

Exhibit A

# City of Everman

**2022-2032**

## **Land Use Assumptions and Capital Improvements Plan**

Water and Sanitary Sewer



Prepared By:

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City of Everman, Texas

2022 Land Use Assumptions for Impact Fees

March 2022



Prepared by:

Stephen A. Cook, AICP

## Purpose

Chapter 395 of the Texas Local Government Code describes the procedure Texas municipalities must follow in order to assess impact fees for new development. A primary step in the process is the development of Land Use Assumptions. These Land Use Assumptions, including both population and employment estimate, form the basis for the development of impact fee Capital Improvement Plans for wastewater and water facilities.

In order for the City of Everman to reasonably estimate the future needs of water and wastewater capital improvements to serve future development, an estimation of future growth is required. The purpose of this report is to examine existing development, identify future growth areas and provide an estimate of future growth based on this data and growth projection assumptions.

## Land Use Assumptions Report Elements

This report contains the following components:

- **Methodology** – Explanation of the general methodology used to prepare the land use assumptions.
- **Data Collection and Service Area** – Explanation of data collection from existing land use and future growth areas into vacant and underdeveloped parcels.
- **Historical Data** – Information on historic population trends for Everman.
- **Growth Assumptions** – Population and employment growth assumptions for buildout and ten years by the impact fee service area.
- **Summary** – Brief synopsis of the land use assumptions report.

## Methodology

Based upon the growth assumptions and the capital improvements needed to support growth, it is possible to develop an impact fee structure which fairly allocates improvement costs to the service area in relationship to their impact upon the entire infrastructure system. The data in this report has been formulated using reasonable and generally accepted planning principles for the preparation of impact fee systems in Texas.

These land use assumptions and future growth projections take into consideration several factors influencing development patterns, including the following:

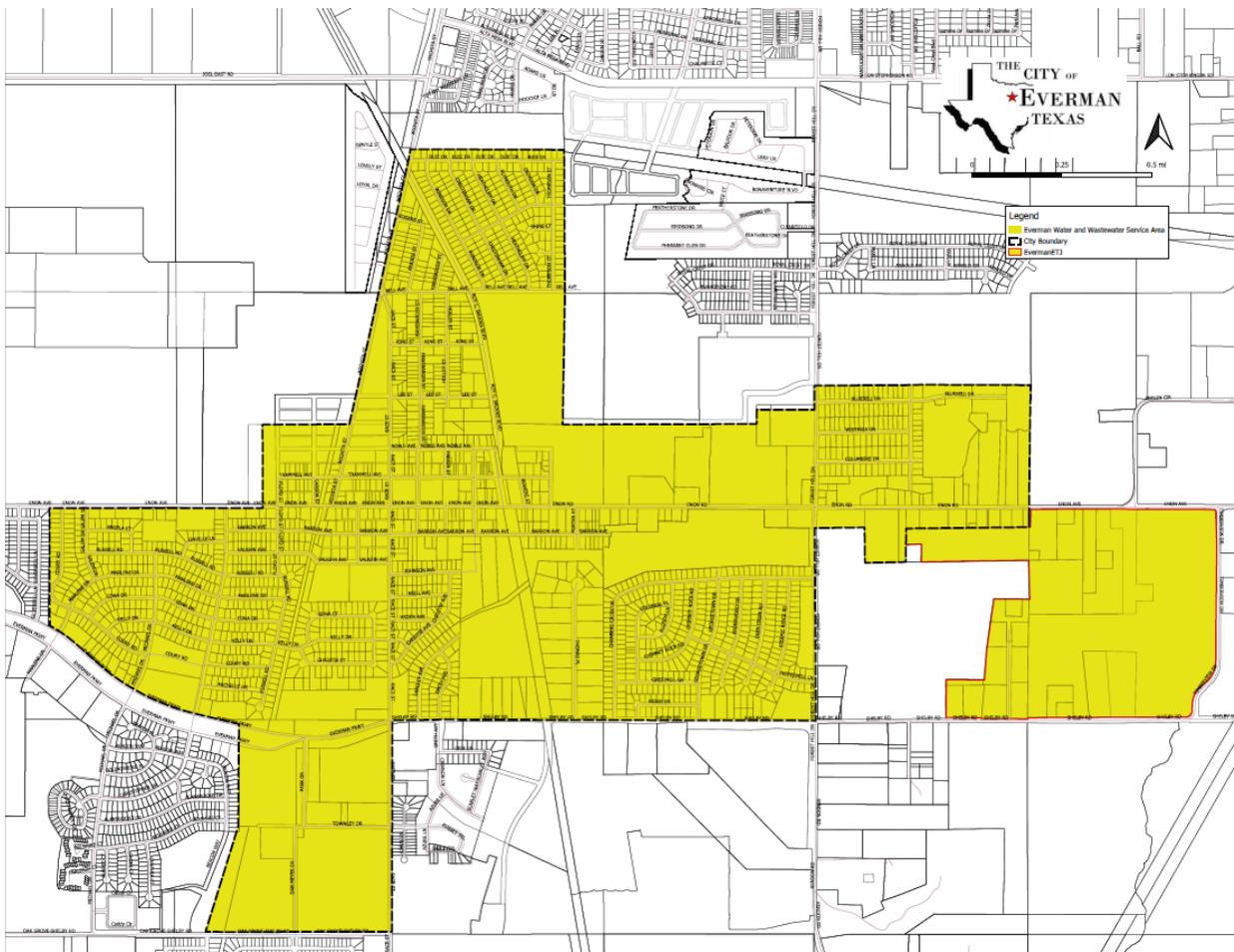
- The character, type, density, and quantity of existing development.
- Anticipated future land use (City's Future Land Use Plan Map).
- Availability of land for future expansion.
- Current and historical growth trends of population and development within the city.
- Location and configuration of vacant land.
- The following tasks were developed in order to achieve this information.
  1. Update service area boundaries in accordance with State Law requirements.
  2. Determine baseline conditions for population and employment.
  3. Project the ultimate buildout population and employment.
  4. Project population and employment growth for the next ten years.

## Service Area

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 boundaries of the impact fee service area for water and wastewater facilities are shown in Figure 1.1. A single service area boundary is defined for both water and wastewater facilities.

**Figure 1.1 Water and Wastewater Service Area**



## Historical Data

The baseline population for the City of Everman as of April 1, 2020, is 6,154 as per the U.S. Bureau of Census as part of the Census 2020. Table 1 shows the population history for Everman from the 2010 U.S. Census through the population total for April 1, 2020.

Year	Population	% Growth
2010	6108	
2011	6103	-0.08%
2012	6128	0.41%
2013	6192	1.04%
2014	6213	0.34%
2015	6279	1.06%
2016	6312	0.53%
2017	6321	0.14%
2018	6252	-1.09%
2019	6255	0.05%
2020	6154	-1.61%

*Table 1.1 Everman Population Estimates – US Bureau of Census*

The population of Everman has fluctuated over the past ten years as few new housing units have been constructed over that time period. It reflects a community which has maximized its available residential land for development. There are some areas which are currently used for agricultural purposes which could potentially increase the population. The City has claimed an area to the southeast bounded by Enon Avenue, Shelby Road and Timberview Drive as Extra-Territorial Jurisdiction. Extra-territorial jurisdiction are areas where municipalities have the ability to potentially annex into the community following State Law. The population of this area is estimated to be approximately 60 persons based on 18 single family housing units contained within the area.

Employment Data – Everman has most of its employment base in production, transportation, and material moving occupations. The second highest employment is in education through the school district and employment with municipal government. The estimated employment numbers from 2010-2019 through the U.S. Census Bureau American Community Survey annual update. Employment has increased over that time a total of 4%. Due to the limited nature of additional areas available for non-residential growth and development in the City, an assumption of a continued 4% growth over a ten-year time period would be reasonable.

<b>Year</b>	<b>Employment Estimate</b>
2010	2463
2011	2634
2012	2461
2013	2629
2014	2603
2015	2611
2016	2614
2017	2581
2018	2458
2019	2555

*Table 1.3 Total Employment Estimates Everman*

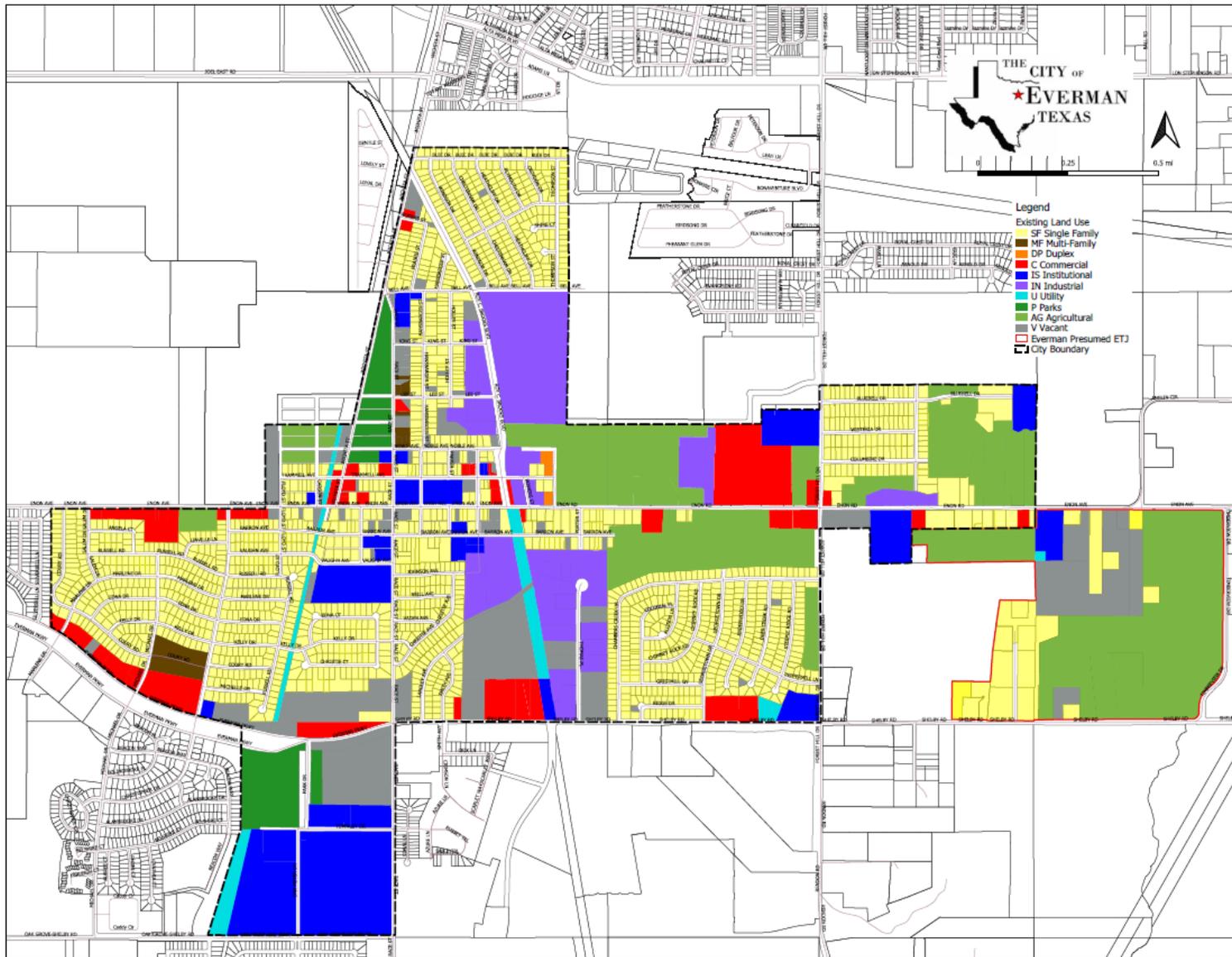
### Growth Assumptions

Calculating growth of the City must be based on the available area remaining in the community for future development. How much additional residential and employment areas may be developed resulting in additional population and employment growth.

Holding Capacity – Holding Capacity of a community is a calculation comparing existing land use data from the City that is assigned as vacant (potential to be developed) with existing zoning and developed properties. A sum of the total vacant land area and properties which may be agricultural now but could have the potentiality for redevelopment in the future is then created. For each area, a total potential number of housing units is assigned based on the maximum number of units (or minimum lot size) allowed within the City. In 2015, as part of the City of Everman's Comprehensive Plan holding capacity was calculated using the minimum density allowed at current zoning levels. Housing units are then multiplied by the observed average household size for owner-occupied units to indicate a population projection. At that time, it was estimated that the City could have the potential of an additional 145 dwelling units based on the existing zoning – which would result in an additional population of 470 persons based on the 3.22 persons per dwelling unit estimate at that time.

Utilizing updated existing land use data and modifications to the zoning map made since that time a new holding capacity model has been developed for the City of Everman.

Figure 1.2 Existing Land Use Updated 2022



Certain assumptions must be made based on the ultimate additional build-out number:

- All future and existing residential properties are assumed to be 100% occupied.
- Existing areas zoned residential will remain static throughout build-out.
- An area consisting of 34.7 acres southwest of Roy C. Brooks Boulevard and E. Bell Avenue will be developed at approximately 5.8 units per acre for a total of 202 dwelling units.
- Commercial areas of the City would be built-out.
- All vacant and agricultural land potentially used for residential would build out at maximum density the zoning allows.
- Zoning districts not zoned for residential and containing vacant land were eliminated from this calculation.
- Areas designated as floodplain and "vacant" were eliminated from the calculation, leaving only developable land for the projection.
- Areas of Extra-Territorial Jurisdiction were assumed to develop at the AG zoning level.
- The average household size in Everman according to the US Bureau of Census is 3.22 persons per household. This is the multiplication factor for projecting population based on possible number of units.

The updated model now shows an ultimate buildout of an additional 313 housing units with an additional 1008 persons added to the population.

<b>Holding Capacity Vacant / AG Land</b>	<b>Vacant Acres</b>	<b>Potential Units</b>	<b>Potential Population Increase</b>
Zoned A-1	10.2	51	165
Zoned A-2	5.4	27	86
Zoned AG	78.4	19	62
New Residential Development	34.7	202	650
Extra-territorial Jurisdiction	55.34	14	45
<b>Total Land Vacant / AG Non-Floodplain</b>	<b>94</b>	<b>313</b>	<b>1008</b>

*Table 1.2 Everman Holding Capacity Model 2022 – Stephen A. Cook, AICP*

The non-residential areas of the City of Everman have been developed in a corridor format with a few industrial centers. There are very few areas available for non-residential development as currently planned for the City. Commercially zoned properties along N. Race Street, Everman Parkway, Shelby Road and the industrial area on Thomas Place provide the greatest amount of opportunity for the community to increase retail, commercial, and employment growth. With limited area for growth an assumption of continued 4% growth of employment over the next 10 years is anticipated.

## Summary

The Land Use Assumptions for Water and Wastewater Impact Fees for the City of Everman include the following:

- The Service Area for both Water and Wastewater is the corporate limits of the City of Everman, areas of Extra-Territorial Jurisdiction.
- The 10-year population projection for the City is 6,852 with a build out population of 7,162.
- The 10-year employment projection for the City is 2,657 with a built-out employment of 2,763.

## PROJECT PRIORITIES

### Water

W01	Replace the 6" Water Line along Bell Street with an 8" Water Line
W02	Replace the 6" Water Line along Columbine Drive with an 8" Water Line
W03	Replace the 6" Water Line along Wisteria Drive with an 8" Water Line
W04	Replace the 6" Water Line along Southway Drive with an 8" Water Line
W05	Replace GST #2 at Townley Drive
W06	Install Well #9
W07	Replace the 6" Water Line along Race Street with a 12" Water Line
W08	Replace the 6" Water Line along Christie Avenue with a 6" Water Line
W09	Replace the 2" Water Line along Pittman Avenue with a 6" Water Line
W10	Replace the 4" Water Line along Vaden Avenue with a 6" Water Line
W11	Replace the 6" Water Line along Neill Avenue with a 6" Water Line
W12	Replace the 6" Water Line along Johnson Avenue with a 6" Water Line
W13	Replace the 3" Water Line along E Barron Avenue with a 6" Water Line
W14	Replace the 4" Water Line along Vaughn Avenue with a 6" Water Line
W15	Construct an 8" Water Line along Roy C Brooks Blvd
W16	Replace the 6" Water Line along E Enon Avenue with an 8" Water Line
W17	Install Well #10
W18	Impact Fee Study (Water System)

### Sanitary Sewer

S01	Replace the 6" Sewer Line along Christie Avenue with a 6" Sewer Line
S02	Replace the 6" Sewer Line along Pittman Avenue with a 6" Sewer Line
S03	Replace the 6" Sewer Line along Vaden Avenue with a 6" Sewer Line
S04	Replace the 6" Sewer Line along Neill Avenue with a 6" Sewer Line
S05	Replace the 6" Sewer Line along Johnson Avenue with a 6" Sewer Line
S06	Construct an 8" Sewer Line along Noble Avenue
S07	Replace the 6" Sewer Line along Noble Avenue with an 8" Sewer Line
S08	Construct a 10" SDR-26 Gravity Sewer Pipe at Drainage Basin 4A
S09	Construct a 6" SDR-26 Gravity Sewer Pipe at E Enon Rd
S10	Impact Fee Study (Wastewater System)

## 1.0 WATER MASTER PLAN

### 1.1 General

The City of Everman's water system consists of more than 27 miles of water lines and utilizes an elevated storage tank and ground storage tanks with booster pump stations. The City of Everman's water supply currently comes from 7 wells and an emergency connection with the City of Fort Worth. In order to meet future demands, the City must water wells and/or modify their existing contract to purchase additional water.



### 1.2 Existing Water System

Everman's existing water system utilizes PVC and cast iron pipe material ranging from 1 inch to 20 inch in diameter. The water system includes 7 wells, 7 ground storage tanks, 1 elevated storage tank, and 4 booster pump stations.

WATER WELLS (946 GPM Total)	
Well	Capacity
# 1	85
# 2	160
# 3	110
# 4	65
# 5	90
# 6	220
# 7	216

EXISTING STORAGE FACILITIES (2,460,000 gal Total)			
Tank	Location	Type	Storage Capacity
# 1	Well #1 & #2	Ground	200,000 gal
# 2	Well #3 & #7	Ground	100,000 gal
# 3	Well #4	Ground	210,000 gal
# 4	Well #5 & #6	Ground	1,200,000 gal
# 5	Well #3 & #7	Elevated	750,000 gal

<b>BOOSTER PUMPS (4700 GPM Total)</b>			
<b>Pump</b>	<b>Location</b>	<b>HP</b>	<b>Capacity</b>
# 1	Wells #1 & #2	30	1,200 GPM
# 2	Wells #3 & #7	25	1,000 GPM
# 3	Well #4	25	500 GPM
# 4	Wells #5 & #6	50	2,000 GPM

### 1.3 Population and Service Connections

According to the Census Bureau, the 2020 City population was 6,154. Based on the Everman Land Use Assumptions, the City has the potential of increasing the number of housing units by 313 units (service connections) at buildout if vacant land area is redeveloped according to the existing zoning. With an estimated 3.22 persons per household, these potential 313 units result in a buildout projected population of 7,162. However, for the use of the CIP and Impact Fee Study, the estimated additional units in the next 10 years is 217, which results in a population of 6,852 in 2032.

### 1.4 Required Storage

Per TCEQ Chapter 290.45 (b) (1) (D) (ii), the City must have a total minimum water storage capacity of 200 gallons per connection. Being conservative and using all 2,111 connections, the City is currently required to have 422,200 gallons of total storage. The City currently has 2,460,000 gallons of total storage and therefore is in compliance.



The population and build out projections, being conservative and including all connections, indicate that the City will require 465,600 gallons of total storage by the year 2032. The current total storage capacity of 2,460,000 will meet the future storage requirements.

Per Chapter 290.45 (b) (1) (D) (iv), the City must have a total minimum elevated water storage capacity of 100 gallons per connection. Being conservative and using all 2,111 connections, the City is required to have 211,100 gallons of elevated storage. The City currently has 750,000 gallons of elevated storage and therefore is in compliance.

The population and build out projections, being conservative and including all connections, indicate that the City will require 232,800 gallons of elevated storage by the

year 2032. The current elevated storage capacity of 750,000 gallons will meet the future elevated storage requirements.

Type	Existing (Gallons)	TCEQ	Projected TCEQ
		Requirement 2022 (Gallons)	Requirement 2032 (Gallons)
Ground	1,710,000	211,100	232,800
Elevated	750,000	211,100	232,800
Total	2,460,000	422,200	465,600

### 1.5 Demand Rates

The average day and maximum day water demands for 2022 were obtained from 2021 data provided by the City. To develop the future water demands, water system and population data was used. The current and projected water demands are shown below:

DEMAND RATES 2021		
Average Daily	420,083	Gallons/Day
Maximum Day	619,000	Gallons/Day

PROJECTED DEMAND RATES			
Year	Average Daily Demand (Gallons/Day)	Service Unit Demand (Gallons/Day)	Service Units
2021	420,083	199	2,111
2032	463,265	199	2,328
10-Year Additional Service Units			217

### 1.6 Pumping Requirements

The City currently has four booster pump stations with a combined capacity of 4,700 GPM, which yields 2.23 GPM per connection. Per TCEQ Chapter 290.45 (b) (1) (D) (iii), for systems which provide an elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 GPM per connection are required at each pump station or pressure plane. The City's current combined pumping capacity of 2.23 GPM is in compliance.

The population and build out projections, being conservative and including all connections, indicate that the City's combined pumping capacity will be 2.02 GPM per connection in 2032. This combined pumping capacity is above the required 0.6 GPM per connection and therefore meets future requirements.

### **1.7 Opinion of Probable Cost**

The opinions of probable costs presented here are preliminary and final costs may vary. The probable costs are based on current-year dollars and average unit costs and do not include allowances for legal or financing costs. The cost of the 10-year water system CIP is estimated to be \$5,667,075. A project cost breakdown is shown in Table 4-1. Everman may re-prioritize these projects based on fund availability and other factors.

## **5.0 SANITARY SEWER MASTER PLAN**

### **5.1 General**

The City of Everman's sanitary sewer collection system is made up of more than 23 miles of gravity sewer lines that conveys flows to the Fort Worth collection system and then further conveyed to the treatment plant. The current system is made up of 9 drainage basins, with some of these basins divided into sub-basins, and the basins are defined by the City's topography.

The surface topography of Everman consists of two regulatory floodways, west to east, in which the City of Fort Worth operates two wastewater collection lines. This results in the individual areas flowing north or south towards the Fort Worth wastewater lines, but generally flow to the northeast.

### **5.2 Existing Sanitary Sewer System**

The City does not own or operate a wastewater treatment plant and has a long-term contract with the City of Fort Worth for the treatment of all sewage. Everman's sewage collection system consists of PVC and clay pipes ranging from 6 inch to 12 inch in diameter. The City does not own or operate any lift stations or force mains in the sewer collection system.

## **Proposed Improvements 2032**

### **5.3 Demand Requirements**

CobbFendley evaluated the sanitary sewer system capacity with assistance from City staff. The evaluation concluded the existing sanitary sewer system is adequate and there are no capacity issues. Any identified improvements to the existing system are to replace aging infrastructure.

Drainage basins with anticipated growth, identified in the land use assumptions, were evaluated based on the potential units for each basin and future lines were sized to accommodate ultimate wastewater flows. Wastewater lines within the undeveloped properties are excluded from the Capital Improvements Plan (CIP) and the impact fee calculation as they are generally the responsibility of developers.

The proposed sewage collection system for 2032 was determined from land use and population projections for the study period. The system was evaluated under these demands and capital improvement projects were identified. The proposed projects are designed with capacity for the calculated 2032 flows, as well as flows for continued growth after 2032, but within the 40-year life expectancy of the projects. TCEQ criteria were used to determine the potential sizes of proposed sanitary sewer lines and the projected wastewater flows. Residential and school flows were applied where necessary (100 GPD/capita residential and 15-20 GPD/student for school flows).

#### **5.4 Opinion of Probable Cost**

The opinions of probable costs presented here are preliminary and final costs may vary. The probable costs are based on current-year dollars and average unit costs and do not include allowances for legal or financing costs. The cost of the 10-year sanitary sewer system CIP is estimated to be \$1,627,800. A project cost breakdown is shown in Table 5-1. Everman may re-prioritize these projects based on funds availability and other factors.

**Table 4-1 - Water System CIP Projects & Costs**

<b>CIP #</b>	<b>Project Description</b>	<b>Ex. Dia (in)</b>	<b>New Dia (in)</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Construction Cost</b>
W01	Replace the 6" Water Line along Bell Street with an 8" Water Line	6	8	2,400	LF	\$146	\$350,400
W02	Replace the 6" Water Line along Columbine Drive with an 8" Water Line	6	8	1,260	LF	\$164	\$206,640
W03	Replace the 6" Water Line along Wisteria Drive with an 8" Water Line	6	8	1,260	LF	\$164	\$206,640
W04	Replace the 6" Water Line along Southway Drive with an 8" Water Line	6	8	420	LF	\$156	\$65,520
W05	Replace GST #2 at Townley Drive	-	-	1	LS	\$237,200	\$237,200
W06	Install Well # 9	-	-	1	LS	\$1,300,000	\$1,300,000
W07	Replace the 6" Water Line along Race Street with a 12" Water Line	6	12	1,250	LF	\$232	\$290,000
W08	Replace the 6" Water Line along Christie Avenue with a 6" Water Line	6	6	1,500	LF	\$135	\$202,500
W09	Replace the 2" Water Line along Pittman Avenue with a 6" Water Line	2	6	265	LF	\$135	\$35,775
W10	Replace the 4" Water Line along Vaden Avenue with a 6" Water Line	4	6	570	LF	\$135	\$76,950
W11	Replace the 6" Water Line along Neill Avenue with a 6" Water Line	6	6	730	LF	\$135	\$98,550
W12	Replace the 6" Water Line along Johnson Avenue with a 6" Water Line	6	6	850	LF	\$135	\$114,750
W13	Replace the 3" Water Line along E Barron Avenue with a 6" Water Line	3	6	660	LF	\$135	\$89,100
W14	Replace the 4" Water Line along Vaughn Avenue with a 6" Water Line	4	6	1,230	LF	\$135	\$166,050
W15	Construct an 8" Water Line along Roy C Brooks Blvd	-	8	2,000	LF	\$164	\$328,000
W16	Replace the 6" Water Line along E Enon Avenue with an 8" Water Line	6	8	3,500	LF	\$164	\$574,000
W17	Install Well # 10	-	-	1	LS	\$1,300,000	\$1,300,000
W18	Impact Fee Study (Water System)	-	-	1	LS	\$25,000	\$25,000

**\$5,667,075**

**Table 5-1 - Wastewater System CIP Projects & Costs**

<b>CIP #</b>	<b>Project Description</b>	<b>Ex. Dia (in)</b>	<b>New Dia (in)</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Construction Cost</b>
S01	Replace the 6" Sewer Line along Christie Avenue with a 6" Sewer Line	6	6	1,225	LF	\$110	\$134,750
S02	Replace the 6" Sewer Line along Pittman Avenue with a 6" Sewer Line	6	6	170	LF	\$110	\$18,700
S03	Replace the 6" Sewer Line along Vaden Avenue with a 6" Sewer Line	6	6	500	LF	\$110	\$55,000
S04	Replace the 6" Sewer Line along Neill Avenue with a 6" Sewer Line	6	6	660	LF	\$110	\$72,600
S05	Replace the 6" Sewer Line along Johnson Avenue with a 6" Sewer Line	6	6	800	LF	\$110	\$88,000
S06	Construct an 8" Sewer Line along Noble Avenue	-	8	860	LF	\$145	\$124,700
S07	Replace the 6" Sewer Line along Noble Avenue with an 8" Sewer Line	6	8	890	LF	\$145	\$129,050
S08	Construct a 10" SDR-26 Gravity Sewer Pipe at Drainage Area 4A	-	10	2,500	LF	\$216	\$540,000
S09	Construct a 6" SDR-26 Gravity Sewer Pipe at E Enon Rd	-	6	4,000	LF	\$110	\$440,000
S10	Impact Fee Study (Wastewater System)	-	-	1	LS	\$25,000	\$25,000

**\$1,627,800**