| 1 | \$ 7,759 | 1,104 | \$ 8,566,685 | \$ (2,618,719) | \$ 11,185,404 | \$ 22,147 | 11,207,551 |
| 2 | 7,759 | 1,104 | 8,566,685 | (1,311,474) | 9,878,159 | 63,941 | 21,149,651 |
| 3 | 7,759 | 1,104 | 8,566,685 | 1,663,497 | 6,903,188 | 97,421 | 28,150,260 |
| 4 | 7,759 | 1,104 | 8,566,685 | 2,952,698 | 5,613,987 | 122,591 | 33,886,837 |
| 5 | 7,759 | 1,104 | 8,566,685 | 3,291,988 | 5,274,697 | 144,636 | 39,306,171 |
| 6 | 7,759 | 1,104 | 8,566,685 | 3,483,894 | 5,082,791 | 165,716 | 44,554,678 |
| 7 | 7,759 | 1,104 | 8,566,685 | 3,737,102 | 4,829,583 | 185,999 | 49,570,260 |
| 8 | 7,759 | 1,104 | 8,566,685 | 3,650,051 | 4,916,634 | 206,033 | 54,692,927 |
| 9 | 7,759 | 1,104 | 8,566,685 | 3,894,302 | 4,672,383 | 225,835 | 59,591,145 |
| 10 | 7,759 | 1,104 | 8,566,685 | 4,429,522 | 4,137,163 | 244,173 | 63,972,481 |
| 11 | - | - | - | 8,560,103 | (8,560,103) | 236,382 | 55,648,761 |
| 12 | - | - | - | 7,181,398 | (7,181,398) | 206,150 | 48,673,513 |
| 13 | - | - | - | 5,593,459 | (5,593,459) | 181,672 | 43,261,726 |
| 14 | - | - | - | 4,210,643 | (4,210,643) | 162,979 | 39,214,062 |
| 15 | - | - | - | 4,212,196 | (4,212,196) | 146,948 | 35,148,814 |
| 16 | - | - | - | 4,212,926 | (4,212,926) | 130,848 | 31,066,735 |
| 17 | - | - | - | 4,210,594 | (4,210,594) | 114,687 | 26,970,829 |
| 18 | - | - | - | 4,213,243 | (4,213,243) | 98,462 | 22,856,049 |
| 19 | - | - | - | 4,037,704 | (4,037,704) | 82,515 | 18,900,860 |
| 20 | - | - | - | 4,037,194 | (4,037,194) | 66,854 | 14,930,520 |
| 21 | - | - | - | 3,599,846 | (3,599,846) | 51,997 | 11,382,671 |
| 22 | - | - | - | 2,899,015 | (2,899,015) | 39,335 | 8,522,991 |
| 23 | - | - | - | 2,397,718 | (2,397,718) | 29,004 | 6,154,277 |
| 24 | - | - | - | 1,773,452 | (1,773,452) | 20,860 | 4,401,684 |
| 25 | - | - | - | 1,477,877 | (1,477,877) | 14,504 | 2,938,312 |
| 26 | - | - | - | 1,182,301 | (1,182,301) | 9,295 | 1,765,305 |
| 27 | - | - | - | 886,726 | (886,726) | 5,235 | 883,814 |
| 28 | - | - | - | 591,151 | (591,151) | 2,329 | 294,992 |
| 29 | - | - | - | 295,575 | (295,575) | 583 | 0 |
| | | | <u>\$ 85,666,849</u> | <u>\$ 88,745,980</u> | | <u>\$ 3,079,131</u> | |

City of Mesquite - 2022 Water Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Water Service Area

| <u>Year</u> | <u>Number of Years to End of Period</u> | <u>Future Value Escalation</u> | | <u>Annual Service Units</u> | | <u>Annual Expense</u> | |
|-------------|---|-------------------------------------|------------------------------------|-----------------------------|------------------|-----------------------|------------------|
| | | <u>Interest Rate Factor</u> | <u>Recovery Fee Factor</u> | <u>Actual</u> | <u>Escalated</u> | <u>Actual</u> | <u>Escalated</u> |
| 1 | 29 | 1.1192 | 1.0000 | 1,104 | 1,236 | \$ (2,618,719) | \$ (2,930,943) |
| 2 | 28 | 1.1148 | 1.0000 | 1,104 | 1,231 | (1,311,474) | (1,462,049) |
| 3 | 27 | 1.1104 | 1.0000 | 1,104 | 1,226 | 1,663,497 | 1,847,173 |
| 4 | 26 | 1.1060 | 1.0000 | 1,104 | 1,221 | 2,952,698 | 3,265,791 |
| 5 | 25 | 1.1017 | 1.0000 | 1,104 | 1,216 | 3,291,988 | 3,626,695 |
| 6 | 24 | 1.0973 | 1.0000 | 1,104 | 1,212 | 3,483,894 | 3,822,974 |
| 7 | 23 | 1.0930 | 1.0000 | 1,104 | 1,207 | 3,737,102 | 4,084,652 |
| 8 | 22 | 1.0887 | 1.0000 | 1,104 | 1,202 | 3,650,051 | 3,973,769 |
| 9 | 21 | 1.0844 | 1.0000 | 1,104 | 1,197 | 3,894,302 | 4,222,959 |
| 10 | 20 | 1.0801 | 1.0000 | 1,104 | 1,193 | 4,429,522 | 4,784,402 |
| 11 | 19 | 1.0759 | 1.0000 | - | - | 8,560,103 | 9,209,444 |
| 12 | 18 | 1.0716 | 1.0000 | - | - | 7,181,398 | 7,695,680 |
| 13 | 17 | 1.0674 | 1.0000 | - | - | 5,593,459 | 5,970,381 |
| 14 | 16 | 1.0632 | 1.0000 | - | - | 4,210,643 | 4,476,655 |
| 15 | 15 | 1.0590 | 1.0000 | - | - | 4,212,196 | 4,460,642 |
| 16 | 14 | 1.0548 | 1.0000 | - | - | 4,212,926 | 4,443,817 |
| 17 | 13 | 1.0506 | 1.0000 | - | - | 4,210,594 | 4,423,839 |
| 18 | 12 | 1.0465 | 1.0000 | - | - | 4,213,243 | 4,409,162 |
| 19 | 11 | 1.0424 | 1.0000 | - | - | 4,037,704 | 4,208,793 |
| 20 | 10 | 1.0383 | 1.0000 | - | - | 4,037,194 | 4,191,663 |
| 21 | 9 | 1.0342 | 1.0000 | - | - | 3,599,846 | 3,722,839 |
| 22 | 8 | 1.0301 | 1.0000 | - | - | 2,899,015 | 2,986,238 |
| 23 | 7 | 1.0260 | 1.0000 | - | - | 2,397,718 | 2,460,116 |
| 24 | 6 | 1.0220 | 1.0000 | - | - | 1,773,452 | 1,812,427 |
| 25 | 5 | 1.0179 | 1.0000 | - | - | 1,477,877 | 1,504,399 |
| 26 | 4 | 1.0139 | 1.0000 | - | - | 1,182,301 | 1,198,772 |
| 27 | 3 | 1.0099 | 1.0000 | - | - | 886,726 | 895,533 |
| 28 | 2 | 1.0059 | 1.0000 | - | - | 591,151 | 594,667 |
| 29 | 1 | 1.0020 | 1.0000 | - | - | 295,575 | 296,161 |
| | | | | | 12,140 | | \$ 94,196,651 |

| | |
|---|-----------------|
| Annual Interest Rate: | 0.396% |
| Total Escalated Expense for Entire Period | \$ 94,196,651 |
| Total Escalated Service Units | 12,140 |
| Impact Fee for Water Service Area | \$ 7,759 |

City of Mesquite - 2022 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Project Funding
Water Service Area

| Impact Fee Project Name⁽¹⁾ | Cost In Service Area ⁽¹⁾ | Percent in Demand | Impact Fee Cost⁽¹⁾ | Debt Funded⁽²⁾ | | Non-Debt Funded⁽²⁾ |
|---|--|--------------------------|--------------------------------------|----------------------------------|----------------------|--------------------------------------|
| | | | | Existing | Proposed | |
| Barnes Bridge Pump Station | \$ 7,220,422 | 15% | \$ 1,083,063 | \$ 1,083,063 | \$ - | \$ - |
| Kaufman County Transmission Line | 10,192,834 | 74% | 7,542,697 | 7,542,697 | - | - |
| Matthew Holzapfel Pump Station | 13,163,725 | 100% | 13,163,725 | 13,163,725 | - | - |
| 24" Water Line along FM 2757 | 477,360 | 74% | 353,246 | 353,246 | - | - |
| 18" Water Line in FM 2757 - P1 | 1,804,920 | 74% | 1,335,641 | 1,335,641 | - | - |
| 30" Barnes Bridge Road Water Line | 4,069,000 | 89% | 3,621,410 | - | 3,621,410 | - |
| 24" La Prada Drive Water Line | 3,506,700 | 89% | 3,120,963 | - | 3,120,963 | - |
| 18" La Prada Drive Water Line | 1,750,000 | 89% | 1,557,500 | - | 1,557,500 | - |
| 24" Motley Drive Water Line | 9,800,000 | 89% | 8,722,000 | - | 8,722,000 | - |
| Southeast Pump Station Expansion | 16,650,000 | 74% | 12,321,000 | - | 12,321,000 | - |
| Trinity Pointe Elevated Storage Tank | 9,000,000 | 40% | 3,600,000 | - | 3,600,000 | - |
| 12" Waterline in Wisser Road | 426,400 | 74% | 315,536 | - | 315,536 | - |
| 24" Waterline in Solterra (Cartwright to Lawson) | 1,690,000 | 90% | 1,521,000 | - | 1,521,000 | - |
| 18" Waterline Crossing (IH 20 near Trinity Pointe) P1 | 2,190,200 | 74% | 1,620,748 | - | 1,620,748 | - |
| 18" Waterline Crossing (IH 20 near Trinity Pointe) P2 | 1,392,400 | 74% | 1,030,376 | - | 1,030,376 | - |
| Matthew Holzapfel Pump Station Expansion | 4,575,000 | 13% | 594,750 | - | 594,750 | - |
| 18" Water Line in FM 2757 - P2 | 959,380 | 74% | 709,941 | - | 709,941 | - |
| 30" Waterline Eulan to Cartwright | 2,938,000 | 90% | 2,644,200 | - | 2,644,200 | - |
| Water Impact Fee Update | 91,350 | 100% | 91,350 | - | - | 91,350 |
| Total | \$ 91,897,691 | | \$ 64,949,147 | \$ 23,478,373 | \$ 41,379,424 | \$ 91,350 |

(1) Table 2.1 Water Impact Fee Capital Improvements

(2) Per discussions with City staff and City files

City of Mesquite - 2022 Water Impact Fee Study

Capital Improvement Plan for Impact Fees

Credit Determination

Water Service Area

| Year | Eligible Revenue Funded Cost ⁽¹⁾ | Annual Service Units | Eligible Debt Service per Service Unit | Annual Growth in Service Units (Cumulative) | Credit for Annual Utility Rate Revenues |
|--------------|--|-------------------------|--|---|---|
| 1 | \$ 1,535,983 | 65,491 | \$ 23.45 | 1,104 | \$ 25,895 |
| 2 | 1,487,337 | 66,595 | 22.33 | 2,208 | 49,318 |
| 3 | 3,189,739 | 67,699 | 47.12 | 3,312 | 156,063 |
| 4 | 3,145,467 | 68,803 | 45.72 | 4,416 | 201,903 |
| 5 | 3,564,322 | 69,908 | 50.99 | 5,521 | 281,470 |
| 6 | 3,832,267 | 71,012 | 53.97 | 6,625 | 357,508 |
| 7 | 4,175,454 | 72,116 | 57.90 | 7,729 | 447,487 |
| 8 | 4,140,388 | 73,220 | 56.55 | 8,833 | 499,472 |
| 9 | 4,484,768 | 74,324 | 60.34 | 9,937 | 599,601 |
| 10 | 5,178,389 | 75,428 | 68.65 | 11,041 | 758,002 |
| 11 | 5,180,467 | 75,428 | 68.68 | 11,041 | 758,306 |
| 12 | 5,181,180 | 75,428 | 68.69 | 11,041 | 758,411 |
| 13 | 4,936,781 | 75,428 | 65.45 | 11,041 | 722,636 |
| 14 | 4,932,679 | 75,428 | 65.40 | 11,041 | 722,036 |
| 15 | 4,934,498 | 75,428 | 65.42 | 11,041 | 722,302 |
| 16 | 4,935,353 | 75,428 | 65.43 | 11,041 | 722,427 |
| 17 | 4,932,621 | 75,428 | 65.40 | 11,041 | 722,027 |
| 18 | 4,935,724 | 75,428 | 65.44 | 11,041 | 722,481 |
| 19 | 4,730,084 | 75,428 | 62.71 | 11,041 | 692,380 |
| 20 | 4,729,487 | 75,428 | 62.70 | 11,041 | 692,293 |
| 21 | 4,217,143 | 75,428 | 55.91 | 11,041 | 617,297 |
| 22 | 3,396,135 | 75,428 | 45.02 | 11,041 | 497,119 |
| 23 | 2,808,875 | 75,428 | 37.24 | 11,041 | 411,158 |
| 24 | 2,077,561 | 75,428 | 27.54 | 11,041 | 304,109 |
| 25 | 1,731,301 | 75,428 | 22.95 | 11,041 | 253,424 |
| 26 | 1,385,041 | 75,428 | 18.36 | 11,041 | 202,740 |
| 27 | 1,038,781 | 75,428 | 13.77 | 11,041 | 152,055 |
| 28 | 692,520 | 75,428 | 9.18 | 11,041 | 101,370 |
| 29 | 346,260 | 75,428 | 4.59 | 11,041 | 50,685 |
| Total | \$ 101,856,606 | | | | \$ 13,201,976 |

| | |
|---|--|
| 2022 Service Units ⁽²⁾ | 64,387 |
| Ten Year Growth in Service Units ⁽²⁾ | 11,041 |
| Annual Growth in Service Units | <div style="border-top: 1px solid black; display: inline-block; width: 100px; text-align: center;">10 years</div> 1,104 |
| Credit Amount | \$ 13,201,976 |

(1) Water Appendices - page 2 Section II

(2) Derived from Table 2.5 Water 10-Year Additional Service Unit Calculation

WASTEWATER FINANCIAL ANALYSIS

City of Mesquite - 2022 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Maximum Fee Summary Table
 Wastewater Service Area

| | | |
|----|---|-----------------|
| 0 | Existing Fund Balance | \$ - |
| 1 | Existing Number of Service Units | 64,627 |
| 2 | Total Number of Services Units for Planning Period | 75,721 |
| 3 | Additional Service Units Added During Planning Period (Line 2 - Line 1) | 11,094 |
| 4 | Total Cost of the Wastewater Impact Fee CIP | \$ 76,918,000 |
| 5 | Recoverable Cost for Impact Fee Planning Period | \$ 47,459,806 |
| 6 | Percent Recoverable for Wastewater Impact Fee Planning Period (Line 5 / Line 4) | 61.70% |
| 7 | Financing Costs (From Financial Analysis) | \$ 29,856,476 |
| 8 | Interest Earnings (From Financial Analysis) | \$ (2,635,327) |
| 9 | Recoverable Cost of Wastewater Impact Fee and Financing Costs Less Balance (Line 5 + Line 7 + Line 8 - Line 0) | \$ 74,680,955 |
| 10 | Pre-Credit Maximum Fee (Line 9 / Line 3) | \$ 6,732 |
| 11 | Credit for Utility Revenues (From Financial Analysis) | \$ (10,232,513) |
| 12 | Recoverable Cost of Wastewater Impact Fee and Financing (Line 9 + Line 11) | \$ 64,448,442 |
| 13 | Maximum Assessable Fee (Line 12 / Line 3) | \$ 5,809 |

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Wastewater Service Area

| | | |
|---|----------------------|--------------------------------|
| Recoverable Impact Fee CIP Costs | \$ 47,459,806 | Table 3.1 |
| Financing Cost | 29,856,476 | See Detail Below |
| Existing Fund Balance | - | Wastewater Appendices - page 1 |
| Interest Earnings | (2,635,327) | Wastewater Appendices - page 3 |
| Pre Credit Recoverable Cost for Impact Fee | \$ 74,680,955 | Sum of Above |
| Credit for Utility Revenues | (10,232,513) | Wastewater Appendices - page 6 |
| Maximum Recoverable Cost for Impact Fee | \$ 64,448,442 | |

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through impact fees. Reference is the Table 3.1 Wastewater Impact Fee Capital Improvements.

Financing Costs:

Represents the interest costs associated with debt financing the new impact fee project costs. Interest costs are derived from existing debt issues and forecasted debt issues.

| | | |
|---|---------------|--------------------------------|
| New Annual Debt Service | \$ 71,950,147 | Wastewater Appendices - page 2 |
| Existing Annual Debt Service | 5,274,835 | Wastewater Appendices - page 2 |
| Principal Component (New and Existing Debt) | (47,368,506) | Wastewater Appendices - page 1 |
| Financing Costs | \$ 29,856,476 | |

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Assuming all existing fund balance is already encumbered for projects from prior impact fee studies. Reference is page 1 of Wastewater Appendices.

Interest Earnings

Represents the interest earned on cash flows and assumes a 0.396% annual interest rate. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Wastewater Appendices.

Pre Credit Recoverable Cost for Impact Fee

Represents Recoverable Impact Fee CIP Costs plus Financing Costs less Existing Fund Balance and Interest Earnings.

Credit for Utility Revenues

In 2001, the Local Government Code Chapter 395 was amended to include a credit for ad valorem and/or utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee. The intent of this amendment is to avoid double-charging the new service units for impact fee capital improvements. The credit recognizes utility revenues used to fund impact fee eligible projects. Reference is page 6 of Wastewater Appendices.

Maximum Recoverable Cost for Impact Fee:

Represents Pre Credit Recoverable Cost for Impact Fee less Credit for Utility Revenues. This is the maximum cost that can be recovered through impact fees.

City of Mesquite - 2022 Wastewater Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Wastewater Service Area

I. General Assumptions

| | |
|--|----------------------|
| Annual Interest Rate on Deposits ⁽¹⁾ | 0.396% |
| Annual Service Unit Growth ⁽²⁾ | 1,109 |
| Existing Fund Balance ⁽³⁾ | - |
| | |
| Portion of Projects Funded by Existing Debt ⁽⁴⁾ | \$ 4,109,972 |
| Non-debt Funded Project Cost ⁽⁵⁾ | 91,300 |
| New Project Cost Funded Through New Debt ⁽⁶⁾ | 43,258,534 |
| Total Recoverable Project Cost ⁽⁷⁾ | \$ 47,459,806 |

II. New Debt Issues Assumptions

| <u>Year</u> | <u>Principal ⁽⁸⁾</u> | <u>Interest ⁽⁹⁾</u> | <u>Term</u> |
|--------------|---------------------------------|--------------------------------|-------------|
| 1 | \$ 4,325,853 | 5.00% | 20 |
| 2 | 4,325,853 | 5.25% | 20 |
| 3 | 4,325,853 | 5.50% | 20 |
| 4 | 4,325,853 | 5.50% | 20 |
| 5 | 4,325,853 | 5.50% | 20 |
| 6 | 4,325,853 | 5.50% | 20 |
| 7 | 4,325,853 | 5.50% | 20 |
| 8 | 4,325,853 | 5.50% | 20 |
| 9 | 4,325,853 | 5.50% | 20 |
| 10 | 4,325,853 | 5.50% | 20 |
| Total | \$ 43,258,534 | | |

III. Capital Expenditure Assumptions

| <u>Year</u> | <u>Annual Capital Expenditures ⁽¹⁰⁾</u> |
|--------------|--|
| 1 | \$ 9,130 |
| 2 | 1,451,081 |
| 3 | 2,893,032 |
| 4 | 4,334,983 |
| 5 | 4,334,983 |
| 6 | 4,334,983 |
| 7 | 4,334,983 |
| 8 | 4,334,983 |
| 9 | 4,334,983 |
| 10 | 4,334,983 |
| 11 | 4,325,853 |
| 12 | 2,883,902 |
| 13 | 1,441,951 |
| Total | 43,349,834 |

- (1) Average City Yield for FY 2022 as of 8/1/2022
- (2) Derived from Table 3.5 Wastewater 10-Year Additional Service Unit Calculations
- (3) Assumes all existing fund balances are already encumbered and assigned
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Table 3.1 Wastewater Impact Fee Capital Improvements
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from City Staff based on recent Utility Revenue Bond
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated per discussions with City Staff

City of Mesquite - 2022 Wastewater Impact Fee Study
Capital Improvement Plan for Impact Fees
Debt Service and Expense Summary
Wastewater Service Area

I. New Debt Service Detail

| <u>Year</u> | <u>Series 1</u> | <u>Series 2</u> | <u>Series 3</u> | <u>Series 4</u> | <u>Series 5</u> | <u>Series 6</u> | <u>Series 7</u> | <u>Series 8</u> | <u>Series 9</u> | <u>Series 10</u> | <u>Total Annual New Debt Service</u> |
|-------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|--------------------------------------|
| 1 | \$ 347,118 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 347,118 |
| 2 | 347,118 | 354,514 | - | - | - | - | - | - | - | - | 701,631 |
| 3 | 347,118 | 354,514 | 361,985 | - | - | - | - | - | - | - | 1,063,616 |
| 4 | 347,118 | 354,514 | 361,985 | 361,985 | - | - | - | - | - | - | 1,425,600 |
| 5 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | - | - | - | - | - | 1,787,585 |
| 6 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | - | - | - | - | 2,149,569 |
| 7 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | - | - | - | 2,511,554 |
| 8 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | - | - | 2,873,538 |
| 9 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | - | 3,235,523 |
| 10 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 11 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 12 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 13 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 14 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 15 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 16 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 17 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 18 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 19 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 20 | 347,118 | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,597,507 |
| 21 | - | 354,514 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 3,250,390 |
| 22 | - | - | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 2,895,876 |
| 23 | - | - | - | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 2,533,892 |
| 24 | - | - | - | - | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 2,171,907 |
| 25 | - | - | - | - | - | 361,985 | 361,985 | 361,985 | 361,985 | 361,985 | 1,809,923 |
| 26 | - | - | - | - | - | - | 361,985 | 361,985 | 361,985 | 361,985 | 1,447,938 |
| 27 | - | - | - | - | - | - | - | 361,985 | 361,985 | 361,985 | 1,085,954 |
| 28 | - | - | - | - | - | - | - | - | 361,985 | 361,985 | 723,969 |
| 29 | - | - | - | - | - | - | - | - | - | 361,985 | 361,985 |
| | \$ 6,942,353 | \$ 7,090,271 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 7,239,690 | \$ 71,950,147 |

II. Summary of Annual Expenses

| <u>Year</u> | <u>New Annual Debt Service⁽¹⁾</u> | <u>Annual Capital Expenditures⁽²⁾</u> | <u>Annual Bond Proceeds⁽²⁾</u> | <u>Existing Annual Debt Service⁽³⁾</u> | <u>Annual Credit⁽⁴⁾</u> | <u>Total Expense</u> |
|-------------|--|--|---|---|------------------------------------|----------------------|
| 1 | \$ 347,118 | \$ 9,130 | \$ (4,325,853) | \$ 1,296,402 | \$ (27,737) | \$ (2,700,941) |
| 2 | 701,631 | 1,451,081 | (4,325,853) | 359,355 | (35,217) | (1,849,003) |
| 3 | 1,063,616 | 2,893,032 | (4,325,853) | 196,049 | (61,694) | (234,850) |
| 4 | 1,425,600 | 4,334,983 | (4,325,853) | 196,049 | (104,196) | 1,526,584 |
| 5 | 1,787,585 | 4,334,983 | (4,325,853) | 276,946 | (163,194) | 1,910,467 |
| 6 | 2,149,569 | 4,334,983 | (4,325,853) | 192,257 | (218,678) | 2,132,278 |
| 7 | 2,511,554 | 4,334,983 | (4,325,853) | 191,773 | (289,994) | 2,422,462 |
| 8 | 2,873,538 | 4,334,983 | (4,325,853) | 193,104 | (370,289) | 2,705,483 |
| 9 | 3,235,523 | 4,334,983 | (4,325,853) | 192,216 | (458,704) | 2,978,166 |
| 10 | 3,597,507 | 4,334,983 | (4,325,853) | 195,121 | (555,664) | 3,246,095 |
| 11 | 3,597,507 | 4,325,853 | - | 197,704 | (556,042) | 7,565,022 |
| 12 | 3,597,507 | 2,883,902 | - | 197,986 | (556,084) | 6,123,312 |
| 13 | 3,597,507 | 1,441,951 | - | 198,026 | (556,089) | 4,681,395 |
| 14 | 3,597,507 | - | - | 195,848 | (555,770) | 3,237,585 |
| 15 | 3,597,507 | - | - | 198,289 | (556,128) | 3,239,668 |
| 16 | 3,597,507 | - | - | 199,287 | (556,274) | 3,240,520 |
| 17 | 3,597,507 | - | - | 198,117 | (556,103) | 3,239,522 |
| 18 | 3,597,507 | - | - | 198,813 | (556,205) | 3,240,116 |
| 19 | 3,597,507 | - | - | 197,341 | (555,989) | 3,238,859 |
| 20 | 3,597,507 | - | - | 197,734 | (556,047) | 3,239,195 |
| 21 | 3,250,390 | - | - | 3,209 | (476,690) | 2,776,909 |
| 22 | 2,895,876 | - | - | 3,209 | (424,749) | 2,474,335 |
| 23 | 2,533,892 | - | - | - | (371,244) | 2,162,647 |
| 24 | 2,171,907 | - | - | - | (318,209) | 1,853,698 |
| 25 | 1,809,923 | - | - | - | (265,175) | 1,544,748 |
| 26 | 1,447,938 | - | - | - | (212,140) | 1,235,798 |
| 27 | 1,085,954 | - | - | - | (159,105) | 926,849 |
| 28 | 723,969 | - | - | - | (106,070) | 617,899 |
| 29 | 361,985 | - | - | - | (53,035) | 308,950 |
| | \$ 71,950,147 | \$ 43,349,834 | \$ (43,258,534) | \$ 5,274,835 | \$ (10,232,513) | \$ 67,083,768 |

(1) Wastewater Appendices - page 2 Section I
(2) Wastewater Appendices - page 1
(3) Eligible debt funded projects as a percent of total principal times original annual debt service
(4) Wastewater Appendices - page 6

City of Mesquite - 2022 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Wastewater Service Area

| <u>Year</u> | <u>Impact Fee</u> | <u>Service Units</u> | <u>Impact Fee Revenue</u> | <u>Annual Expenses</u> | <u>Sub-Total</u> | <u>Accumulated Interest</u> | <u>Estimated Fund Balance</u> |
|----------------|-------------------|----------------------|---------------------------|------------------------|------------------|-----------------------------|-------------------------------|
| Initial | | | | | | | \$ - |
| 1 | \$ 5,809 | 1,109 | \$ 6,444,844 | \$ (2,700,941) | \$ 9,145,785 | \$ 18,109 | 9,163,894 |
| 2 | 5,809 | 1,109 | 6,444,844 | (1,849,003) | 8,293,848 | 52,711 | 17,510,452 |
| 3 | 5,809 | 1,109 | 6,444,844 | (234,850) | 6,679,694 | 82,567 | 24,272,713 |
| 4 | 5,809 | 1,109 | 6,444,844 | 1,526,584 | 4,918,260 | 105,858 | 29,296,832 |
| 5 | 5,809 | 1,109 | 6,444,844 | 1,910,467 | 4,534,377 | 124,994 | 33,956,202 |
| 6 | 5,809 | 1,109 | 6,444,844 | 2,132,278 | 4,312,566 | 143,005 | 38,411,774 |
| 7 | 5,809 | 1,109 | 6,444,844 | 2,422,462 | 4,022,382 | 160,075 | 42,594,231 |
| 8 | 5,809 | 1,109 | 6,444,844 | 2,705,483 | 3,739,361 | 176,077 | 46,509,669 |
| 9 | 5,809 | 1,109 | 6,444,844 | 2,978,166 | 3,466,678 | 191,042 | 50,167,390 |
| 10 | 5,809 | 1,109 | 6,444,844 | 3,246,095 | 3,198,749 | 204,996 | 53,571,135 |
| 11 | - | - | - | 7,565,022 | (7,565,022) | 197,163 | 46,203,276 |
| 12 | - | - | - | 6,123,312 | (6,123,312) | 170,841 | 40,250,805 |
| 13 | - | - | - | 4,681,395 | (4,681,395) | 150,124 | 35,719,533 |
| 14 | - | - | - | 3,237,585 | (3,237,585) | 135,039 | 32,616,987 |
| 15 | - | - | - | 3,239,668 | (3,239,668) | 122,749 | 29,500,068 |
| 16 | - | - | - | 3,240,520 | (3,240,520) | 110,404 | 26,369,952 |
| 17 | - | - | - | 3,239,522 | (3,239,522) | 98,011 | 23,228,441 |
| 18 | - | - | - | 3,240,116 | (3,240,116) | 85,569 | 20,073,894 |
| 19 | - | - | - | 3,238,859 | (3,238,859) | 73,080 | 16,908,115 |
| 20 | - | - | - | 3,239,195 | (3,239,195) | 60,543 | 13,729,463 |
| 21 | - | - | - | 2,776,909 | (2,776,909) | 48,870 | 11,001,424 |
| 22 | - | - | - | 2,474,335 | (2,474,335) | 38,666 | 8,565,755 |
| 23 | - | - | - | 2,162,647 | (2,162,647) | 29,638 | 6,432,746 |
| 24 | - | - | - | 1,853,698 | (1,853,698) | 21,803 | 4,600,852 |
| 25 | - | - | - | 1,544,748 | (1,544,748) | 15,161 | 3,071,265 |
| 26 | - | - | - | 1,235,798 | (1,235,798) | 9,715 | 1,845,182 |
| 27 | - | - | - | 926,849 | (926,849) | 5,472 | 923,805 |
| 28 | - | - | - | 617,899 | (617,899) | 2,435 | 308,340 |
| 29 | - | - | - | 308,950 | (308,950) | 609 | - |
| | | | \$ 64,448,442 | \$ 67,083,768 | | \$ 2,635,327 | |

City of Mesquite - 2022 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Wastewater Service Area

| <u>Year</u> | <u>Number of Years to End of Period</u> | <u>Future Value Escalation</u> | | <u>Annual Service Units</u> | | <u>Annual Expense</u> | |
|-------------|---|-------------------------------------|------------------------------------|-----------------------------|------------------|-----------------------|------------------|
| | | <u>Interest Rate Factor</u> | <u>Recovery Fee Factor</u> | <u>Actual</u> | <u>Escalated</u> | <u>Actual</u> | <u>Escalated</u> |
| 1 | 29 | 1.1192 | 1.0000 | 1,109 | 1,242 | \$ (2,700,941) | \$ (3,022,968) |
| 2 | 28 | 1.1148 | 1.0000 | 1,109 | 1,237 | (1,849,003) | (2,061,294) |
| 3 | 27 | 1.1104 | 1.0000 | 1,109 | 1,232 | (234,850) | (260,781) |
| 4 | 26 | 1.1060 | 1.0000 | 1,109 | 1,227 | 1,526,584 | 1,688,457 |
| 5 | 25 | 1.1017 | 1.0000 | 1,109 | 1,222 | 1,910,467 | 2,104,711 |
| 6 | 24 | 1.0973 | 1.0000 | 1,109 | 1,217 | 2,132,278 | 2,339,808 |
| 7 | 23 | 1.0930 | 1.0000 | 1,109 | 1,213 | 2,422,462 | 2,647,751 |
| 8 | 22 | 1.0887 | 1.0000 | 1,109 | 1,208 | 2,705,483 | 2,945,429 |
| 9 | 21 | 1.0844 | 1.0000 | 1,109 | 1,203 | 2,978,166 | 3,229,506 |
| 10 | 20 | 1.0801 | 1.0000 | 1,109 | 1,198 | 3,246,095 | 3,506,163 |
| 11 | 19 | 1.0759 | 1.0000 | - | - | 7,565,022 | 8,138,880 |
| 12 | 18 | 1.0716 | 1.0000 | - | - | 6,123,312 | 6,561,822 |
| 13 | 17 | 1.0674 | 1.0000 | - | - | 4,681,395 | 4,996,857 |
| 14 | 16 | 1.0632 | 1.0000 | - | - | 3,237,585 | 3,442,123 |
| 15 | 15 | 1.0590 | 1.0000 | - | - | 3,239,668 | 3,430,752 |
| 16 | 14 | 1.0548 | 1.0000 | - | - | 3,240,520 | 3,418,119 |
| 17 | 13 | 1.0506 | 1.0000 | - | - | 3,239,522 | 3,403,587 |
| 18 | 12 | 1.0465 | 1.0000 | - | - | 3,240,116 | 3,390,784 |
| 19 | 11 | 1.0424 | 1.0000 | - | - | 3,238,859 | 3,376,099 |
| 20 | 10 | 1.0383 | 1.0000 | - | - | 3,239,195 | 3,363,131 |
| 21 | 9 | 1.0342 | 1.0000 | - | - | 2,776,909 | 2,871,785 |
| 22 | 8 | 1.0301 | 1.0000 | - | - | 2,474,335 | 2,548,781 |
| 23 | 7 | 1.0260 | 1.0000 | - | - | 2,162,647 | 2,218,928 |
| 24 | 6 | 1.0220 | 1.0000 | - | - | 1,853,698 | 1,894,436 |
| 25 | 5 | 1.0179 | 1.0000 | - | - | 1,544,748 | 1,572,470 |
| 26 | 4 | 1.0139 | 1.0000 | - | - | 1,235,798 | 1,253,014 |
| 27 | 3 | 1.0099 | 1.0000 | - | - | 926,849 | 936,054 |
| 28 | 2 | 1.0059 | 1.0000 | - | - | 617,899 | 621,574 |
| 29 | 1 | 1.0020 | 1.0000 | - | - | 308,950 | 309,561 |
| | | | | | 12,199 | | \$ 70,865,538 |

Annual Interest Rate: 0.396%

Total Escalated Expense for Entire Period \$ 70,865,538

Total Escalated Service Units 12,199

Impact Fee for Wastewater Service Area \$ 5,809

City of Mesquite - 2022 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Project Funding
 Wastewater Service Area

| <u>Impact Fee Project Name⁽¹⁾</u> | <u>Cost In Service Area⁽¹⁾</u> | <u>Percent in Demand</u> | <u>Impact Fee Cost⁽¹⁾</u> | <u>Debt Funded⁽²⁾</u> | | <u>Non-Debt Funded⁽²⁾</u> |
|--|---|--------------------------|--------------------------------------|----------------------------------|-----------------|--------------------------------------|
| | | | | <u>Existing</u> | <u>Proposed</u> | |
| 10" Tripp Road Wastewater Line | \$ 700,000 | 7% | \$ 49,000 | \$ 49,000 | \$ - | \$ - |
| 15" Polo Ridge Interceptor | 5,487,800 | 74% | 4,060,972 | 4,060,972 | - | - |
| 24"/36" South Mesquite Creek Sewer | 11,011,700 | 40% | 4,404,680 | - | 4,404,680 | - |
| 12"/15" Independence Road Sewer | 2,626,800 | 40% | 1,050,720 | - | 1,050,720 | - |
| 54" South Mesquite Creek Interceptor | 11,551,600 | 16% | 1,848,256 | - | 1,848,256 | - |
| 8"/12"/15" Collins Interceptor | 4,013,500 | 74% | 2,969,990 | - | 2,969,990 | - |
| Collins Lift Station and 12" Force Main | 4,078,500 | 89% | 3,629,865 | - | 3,629,865 | - |
| 12"/15"/18"/21" Spradley Interceptor | 12,447,000 | 74% | 9,210,780 | - | 9,210,780 | - |
| 12"/15" Trinity Pointe Interceptor | 4,563,400 | 74% | 3,376,916 | - | 3,376,916 | - |
| 12" Buffalo Creek Sewers | 5,860,300 | 74% | 4,336,622 | - | 4,336,622 | - |
| 12"/24" McKenzie Sewer Main | 5,540,600 | 89% | 4,931,134 | - | 4,931,134 | - |
| 8"/12" Mckenzie Sewer Lateral | 1,506,700 | 89% | 1,340,963 | - | 1,340,963 | - |
| 15" Solterra (Lucas Farms) Sewer | 4,901,000 | 89% | 4,361,890 | - | 4,361,890 | - |
| 12" Berry Road Sewer | 1,358,600 | 55% | 747,230 | - | 747,230 | - |
| 8" Airport Sewer | 1,179,200 | 89% | 1,049,488 | - | 1,049,488 | - |
| Wastewater Impact Fee Update | 91,300 | 100% | 91,300 | - | - | 91,300 |
| Total | \$ 76,918,000 | | \$ 47,459,806 | \$ 4,109,972 | \$ 43,258,534 | \$ 91,300 |

(1) Table 3.1 Wastewater Impact Fee Capital Improvements

(2) Per discussions with City staff and City files

City of Mesquite - 2022 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Credit Determination
 Wastewater Service Area

| <u>Year</u> | <u>Eligible Revenue Funded Cost⁽²⁾</u> | <u>Annual Service Units</u> | <u>Eligible Debt Service per Service Unit</u> | <u>Annual Growth in Service Units (Cumulative)</u> | <u>Credit for Annual Utility Rate Revenues</u> |
|--------------|---|---------------------------------|---|--|--|
| 1 | \$ 1,643,519 | 65,736 | \$ 25.00 | 1,109 | \$ 27,737 |
| 2 | 1,060,986 | 66,846 | 15.87 | 2,219 | 35,217 |
| 3 | 1,259,665 | 67,955 | 18.54 | 3,328 | 61,694 |
| 4 | 1,621,650 | 69,065 | 23.48 | 4,438 | 104,196 |
| 5 | 2,064,531 | 70,174 | 29.42 | 5,547 | 163,194 |
| 6 | 2,341,826 | 71,283 | 32.85 | 6,656 | 218,678 |
| 7 | 2,703,326 | 72,393 | 37.34 | 7,766 | 289,994 |
| 8 | 3,066,642 | 73,502 | 41.72 | 8,875 | 370,289 |
| 9 | 3,427,739 | 74,612 | 45.94 | 9,985 | 458,704 |
| 10 | 3,792,629 | 75,721 | 50.09 | 11,094 | 555,664 |
| 11 | 3,795,211 | 75,721 | 50.12 | 11,094 | 556,042 |
| 12 | 3,795,493 | 75,721 | 50.12 | 11,094 | 556,084 |
| 13 | 3,795,534 | 75,721 | 50.13 | 11,094 | 556,089 |
| 14 | 3,793,355 | 75,721 | 50.10 | 11,094 | 555,770 |
| 15 | 3,795,796 | 75,721 | 50.13 | 11,094 | 556,128 |
| 16 | 3,796,795 | 75,721 | 50.14 | 11,094 | 556,274 |
| 17 | 3,795,625 | 75,721 | 50.13 | 11,094 | 556,103 |
| 18 | 3,796,321 | 75,721 | 50.14 | 11,094 | 556,205 |
| 19 | 3,794,848 | 75,721 | 50.12 | 11,094 | 555,989 |
| 20 | 3,795,241 | 75,721 | 50.12 | 11,094 | 556,047 |
| 21 | 3,253,598 | 75,721 | 42.97 | 11,094 | 476,690 |
| 22 | 2,899,085 | 75,721 | 38.29 | 11,094 | 424,749 |
| 23 | 2,533,892 | 75,721 | 33.46 | 11,094 | 371,244 |
| 24 | 2,171,907 | 75,721 | 28.68 | 11,094 | 318,209 |
| 25 | 1,809,923 | 75,721 | 23.90 | 11,094 | 265,175 |
| 26 | 1,447,938 | 75,721 | 19.12 | 11,094 | 212,140 |
| 27 | 1,085,954 | 75,721 | 14.34 | 11,094 | 159,105 |
| 28 | 723,969 | 75,721 | 9.56 | 11,094 | 106,070 |
| 29 | 361,985 | 75,721 | 4.78 | 11,094 | 53,035 |
| Total | \$ 77,224,982 | | | | \$ 10,232,513 |

| | |
|---|----------------------|
| 2022 Service Units ⁽¹⁾ | 64,627 |
| Ten Year Growth in Service Units ⁽¹⁾ | 11,094 |
| Annual Growth in Service Units | 1,109 |
| Credit Amount | \$ 10,232,513 |

(1) Derived from Table 3.5 Wastewater 10-Year Additional Service Unit Calculation

(2) Wastewater Appendices - page 2 Section II