**ORDINANCE NO. 14-1114**

**AN ORDINANCE ESTABLISHING THE CITY'S WATER AND WASTEWATER IMPACT FEE PROGRAMS BY INCORPORATING IMPACT FEE LAND USE ASSUMPTIONS AND IMPACT FEE CAPITAL IMPROVEMENTS PLANS, BY ESTABLISHING THE IMPACT FEE SERVICE AREA BOUNDARIES, AND BY SETTING THE WATER AND WASTEWATER IMPACT FEES TO BE CHARGED BY THE CITY.**

**WHEREAS,** the City of Pleasanton appointed the Planning and Zoning Commission as the Impact Fee Advisory Committee on July 18, 2013, in accordance with Section 395.058 of the Texas Local Government Code; and,

**WHEREAS,** the City has caused Land Use Assumptions and a Capital Improvements Plan to be developed by qualified professionals using generally accepted engineering and planning practices in accordance with the provisions of Section 395.0411 of the Texas Local Government Code, which were available for public review at City Hall on April 10, 2014; and

**WHEREAS,** the City adopted Resolution No. 130-14 on April 17, 2014 establishing the date and time for a public hearing on the Land Use Assumptions and Capital Improvements Plan, and has met the requirements of Sections 395.042 and 395.043 of the Texas Local Government Code; and

**WHEREAS,** notice of the public hearing was subsequently published in the Pleasanton Express on April 23, 2014 in accordance with Section 395.044; and,

**WHEREAS,** the Impact Fee Advisory Committee met on May 14, 2014 and voted unanimously to recommend adoption of the Laud Use Assumptions and Capital Improvements Plan; and

**WHEREAS,** the City held a public hearing on May 28, 2014 to consider public testimony concerning the Land Use Assumptions and Capital Improvements Plan; and

**WHEREAS,** the City's consultant calculated the Water and Wastewater Impact Fees assuming the 50% credit allowed under Section 395.014(7)(b) and assuming a ten (10) year planning period, and further assuming only costs eligible under applicable law for inclusion in the fee, as described in detail in the Study titled "2014 Impact Fee Study: Water and Wastewater Projects by Stewart Planning Consulting, LLC" and dated July 18, 2014, as attached hereto; and

**WHEREAS,** the Impact Fee Advisory Committee met on May 28, 2014 and voted unanimously to recommend adoption of the Impact Fee as calculated by the City's consultant, such comments having been provided to the City Council in accordance with Section 395.050 of the Texas Local Government Code; and,

**WHEREAS,** the City adopted Resolution No. 131-14 on June 5, 2014 establishing the date and time for a public hearing on the impact fee in accordance with Section 395.047 of the Texas Local Government Code; and

**WHEREAS,** notice of a public hearing on the imposition of an impact fee was published in the Pleasanton Express on June 11, 2014 in accordance with Section 395.049 of the Texas Local Government Code; and

**WHEREAS,** the City passed Ordinance No. 14-1109 on June 19, 2014 which adopted the Land Use Assumptions and Capital Improvements Plan; and

**WHEREAS,** a public hearing was held on July 17, 2014 on the imposition of impact fees, as required by Section 395.047 of the Texas Local Government Code; and

**WHEREAS,** an additional public hearing was held on August 7, 2014 to receive additional public input on the imposition of impact fees; and

**WHEREAS,** the City Council of the City of Pleasanton has made a finding that the above statements are true and correct, and that it is in the best interest of the City to adopt the Land Use Assumptions, Capital Improvements Plans and Impact Fees for the City's Water and Wastewater Impact Fee Programs, as set out in this ordinance;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF PLEASANTON, TEXAS:**

**Part 1. Water Impact Fee Program.** The City Council establishes the City's Water Impact Fee Program by adopting:

(1) the area described in Section 2.4 of the attached Impact Fee Study (Attachment 'A'), as the City's Water Service Area;

(2) the Land Use Assumptions and Capital Improvements Plan as adopted under Ordinance No. 14-1109 (June 19, 2014); and

(3) A Water Impact Fee of $3,220 per living unit equivalent (LUE) on new development within the Water Service Area.

**Part 2. Wastewater Impact Fee Program.** The City Council establishes the City's Wastewater Impact Fee Program by adopting:

(1) the area described in Section 2.8 of the attached Impact Fee Study (Attachment 'A'), as the City's Wastewater Service Area;

(2) the Land Use Assumptions and Capital Improvements Plan as adopted under Ordinance No. 14-1109 (June 19, 2014); and

(3) A Wastewater Impact Fee of $1,149 per living unit equivalent (LUE) on new development within the Wastewater Service Area.

**Part 3. Assessment and Collection of Impact Fees.**

Impact Fees shall be assessed and collected in accordance with the provisions of Chapter 395 of the Texas Local Government Code, as the same may be amended from time to time. The City Manager, or his designee, is hereby authorized to develop procedures and policies for assessment and collection of impact fees consistent with applicable law and the City's ordinances, and to implement said procedures and policies in the administration of the City's Water and Wastewater Impact Fee Programs.

**Part 4. New Development Platted Before Adoption of Impact Fees.** For new development which is platted in accordance with Subchapter A, Chapter 212 of the Texas Local Government Code or the subdivision or platting procedures of the City of Pleasanton before the adoption of the impact fees set out in this ordinance, the impact fees adopted by this ordinance may not be collected on any service unit for which a valid building permit is issued within one year after the date of adoption of said impact fees.

**Part 5. Collection of Fee if Services not Available** Except as otherwise provided by law, impact fees required by this ordinance may be assessed but may not be collected in areas where services are not currently available unless:

(i) the collection is made to pay for a capital improvement or facility expansion that has been identified in the Capital Improvements Plan and the City commits to commence construction within two years, under duly awarded and executed contracts or commitments of staff time covering substantially all of the work required to provide service, and to have the service available within a reasonable period of time considering the type of capital improvement or facility expansion to be constructed, but in no event longer than five years;

(ii) the City agrees that the owner of a new development may construct or finance the capital improvements or facility expansions and agrees that the costs incurred or funds advanced will be credited against the Impact Fees otherwise due from the new development or agrees to reimburse the owner for such costs from impact fees paid from other new developments that will use such capital improvements or facility expansions, which fees shall be collected and reimbursed to the owner at the time the other new development records its plat; or

(iii) an owner voluntarily requests the City to reserve capacity to serve future development, and the City and owner enter into a valid written agreement.

**Part 6. Additional Fees.** After assessment of all impact fees attributable to the new development or execution of an agreement for payment of impact fees, additional impact

fees or increases in fees may not be assessed against the tract for any reason, unless the number of service units to be developed on the tract increases. In the event of the increase in the number of service units, the impact fees to be imposed are limited to the amount attributable to the additional service units.

**Part 7. Agreement with Owner.** This ordinance does not prohibit the City from entering into an agreement with the owner of a tract of land for which the plat has been recorded providing for the time and method of payments of the impact fees.

**Part 8. Acceptance of Fees.** The City is under no obligation to accept offered impact fees. This ordinance creates no obligation for the City to serve any property within the City.

**Part 9. Imposition of Additional Fees.** This ordinance shall not limit the City's authority to impose other or additional impact fees authorized by Chapter 395 of the Texas Local Government Code, or to impose taxes, fees, charges or assessments authorized by state law.

**Part 10. Attachments.** Attachment 'A' referenced above are incorporated into this ordinance.

**Part 11. Repeal.** Any prior ordinance or parts of ordinances that are in force when this ordinance become effective, and which conflict with the provisions of this ordinance, are hereby repealed to the extent of the conflict.

Passed, Approved, and Adopted this the 14th day of August, 2014.

Jeanne B. Israel, Mayor Pro-Tem

Attest:

Cindy Urrabazo, City Secretary

Approved as to Form:

Bobby Maldonado, City Attorney

CITY OF PLEASANTON

# 2014 Impact Fee Study

## Water and Wastewater Projects

**Prepared by Stewart Planning Consulting, LLC**
**in association with Susan Roth Consulting, LLC**

**5/29/2014**

This document is released for planning purposes of interim review under the authority of Susan Roth, P.E. No. 92276, in May 2014.

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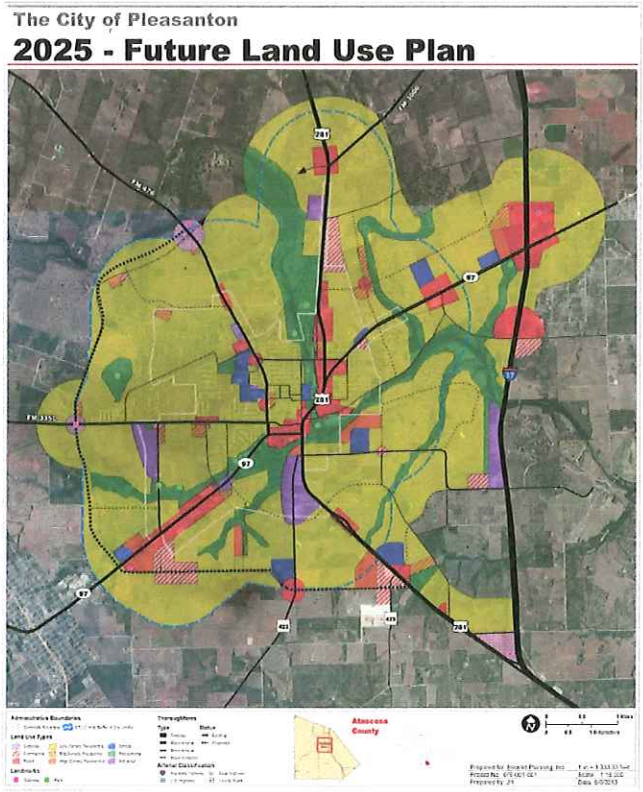
# 1 THE FUTURE LAND USE ASSUMPTIONS

## 1.1 Pleasanton 2025 Plan – The Starting Point

The basis of determining capital projects which are necessary to support growth is a set of assumptions about future land use. As time progresses, the actual growth pattern may differ from these assumptions because the nature of land development is dependent on many factors, such as market timing and demand, land prices, macroeconomic considerations, financing, and construction costs, to name a few. However, in order to be ready for growth and guide it appropriately, some reasonable assumptions must be made and it is understood that these assumptions may change over time and should be reviewed periodically.




1: The Future Land Use Plan, which supports and is consistent with, but is not the same thing as the impact fee Land Use Assumptions.

The Future Land Use Map is found in the Pleasanton 2025 Plan, and shown here for reference. This map depicts the location of residential and non-residential land uses inside the current city limits its extraterritorial jurisdiction (ETJ), and beyond these limits in anticipation of growth (future ETJ).

This map was developed initially by the Master Plan Steering Committee as part of the Pleasanton 2025 Plan. This effort reflected assumptions about the type and quantity of different land uses for approximately a 12 year horizon, and incorporates the City's land use policy. This document was adopted in June 2013. The Future Land Use Map was developed according to generally-accepted principles of land use planning, as described in the detail sections excerpted from the 2025 Plan below.

## 1.2 The 2025 Future Land Use Plan Land Use Categories

The Plan includes three general groups of residential land use, of an approximate density to correspond to their intensity (and utility service planning).

**Low Density Residential Land Use (<4 Units per acre)** 

This use is representative of traditional, single-family detached dwelling units, including larger-lot residences, and reflects the largest land use category. Low density residential land use areas are usually not located adjacent to major thoroughfares or other incompatible land uses, and are in proximity to existing single-family residential land use. As the City contemplates implementing zoning, it should encourage a variety of lot sizes within the low density district, to offer good market choice.

**Medium Density Residential Land Use (4-8 Units per acre)** 

This use generally includes two-family, attached dwelling units, such as duplex units, patio homes, and townhomes. Medium density land uses often provide areas for "empty nesters" who may not want the maintenance of a large-lot single-family home, and for young families who may find a townhome or duplex more affordable than a single-family home. It is anticipated that new areas for medium density land use will be developed in the future.

**High Density Residential Land Uses (4-16 Units per acre)** 

At the top end of the density scale, high density typically includes apartments and condominiums in attached buildings. Generally, medium density uses should also be permitted in any area designated for high density use, as the Future Land Use Plan emphasizes flexibility as a stated goal. The plan includes several areas for multiple- family or higher density residential development. These areas have been located next to collectors or major arterials to promote ease of access and to avoid congestion. Multi-family complexes would be appropriate in density ranging from 4 to 16 units per acre. Densities proposed higher than this should require additional review of traffic impacts, location, and utility considerations.

**Retail Uses** 

Retail land use areas are intended to pro- vide for a variety of retail trade, personal, and business services and establishments. Retail establishments generally require greater visibility than do other types of nonresidential land use (e.g., office, commercial). In response to this need, retail land uses have been designated in the higher traffic areas of Pleasanton.

**Commercial Uses** 

Areas designated for commercial land use are intended for a variety of commercial uses and establishments with outside storage, display and sales. Examples of such uses include automobile-related services, manufactured home sales, self- storage units, welding shops, and pawn shops.

Commercial uses often locate along major thoroughfares not because they need the same level of visibility as retail uses do, but because they need the accessibility. The key difference is that commercial uses generally have a greater need for outside storage areas, and these areas tend to reduce the aesthetic quality of major thoroughfares.

**Industrial**

The Eagle Ford phenomenon has given rise to a variety of oil and gas field service-related operations. These users need large, flexible space and large unimpeded outdoor storage area for supplies and equipment which is easily accessible by large and oversize vehicles. Because this use will continue to be critical to the economic vitality of the city, ample industrial space is envisioned. Careful, proactive encouragement is required, and land is sought to be suitable for industrial land use based on the following criteria:

- Access to an existing or proposed major arterial;
- Access to a railroad;
- Relatively flat or gently sloping site
- The site will not negatively impact the existing or proposed residential areas; and,
- A relatively large amount of land can be assembled in one area.

General planning criteria for industrial uses suggests that the minimum size requirements for preplanned industrial parks area about 200 to 300 acres. Approximately three to five percent of a city's land (0.2 to 0.3 acres per 100 persons) is often allocated to industrial uses. In the case of Pleasanton, due to the importance of industrial use mentioned above, a larger percentage has been allocated on the Future Land Use Map.

**Civic and Institutional**

Binding the residential and commercial uses together are the civic and institutional uses that support public space, public administration, utilities, and schools. These uses often have very specific land use requirements. For example, schools must manage large populations, peak traffic flows, and indoor and outdoor activities. A wastewater plant is strategically located with respect to topography, as is an elevated storage tank that provides drinking water at a higher pressure. Land must be reserved for these types of facilities throughout the community.

## 1.3 Bridging from Policy Land Use Planning to Land Use Assumptions

The Texas Local Government Code §395 requires that the impact fee Land Use Assumptions (hereinafter noted in "toggle" case or as the "LUA") are based upon a 10 year planning horizon. In order to account for the difference between the Future Land Use Map (the policy document that is part of the Comprehensive Plan [LGC §213.002] and based on a longer planning horizon and usually a broader geographic area) and the requirements for Land Use Assumptions as they relate specifically to impact fees [LGC §395.001(5)], three things are adjusted using the Future Land Use Map as the basis.

First, the Impact Fee Advisory Committee has assigned a weighting factor to each area on the Future Land Use Map to account for the likelihood of development occurrence. In other words, for a given area on the map, the Committee evaluates the likelihood that development will occur within the 10-year planning horizon, expressed as a percent chance (a value between 0-100% is assigned).

Second, the Impact Fee Advisory Committee evaluated the extent of development occurrence in each area and assigned a value between 0-100%. These two values are taken together to reflect a composite weighting. For example, an area of commercial development shown on the Future Land Use Map (the LGC §213 map) might receive a 70% percent value for the first score (i.e. "there is a 70% chance that this area will develop"). Because this particular area is large and would be subject to development phasing and market absorption beyond the 10-year horizon, it might be expected that only 60% of the area would develop before 2024. Thus together, for this example area, a composite weighting of 42% is calculated (p1 and 2 = p1 x p2; 0.7 x 0.6 = 0.42 = 42%).

Third, the service area corresponding to each utility is determined and overlaid to the map. This final adjustment to the Future Land Use Map creates the Land Use Assumptions (LUA), and is discussed again in different detail in the engineering descriptions of the CIP.

Taken all together, the LUA anticipate and reflect the most likely development pattern (i.e. the arrangement of various land uses across the city) and intensity (a means of anticipating future demand); moreover, these LUA are also consistent with the broader policies outlined in the Pleasanton 2025 Plan. The Future Land Use Assumptions are provided here as Appendix A.

# 2 CAPITAL IMPROVEMENTS PLAN

## 2.1 Introduction

The Pleasanton 2025 Plan serves as a basis for the development of a systemwide capital improvements plan (CIP) which covers water, wastewater, (and roadway improvements) across the city. This list of projects will serve existing and new development in the City during the Comprehensive Plan planning horizon.

However, in the consideration of impact fees, CIP projects for which an impact fee is assessed cannot be used to pay for improvements to the existing system. In other words, impact fees can only cover expenses related to improvements that are necessary to meet the demands attributable to growth. With this in mind, the following sections describe the water and sanitary sewer systems and capital improvements recommended to meet the demands of new growth, and consequently for inclusion in the impact fee program.

Several of the projects listed in Appendix D of the Pleasanton 2025 Plan provide service to new developing areas, and these are included in the impact fee capital improvements plan. Those which improve service to existing customers are not included in the impact fee CIP. The following Table 1 describes what is included and what is not.

Table 1. What projects can be included in an impact fee calculation.

| Case | Included in Impact Fee CIP |
|---|---|
| Project serves new development only | Yes. |
| Project improves existing system deficiencies | No. |
| Project serves new development and corrects existing system deficiencies | No. Detailed engineering modeling is necessary to be able to incorporate these projects, which is recommended for an impact fee update. |

The development of a successful Capital Improvements Program involves identifying the needs of the community and preparing a short-term and long-term funding strategy to meet those needs in order to achieve the most cost-effective master plan. Population growth and aging infrastructure are the primary factors that create the need for public investment in facilities.

A CIP is an effective planning tool to use with allocating funds and provides a framework to define the required timing of each project. A CIP addresses necessary improvements to the existing system in order to meet established performance criteria and defines improvements required during 2012 through 2022 to accommodate future growth. As a result, the City can utilize the CIP as a roadmap in order to take advantage of alternative financing opportunities, including federal and state funding.

An impact fee may be imposed only on new service connections to pay certain eligible costs, which include construction contract prices, related surveying and engineering fees, projected interest charges and other finance costs used for payment of principal and interest, and the cost of preparing the impact fee study. Any capital improvement plan costs not covered by the impact fee would be recovered through monthly utility rates.

## 2.2 Defining Capital Projects

A 'capital project' is defined as a project with a minimum total cost of $50,000 resulting in the (1) creation of a new fixed asset; or (2) enhancement to an existing fixed asset with a life expectancy of at least 20 years. The CIP is designed to identify necessary infrastructure improvements, such as collection and transmission mains, water supply projects, water/wastewater facilities, to address existing system deficiencies. Projects considered 'operational, recurring or maintenance' in nature, as well as vehicle replacements costing less than $35,000, are not considered as CIP projects; these types of projects should be funded through the City's operating budget.

The CIP is not to be confused with the Capital Improvement Budget. This budget is prepared each year in conjunction with the Annual Operating Budget and includes only those projects identified in the first year of the CIP for funding and implementation.

## 2.3 Developing a Capital Improvements Plan

The CIP should be updated on an annual basis and serve as a guide for the City to manage the continually changing needs of the community.

The scheduling of the improvements noted in the CIP for the ten year planning period (2012-2022) is based on the following factors:

- Address existing system deficiencies;
- Address TCEQ regulatory requirements; and,
- Support new population growth.

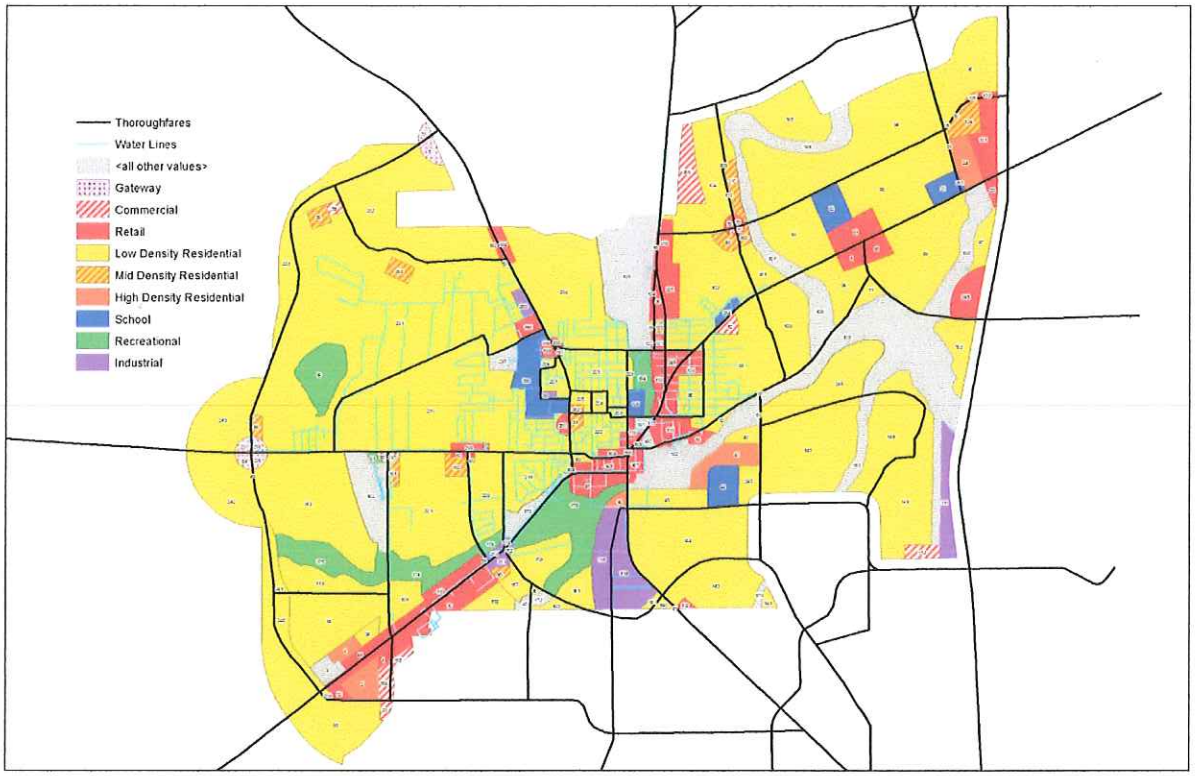
Several of the proposed infrastructure improvements identified in the CIP include a combination of the factors listed above. Where applicable, a determination was made to identify the percentage of the project costs for the proposed improvement allocated towards supporting new population growth and addressing system deficiencies/regulatory requirements. The costs associated with serving new growth will be used in the development of impact fees for the City.

Planning level capital costs were developed based on several sources, including information from the CEC – City of Pleasanton 2008 Water/Wastewater Master Plan and the Means Facilities Construction Cost Data. The project cost estimates include an allowance of 20 percent for construction contingency; 17 percent for engineering/surveying/geotechnical and management fees. Financing cost estimates were based on a 4.5 percent interest rate per year.

## 2.4 Water Service Area Description

The service area for water is the area which is within the City of Pleasanton's corporate limits and extraterritorial jurisdiction and within the area currently not included in other water providers' Certificates of Convenience and Necessity (CCN). The following figure depicts this area and the

assumed land uses. An index to the individual areas and the corresponding probability weightings is found in Appendix A.




Existing Water System Map and Land Use Assumptions.

## 2.5 Existing Water System

There are currently five active groundwater wells that supply the City of Pleasanton. The water system operators specify which well or combinations of wells are operating at any given time. The City's water treatment facilities at each Carrizo well site are equipped with a coagulation filtration system for iron and manganese treatment. There are approximately 4,300 water service connections in the City's service area.

### 2.5.1 Source

Five groundwater wells currently supply the City of Pleasanton; information regarding the capacity of each well, associated aquifer formation, and total well depth is provided below:

- Woodland (425 GPM; Queen City Aquifer; 750 feet deep)
- Goodwin (1520 GPM; Carrizo Aquifer; 1751 feet deep)
- Main Yard (1500 GPM; Carrizo Aquifer; 1710 feet deep)
- Halpin (1550 GPM; Carrizo Aquifer; 1584 feet deep)
- North Town (520 GPM; Queen City Aquifer; 790 feet deep)

In the South Central Texas Region, the primary water source for the City of Pleasanton is the Carrizo Aquifer (major aquifer) and the Queen City Aquifer (minor aquifer). The Carrizo Aquifer is predominantly composed of sand, as well as gravel, silt, clay and lignite. The thickness of the water bearing portion of the aquifer ranges from 200 feet in Dimmit County to more than 1,500 feet in the downdip artesian strata in Atascosa County; water from the Carrizo Aquifer is fresh to slightly saline. In the outcrop of the formation, the water is hard yet usually low in dissolved solids; however, the water is softer, has a higher temperature and contains more dissolved solids in the downdip strata. The water quality that a few adjacent counties have pumped from the aquifer contains high concentrations of iron and manganese, similar to the City of Pleasanton (located in the downdip strata). In addition, some sampled wells were found to contain high concentrations of dissolved solids, chloride and/or sulfate. Localized contamination of the aquifer has been attributed to direct infiltration of oil field brines on the surface and to downward leakage of saline water from the overlying Bigford Formation.

The Queen City Aquifer extends across Texas and underlies six counties, including Atascosa County in the South Central Texas Region. The formation of the aquifer is comprised of sand, loosely cemented sandstone and clay. The total aquifer thickness is usually less than 500 feet; however in the outcrop area, the water is under artesian conditions in the downdip subsurface. The yield of individual wells is typically low, but a few wells exceed yields of 400 GPM.

### 2.5.2 Supply

One important observation during the evaluation of the City's existing water system addresses the relative amount of groundwater, treatment, storage, and distribution capacity available, relative to the current water demands. The average day demand and peak day demand in 2012 was XXX MGD and XX MGD, respectively; the total groundwater well production capacity is approximately 8.0 MGD (assuming all wells are available). Peak day and peak hour demands, especially during the summer months, increase the need for additional treated water supplies.

As the City continues to develop, the City should plan to drill more production wells to support the increased population demands, as well as provide system redundancy; however, the City will need to factor in the regulations and permitted withdrawal limits established by the Evergreen Underground Water Conservation District (EUWCD) on pumping groundwater. The EUWCD was created in 1965 in accordance with Section 59, Article 16 of the Constitution of the State of Texas, and encompasses all of Atascosa, Frio, Wilson and Karnes Counties. The purpose of the EUWCD is to manage well production and groundwater supplies in their jurisdictional area.

The EUWCD guidelines state that each well, unless exempted, has a production limit of up to two acre-feet (652,000 gallons) of water per acre of water rights per calendar year; however, the allowance cannot exceed 75 percent of the annual production capability of the well based on the acres of groundwater rights owned or leased by the applicant at the time the permit application is filed. Entities that use groundwater for municipal supply to the public may claim acreage within their CCN or service area if:

The well is located or to be located within their CCN or service area;

The well satisfies EUWCD spacing requirements (wells cannot be drilled within 100 feet of any property line; new wells must be spaced a minimum of one foot for each gallon per minute of production capability from existing wells producing from the same aquifer); and,

There are no other wells located within the 'claimed acreage' and none of the water rights within the claimed area is leased to another permittee, or the total annual production of all wells within the CCN or service area plus all the leased water rights within the claimed acreage do not exceed the maximum production limitation.

As a result, the City will need to submit a permit application to the EUWCD for the drilling of any new municipal water wells; the application fee for each well is $25.00 for a five year period. Also, the City may need to account for the cost associated with leasing and/or purchasing property in order to obtain the necessary water rights based on the design capacity of the new well. For example, a new well with a design capacity of 1,500 GPM would require approximately 900 acres of leased and/or purchased property for necessary water rights according to the EUWCD guidelines.

### 2.5.3 Treatment

Treatment at the three Carrizo wells (located at Goodwin, Halpin and Main Yard) consists of coagulation filtration systems for iron and manganese removal and disinfection using chlorine gas. Chlorine cylinders (150 lbs) are delivered to each of the well sites, stored, and supply each well site through the use of a chlorinator. The chlorinator feed system is generally operated automatically, and chlorine residual is monitored using an in-line chlorine residual analyzer. The chlorinator feed system varies the chlorine dose based on the measured residual and operator-entered residual setpoint.

The major components of the coagulation filtration system include pressure filter vessels, sludge mates for residuals thickening, and chemical storage and feed systems. The spent filter backwash water from this filtration process is disposed of through the sanitary sewer. The iron and manganese residuals are then thickened in a sludge mate system and then hauled to a landfill for disposal.

### 2.5.4 Storage and Distribution

Based on the information presented in the CEC 2008 Water and Wastewater Master Plan, the City has a total ground storage capacity of 1.9 MG, excluding the Industrial tank (used only for fire protection supply). The total elevated storage capacity is 600,000 gallons if the elevated tanks are operated at full capacity. A summary of the storage tanks located at each of the well sites is provided below in Table 2:

Table 2 Summary of Storage Tank Capacities

| Well Site | Ground Storage Capacity (Gallons) | Year Built | Elevated Storage Capacity (Gallons) | Year Built |
|---|---|---|---|---|
| Woodland | 300,000 | 2008 | N/A | |
| Goodwin | 200,000 | | 250,000 | 1975 |
| Main Yard | 500,000 | 1990 | 250,000 | 1990 |
| Halpin | 500,000 | | 100,000 | 1975 |
| North Town | 400,000 | 2000 | N/A | |
| Industrial Park | 300,000 | | N/A | |

In order to verify the hydraulics of the overall water system, our team recommends that the City use WaterCAD to model the latest and projected water demands, as well as verify the hydraulic pressure planes in the system. Construction of additional ground storage and elevated storage tanks has been identified based on the drilling of new water wells to support population growth and water demands. Based on TCEQ regulations, the following system capacity requirements need to be accounted for:

Production Well Capacity (GPM): 0.6 x No. of Water Connections

Total Ground, Elevated and Hydro Tank Storage (Gallons): 200 X No. of Water Connections

Elevated Storage (Gallons): 100 X No. of Water Connections

Pump Capacity (GPM): (Maximum Day Demand)/1440*1.25

The distribution system is comprised of pipeline sizes ranging from 2 to 12 inch in diameter. The City has reported that approximately 25% of the system contains small diameter pipe (2-in, 3-in, 4-in) and has experienced low water pressures in the northern and western quadrants of their service area based on City staff feedback. System pressures in the northwest quadrant of the City drop below 25 psi; TCEQ recommends a minimum pressure of 35 psi. In addition, the National Fire Protection Agency (NFPA) recommends using a pipe diameter of 6-inches or greater in order to provide fire protection.

Each should also be equipped with an emergency power generator to maintain water production capacity in case of utility grid power outages.

### 2.5.5 Pump Stations

Pump stations are located at each of the well sites with the exception of Industrial Park. Each pump station is comprised to two or three pumps of various sizes. Based on feedback from City staff, the

pumps at both Woodland and Halpin operate almost continuously throughout the day and have experienced motor outages due to constant use.

In addition to transporting water through the system, pump applications include chemical feed systems, sludge removal, air compression, and sampling. For a given application, there could be several viable pumping options. However, there are typically usually only one or two types of pumps that are the best fit for the intended use.

## 2.6 Existing Water System Capital Improvement Projects

Based on feedback received from City staff, eleven CIP projects have been identified and documented on initial data summary sheets in Appendix D of the Pleasanton 2025 Plan. A few of these projects include drilling new groundwater wells (gravel packed design recommended to filter out fine sands).

- Continue to upgrade existing, small diameter waterlines (2-in., 3-in., 4-in.) to larger diameter pipes (6-inch or 8-inch) in order to maintain adequate water pressures in the system during peak demand and fire flow conditions. TCEQ requires that waterline pressure be maintained above 35 psi during peak daily demands and above 20 psi during fire flow conditions.
- Install larger pumps (3-30 HP) at the Woodland Pump Station. (CEC 2008 Water & Wastewater Master Plan)
- Install new water distribution pump station at Deer Run; project includes a 250,000 gallon elevated storage tank, new 200,000 gallon ground storage tank and new well with production capacity of 1500 GPM. (CEC 2008 Water & Wastewater Master Plan)
- Install variable speed pumps at locations where the pump stations pump directly into the existing system (i.e. Halpin and Woodland Pump Stations) in order to reduce operation costs. (CEC 2008 Water & Wastewater Master Plan)
- Provide back-up electrical generators at all pump stations to have the ability to supply adequate pressures in the distribution system in case of utility grid power outages.

## 2.7 Impact Fee Eligible Water CIP Projects

Specifically, Capital Improvement Projects which will serve new development and are eligible for impact fee funding are as follows in Table 3 and represent the estimated probable cost of the 10-year CIP developed in this study. These estimated costs will only serve new development, and each CIP project will require a detailed engineering design to confirm the pipeline diameter, pump capacity and tank volume. The Project IDs correspond to the project descriptions of the Pleasanton 2025 Capital Improvements Plan (these listed below being the impact fee eligible projects). The project locations and cost estimates are provided in Appendix B.

Table 3. Water System Project List.

| Project ID | Project Name | Project Cost |
|---|---|---|
| W2B | SH 97 Corridor East - New Elevated Storage Tank | $3,973,000 |
| W2C-revised* | SH 97 Corridor East - 16" pipeline extension | $3,774,348 |
| W3 | 281N Corridor - One New Well and Ground Storage Tank | $1,849,500 |
| W4A | Industrial Park/281 S Well and Ground Storage Tank | $1,849,500 |
| W4B | Industrial Park/281 S - 1.0 MG Elevated Storage Tank | $3,973,000 |
| W5 | 12" Pipeline - FM 476 North Extension | $279,549 |

* Cost estimate prepared by Klein Engineering

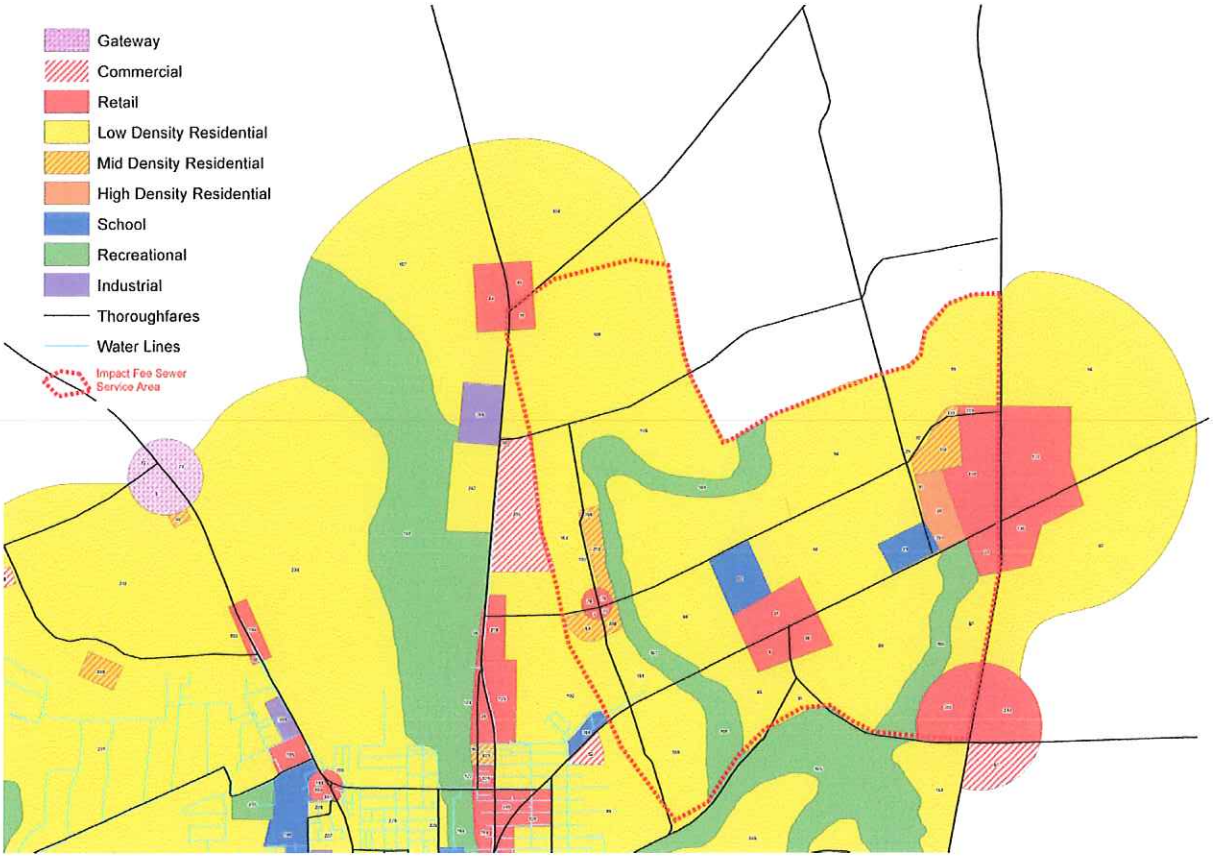
## 2.8 Sewer Service Area Description

The service area for sanitary sewer is the area within the City of Pleasanton's corporate limits, extraterritorial jurisdiction and also within the area currently not included in other water providers' Certificates of Convenience and Necessity (CCN), and those within an area that flows by gravity to a point on the Atascosa River downstream of the confluence with Galvan Creek. Any new growth projects which may lie outside of this physical area, yet utilize the capacity of the listed CIP projects by way mechanical methods (pumps), are considered to be part of the service area for the purpose of this impact fee study and §395.001(9).

## 2.9 Existing Wastewater System Map and Land Use Assumptions

Systemwide land use assumptions have been developed, however the service area for wastewater projects to meet new demand only considers the SH 97 East corridor, which includes a large portion of the Galvan Creek and Pederson Creek tributary sewersheds. There are currently no existing sewer facilities in this area.

The following figure depicts this area and the assumed land uses. An index to the individual areas and the corresponding probability weightings is found in Appendix A.




Proposed Wastewater Service Area Map and Land Use Assumptions.

## 2.10 Existing Wastewater System

Planning for infrastructure improvements for wastewater collection and treatment facilities is important in order to address issues associated with aging infrastructure, service area growth due to new planned developments, and potential water quality degradation from failing collection lines and septic systems.

### 2.10.1 Treatment Plant

The City's existing wastewater treatment plant was originally constructed in the 1950s and has undergone numerous plant modifications. The current treatment plant design consists of a lift station, bar screen, parallel primary treatment system with an oxidation ditch and carousel basin, three clarifiers, ultraviolet disinfection system, sludge drying beds and discharge facilities.

The City is currently proceeding through the permit renewal process with TCEQ since their wastewater discharge permit expired on May 1, 2009. The effluent limits that are likely to be proposed for the plant's discharge permit will be a 5.0-5.0-1.3-1.0 treatment level, which corresponds to effluent limits of five milligrams per liter (mg/L) of carbonaceous biochemical oxygen demand (CBOD5); 5 mg/L of total suspended solids (TSS); 1.3 mg/L of ammonia nitrogen (NH3-N); and 1.0 mg/L of total phosphorus (TP); the City is limited to a maximum daily flow of 1.42 MGD and a maximum 2-hour peak flow of 2,958 GPM. Based on staff feedback, the City is currently using approximately 66 percent of the treatment plant design capacity.

Although the City's wastewater permit has included ammonia nitrogen on the list of permitted discharge parameters in the past, discharge limitations of total phosphorus are currently being proposed by TCEQ for inclusion in the City's permit renewal. Based on draft nutrient guidelines developed by TCEQ, the existing and any new wastewater treatment plants will have a total phosphorus (TP) effluent limit of either 0.5 mg/L or 1.0 mg/L, depending on the size of the treatment facility. Typical effluent limits for total phosphorus (TP), as a daily average concentration, generally fall into the following ranges:

- Permitted flow < 0.5 MGD: TP = 1.0 mg/L
- Permitted flow ranging between 0.5 – 3.0 MGD: TP ranges between 0.5 – 1.0 mg/L
- Permitted flow > 3.0 MGD: TP = 0.5 mg/L

TCEQ has proposed a screening model for TP to be used to assess the impact of wastewater on the main pool of large reservoirs, rivers and creeks. According to the draft nutrient guidelines from TCEQ, existing plants will likely have total phosphorus limits included in their new discharge permits. As a result, the City will need to modify the treatment process at their existing wastewater treatment plant in order to satisfy stringent discharge limitations for total phosphorus.

Treatment plants with capacities less than 1.0 MGD and with total phosphorus effluent limits of less than 2.0 mg/L would include the following processes: preliminary screening, activated sludge with nitrification, chemical addition to precipitate phosphorus, tertiary filters, disinfection using chlorine, de-chlorination, a sludge holding basin, and sludge drying beds. These plants would be capable of meeting the following effluent limit combinations: 5-5-1.9-1.0, 5-5-1.5-1.0 and 5-5-1.0-0.5. To obtain the lower effluent limits for CBOD and ammonia nitrogen, longer sludge retention times (SRTs) would be incorporated in the design, thus increasing the cost of aeration basins. The tertiary filters would ensure that the TSS limit of 5 mg/L would not be exceeded and the filters would also assist in the removal of CBOD and phosphorus that might be associated with any carry-over flocculant from the clarifier. For phosphorus removal, chemical addition is assumed for small plants since biological nutrient removal (BNR) systems are more difficult to operate and smaller plants typically do not have the personnel to attend to these plants.

Treatment plants with capacities equal to or greater than 1.0 MGD and with total phosphorus effluent limits of less than 2.0 mg/L would include the following processes: preliminary screening, grit removal,

activated sludge with BNR, tertiary filters, disinfection using chlorine, de-chlorination, aerobic digesters and a belt press for sludge dewatering. Estimated costs also include a back-up chemical addition system for phosphorus precipitation when the BNR system fails to reach the required effluent limit.

The assumptions related to phosphorus removal are based on total phosphorus levels of about 7 to 9 mg/L in the influent wastewater, removal rates of about 2 mg/L for conventional activated sludge, and removals down to about 1 mg/L for the BNR process. As noted above, chemical addition can be used in lieu of BNR in small plants and should be incorporated into the design as a backup to BNR when the total phosphorus effluent limit is greater than 1.0 mg/L. For limits below 1.0 mg/L, chemical addition is recommended in addition to BNR due to the problem of consistently removing total phosphorus to levels of 1.0 mg/L and lower.

### 2.10.2 Collection System

The collection system lines, ranging in size from 6-inch to 30-inches in diameter, are primarily comprised of vitrified clay and concrete pipe material; these pipelines have been in service for over 30 years. Staff has verified that sections of the pipe material in various parts of the collection system have deteriorated and require necessary rehabilitation and/or replacement. The City purchased video inspection equipment (i.e. closed circuit robotically controlled television camera) a few years ago in order to televise and record the interior condition of the collection lines.

Based on the CEC 2008 Water & Wastewater Master Plan, the collection system was divided into three sewersheds (East, Regional and Atascosa Sewershed) in order to evaluate the capacity of each. The results of the evaluation showed that the City's collection system has experienced considerable infiltration and inflow (I&I) conditions, especially during heavy rain events. In addition, the City previously reported a number of sanitary sewer overflows to TCEQ due to the size (pipeline diameter), condition of the collection system, I/I, grease and sand. As a result, the City voluntarily participated in TCEQ's Sanitary Sewer Overflow (SSO) Initiative Program in 2009; a number of problematic areas of the system were highlighted in the City's SSO Plan.

Projects identified in the City's SSO Plan that still require a video inspection and upgrade include the collection lines located on Oakhaven and Oaklawn Roads. The City has already completed or is scheduled to complete the following collection system projects by next year:

- Airport Road
- Atascosa River Project (Phase 2)
- Atascosa River Project (Phase 3)
- East Side
- Sanchez Street
- Sutton Street

### 2.10.3 Lift Stations

The City's wastewater currently includes five lift stations (Dowdy, Goodwin East, Industrial Park, Goodwin West and FM 476). Based on the evaluation of these lift stations provided in the CEC 2008 Water & Wastewater Master Plan, the City is in the process of decommissioning both the Goodwin West and FM 476 Lift Stations and extending the gravity collection system to these two lift stations. The City also plans to install backup generators at the other three remaining lift stations.

The Dowdy Lift Station is located north of the intersection of First Street and US Highway 281; this lift station serves approximately 12 houses situated on large size lots within a small sewershed northeast of US Highway 281. This lift station has not been experiencing any maintenance issues recently. The Industrial Park Lift Station is located on the south side of Pleasanton near the intersection of Industrial Boulevard and US Highway 281; this lift station serves the commercial tenants within the Industrial Park. The Goodwin East Lift Station is located near the intersection of Oakhaven Road and Old Pearsall Road; this lift station will have sufficient capacity and cycle time to remain in operation after the Goodwin West Lift Station is decommissioned.

## 2.11 Existing System Wastewater CIP Projects

Although a number of projects identified in the CEC 2008 Water & Wastewater Master Plan have been completed, including the sanitary sewer improvements on Sutton Street, Sanchez Street and East Side, here's an additional list of CIP projects identified by staff:

Conduct a systematic evaluation of the collection system using the video inspection equipment purchased by the City to televise and record the interior condition of the collection lines. The evaluation should focus on problematic areas of the system, as well as areas highlighted in the City's 2009 Sanitary Sewer Overflow (SSO) Plan. The City should also conduct a smoke test to detect the source of infiltration and inflow (I/I) conditions.

Continue to replace vitrified clay and outdated concrete pipelines in the collection system by using either the pipe bursting technology or inserting new liners to address deteriorating pipeline materials, as well as infiltration and inflow (I/I) conditions. Projects identified in the CEC 2008 Water & Wastewater Master Plan that still require a video inspection and upgrade include the collection lines located on Oakhaven and Oaklawn Roads.

By addressing the I/I conditions, the expansion of existing wastewater facilities to convey and treat larger volumes of flow can be postponed; also recommend 're-rating' the City's treatment plant capacity in their TCEQ discharge permit following the completion of the I/I program. TCEQ requires the City to initiate planning for a treatment plant expansion when the average annual flow reaches 75 percent of the treatment plant's permitted capacity; construction activities must be initiated when the plant reaches 90 percent of its permitted capacity.

Complete the Atascosa River Project (Phase 2) identified in the CEC 2008 Water & Wastewater Master Plan in order to complete the extension of the collection line and to decommission the FM 476 Lift Station; this lift station has been problematic due to limited system capacity and equipment failures.

Evaluate the possibility of constructing a new Wastewater Treatment Plant (multi-phased project; 0.4 MGD initial phase), lift station and collection lines to serve new developments located along the SH-97 east corridor, as well as areas located downstream of the existing wastewater treatment plant; the proposed new plant would discharge into Galvan Creek. The boundary of this new treatment plant would be limited to the area west of Interstate 37, the edge of the City of McCoy's Wastewater CCN.

Address treatment modifications of the City's existing wastewater treatment plant in order to satisfy stringent discharge limitations for total phosphorus. The City is currently proceeding through the permit renewal process with TCEQ. The effluent limits that are likely to be proposed for the plant's discharge permit will be a 5.0-5.0-1.3-1.0 treatment level, which corresponds to effluent limits of five milligrams per liter (mg/L) of carbonaceous biochemical oxygen demand (CBOD5); 5 mg/L of total suspended solids (TSS); 1.3 mg/L of ammonia nitrogen (NH3-N); and 1.0 mg/L of total phosphorus (TP).

After addressing the I/I issues with the collection system, initiate planning activities to determine the implementation schedule and amount of capacity needed for expanding the existing wastewater treatment plant.

## 2.12 Impact Fee Eligible Wastewater CIP Projects

Specifically, Capital Improvement Projects which will serve new development and are eligible for impact fee funding are as follows in Table 4 and represent the estimated probable cost of the 10-year CIP developed in this study. These estimated costs will only serve new development, and each CIP project will require a detailed engineering design to confirm the diameter of the proposed force mains. The Project IDs correspond to the project descriptions of the Pleasanton 2025 Capital Improvements Plan (these listed below being the impact fee eligible projects). The project locations and cost estimates are provided in Appendix C.

Table 4. Sewer System Project List.

| | | |
|---|---|---|
| WW1-revised* | 97 East Sanitary Sewer Extension & Force Main | $3,564,073 |
| WW2A | First Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006 | $628,830 |
| WW2B | Second Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006 | $489,090 |

* Cost estimate prepared by Klein Engineering

# 3 Derivation of the Impact Fee

## 3.1 Impact Fee Overview

The process for deriving, or calculating the impact fee is set out specifically in the Texas Local Government Code - Chapter 395 (LGC §395). The terms are specifically defined in this statutory context, and the process requires demonstration of the calculation of the impact fee. The following sections describe what cost items are included, how they are projected across the statutory timeline, and how the initial impact fee is calculated. For quick reference, Appendix F provides a glossary of terms and their use in the impact fee calculation context.

According to the impact fee law outlined in LGC §395, there are two methods in which impact fees can be collected: (1) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or (2) a credit equal to 50 percent of the total projected cost of implementing the capital improvement plan. The intent of this provision of the statute is to account for the fact that over time, the constructed improvements begin to serve existing development, as that development moves in and "comes on-line". The latter of these two alternatives (the 50% credit) was used for calculating the maximum water and wastewater impact fees for the City of Pleasanton.

## 3.2 Projected New 'Service Units'

The LGC §395 requires that the capital improvement plan include "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." The statue also requires "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 residential, commercial and industrial."

The term 'service units' is defined as "a standardized measure of consumption, use, generation, or discharge 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." The purpose of this requirement is to establish a relative measure of water consumption and wastewater discharge for the various land uses identified for the service area within the next 10 years.

Facility design parameters typically used for determining the rate of water consumption or wastewater discharge per residential living unit equivalent (LUE) are 500 gallons per day (gpd) for water and 300 gpd for wastewater. Due to the progressive water conservation efforts in the San Antonio area, the design parameters used in this study for water consumption and wastewater discharge per residential LUE

were 315 gpd and 240 gpd, respectively, based on design criteria used by Klein Engineering for other entities in the area. The consumption rate was also reviewed for comparison to 2012 water utility billing data. Conversion of the City's population projections to LUEs was based on the TCEQ design criteria of 2.5 people per connection or LUE, and was verified against the land use assumptions in accordance with Table 6 below. The timing of the projection was assumed to be uniform (linear) across the statutory 10 year planning horizon.

## 3.3 Impact Fee Calculation

An impact fee may be imposed only on new service unit connections to pay certain eligible costs, which include construction contract prices, related surveying and engineering fees, projected interest charges and other finance costs used for payment of principal and interest, and the cost of preparing the impact fee study. Any capital improvement plan costs not covered by the impact fee would be recovered through monthly utility rates.

The calculation of the impact fees was based on dividing the total allowable capital costs attributed to future growth between 2014 and 2023 by the number of new LUEs projected to connect to the water and wastewater systems during this time period. The percentage of utilized capacity of water and wastewater infrastructure during this ten year period was based on the revised cost estimates prepared by the City's engineering consultant, Klein Engineering for W2C and WW1 (reference Tables D-1 and E-1 in the Appendix); an assumption was made that the percentage of utilized capacity also applied to the other water and wastewater CIP projects on the list and was verified through the calculation of the number of LUEs associated with the land use plan. Based on the design parameters used in this study for water consumption and wastewater discharge per residential LUE, 39 percent of allowable capital costs for water infrastructure and 46 percent of allowable capital costs for wastewater infrastructure identified in the CIP list would be attributed to future growth between 2014 and 2023 (reference Tables D-1 and E-1 in the Appendix).

The typical meter size used for a single-family LUE is either a 5/8-inch or ¾-inch water meter, and therefore is considered to be equivalent to one LUE. The project costs attributable over the ten year impact fee period, as listed in the capital improvements plan in the City of Pleasanton 2013 Water and Wastewater Master Plan, were adjusted based on interest rates offered through the TWDB Drinking Water and Clean Water State Revolving Fund Programs to calculate the yearly principal plus interest balance remaining after impact fees for new connections were collected. A trial and error approach was utilized to determine the maximum impact fee for the ten year impact fee period.

The maximum allowable impact fee per LUE that has been calculated for water service represents the impact fee for a standard single-family LUE. Impact fees for other types of connections, such as commercial, multi-family, etc. would be assessed on the basis of the size of the meter required for the customer's water service and the number of LUEs associated with that meter size as shown in Table 5 below.

Table 5: LUE Equivalencies for Various Types and Sizes of Water Meters*

| Meter Type | Meter Size | Maximum Continuous Operating Capacity (gpm) | LUE/Service Unit Equivalent |
|---|---|---|---|
| Positive Displacement | 5/8", 3/4" | 15 | 1.0 |
| Positive Displacement | 1" | 25 | 1.67 |
| Positive Displacement | 1 ½" | 50 | 3.33 |
| Positive Displacement | 2" | 80 | 5.33 |
| Compound | 2" | 80 | 5.33 |
| Turbine | 2" | 100 | 6.67 |
| Compound | 3" | 160 | 10.67 |
| Turbine | 3" | 240 | 16.00 |
| Turbine | 4" | 420 | 28.00 |
| Compound | 6" | 500 | 33.33 |
| Turbine | 6" | 920 | 61.33 |
| Compound | 8" | 800 | 53.33 |
| Turbine | 8" | 1,600 | 106.67 |
| Turbine | 10" | 2,500 | 166.67 |

* Source: AWWA Standards C700, C701, C702, C703

For each potential connection, the developer would be required to determine the instantaneous peak flow rate in order to select the required meter size for that connection. As a result, the impact fee will be the equivalent single family LUE rate multiplied by the LUE/Service Unit Equivalent (shown above in Table 5) as determined by the meter size required at the time of issuance of the building permit. The equivalent LUEs calculated for water service would be used for wastewater service as well.

To convert land use assumptions to LUEs, the following assumptions were made, based on commonly-utilized equivalencies (for example, the City of Austin Utility Criteria Manual, and the Engineering Design Guidelines of the City of Pflugerville, Texas).

Table 6: Land Use Equivalency Table

| Land Use Classification (See Appendix A) | LUE Conversion |
|---|---|
| Single-Family | 1 Dwelling Unit = 1 LUE |
| Rural Residential | 1 Dwelling Unit = 1 LUE |
| Multi-family | 1 BR = 0.7 LUE; 2 BR+ = 1 LUE |
| Commercial/Retail | 1 LUE/1,660 sf floor area |
| Commercial/Industrial | 1 LUE/2,830 sf floor area |
| Industrial | 1 LUE/4,000 sf floor area |
| School | 2.5 LUE/acre |

## 3.4 Maximum Impact Fee and Comparison to Other Entities

The maximum allowable impact fees calculated for water and wastewater service in the City of Pleasanton is $3,220 per LUE and $1,149 per LUE, respectively, resulting with a combined water/wastewater impact fee of $4,369 per LUE. Support documentation for the calculation of the water and wastewater impact fees is provided in Appendix D and E.

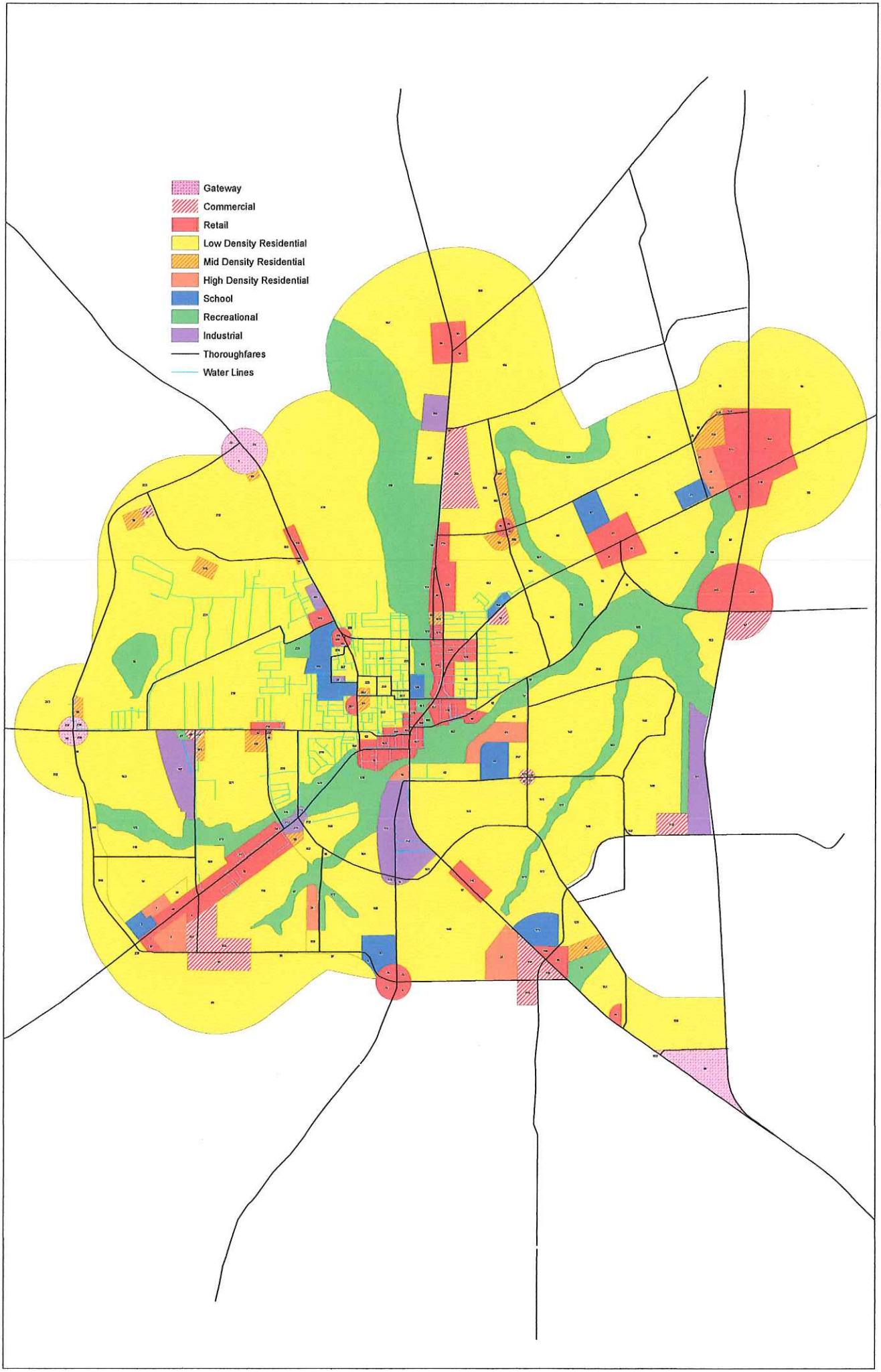
The City has final authority to set the water and wastewater impact fees at an amount not to exceed the maximum fee as calculated in the study. In determining the impact fee amount for the City of Pleasanton to adopt, the following list of entities in Texas along with their population and associated water/wastewater impact fees per LUE are provided in Table 7 for comparison purposes:

Table 7: Impact Fee Comparison of Entities

| Entity | Population (Yr) | Water Impact Fee | Wastewater Impact Fee |
|---|---|---|---|
| City of Burnet | 5,987 (2010) | $1,084.50 | $1,173.00 |
| City of Buda | 7,343 (2010) | $2,187 | $2,531 |
| City of Kyle | 30,875 (2012) | $2,115 | $2,216 |
| City of Liberty Hill | ~5,000 (2000) | N/A | $3,100 |
| City of La Vernia | 1,034 (2010) | $1143.03 | $1534.58 (W); $284.77 (S) |
| City of Lytle | 2,492 (2010) | $900 | $750 |
| City of Jourdanton | 3,871 (2010) | N/A | N/A |
| SAWS | >460,000 (w); >411,000 (ww) | $3,123 - $3,510 | $1,104 - $2,347 |
| City of Seguin | 26,272 (2012) | $613 + $1,262 (SSLGC) | $2,374 |

The 2010 U.S. Census population for the City of Pleasanton was 8,934 people. Based on this population figure, Pleasanton's proximity to San Antonio and location near the growth corridor of IH-37 and SH-97, both the Cities of Buda and Burnet are good comparisons for water and wastewater impact fees charged in those respective cities. The Cities of Buda and Burnet are both located outside of a large and growing major Texas city and are experiencing similar growth as the City of Pleasanton. The City of Buda charges a combined water/wastewater impact fee of $4,718 per LUE for new developments, and the City of Burnet charges a combined water/wastewater impact fee of $2,257.50 per LUE.

# Appendix A: Land Use Assumptions Map and Probability Weighting Analysis


Gateway
Commercial
Retail
Low Density Residential
Mid Density Residential
High Density Residential
School
Recreational
Industrial
Thoroughfares
Water Lines

Appendix A: Land Use Assumptions

| Column | Heading | Description |
|---|---|---|
| A | **Object_ID** | Unique identifier for individual area on map. |
| B | **LU_Type** | Land Use Type |
| C | **Area_AC** | Area in acres |
| D | **10yr_PROB** | Probability that the area will develop within 10 years. |
| E | **PROB_FULL** | Probability that the area will develop to buildout potential |
| F | **WEIGHT** | Resulting probability of development for planning purposes. |

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| **Object_ID** | **LU_Type** | **Area_AC** | **10yr_PROB** | **PROB_FULL** | **WEIGHT** |
| 1 | rtl | 30.8 | 1.00 | 1.00 | 1 |
| 2 | hi-res | 48.3 | 0.50 | 0.40 | 0.2 |
| 3 | hospital | 26.7 | 1.00 | 1.00 | 1 |
| 4 | hi-res | 19.7 | 0.50 | 0.40 | 0.2 |
| 5 | gtwy | 39.0 | 0.00 | 0.00 | 0 |
| 7 | rtl | 3.1 | 0.70 | 1.00 | 0.7 |
| 8 | rtl | 23.9 | 1.00 | 1.00 | 1 |
| 11 | low-res | 20.5 | 0.60 | 0.50 | 0.3 |
| 12 | low-res | 11.9 | 0.50 | 0.10 | 0.05 |
| 14 | low-res | 221.0 | 0.60 | 0.30 | 0.18 |
| 16 | hi-res | 13.1 | 1.00 | 0.90 | 0.9 |
| 17 | rtl | 10.3 | 0.70 | 0.50 | 0.35 |
| 18 | rtl | 15.0 | 1.00 | 1.00 | 1 |
| 19 | mid-res | 2.9 | 1.00 | 0.20 | 0.2 |
| 20 | rtl | 16.4 | 1.00 | 1.00 | 1 |
| 21 | sch | 32.0 | 0.70 | 0.30 | 0.21 |
| 23 | rtl | 27.2 | 1.00 | 0.40 | 0.4 |
| 24 | hi-res | 48.0 | 1.00 | 0.50 | 0.5 |
| 25 | mid-res | 0.2 | 1.00 | 0.60 | 0.6 |
| 32 | rtl | 9.4 | 1.00 | 0.90 | 0.9 |
| 33 | com | 63.6 | 0.60 | 0.40 | 0.24 |
| 34 | low-res | 17.4 | 0.60 | 0.60 | 0.36 |
| 36 | low-res | 3.2 | 0.50 | 0.50 | 0.25 |
| 38 | mid-res | 16.6 | 0.60 | 0.60 | 0.36 |
| 39 | com | 7.5 | 0.60 | 0.60 | 0.36 |
| 40 | low-res | 0.5 | 0.60 | 0.80 | 0.48 |
| 41 | hi-res | 66.9 | 0.50 | 0.50 | 0.25 |
| 42 | low-res | 20.7 | 0.50 | 0.50 | 0.25 |
| 43 | low-res | 69.9 | 1.00 | 0.80 | 0.8 |
| 44 | sch | 58.6 | 0.50 | 0.50 | 0.25 |
| 45 | rtl | 45.7 | 1.00 | 1.00 | 1 |
| 47 | floodplain | 69.4 | 0.00 | 0.00 | 0 |
| 48 | mid-res | 1.7 | 1.00 | 1.00 | 1 |
| 50 | rtl | 1.8 | 0.80 | 0.80 | 0.64 |
| 51 | mid-res | 9.3 | 1.00 | 1.00 | 1 |
| 52 | com | 14.8 | 1.00 | 1.00 | 1 |
| 53 | mid-res | 16.5 | 0.70 | 0.70 | 0.49 |

| | | | | | |
|---|---|---|---|---|---|
| 54 | ind | 1.4 | 1.00 | 0.80 | 0.8 |
| 55 | mid-res | 8.9 | 0.70 | 0.50 | 0.35 |
| 56 | rec | 105.3 | 0.00 | 0.00 | 0 |
| 57 | low-res | 0.0 | 0.00 | 0.00 | 0 |
| 58 | rtl | 4.3 | 1.00 | 0.20 | 0.2 |
| 59 | ind | 5.4 | 1.00 | 1.00 | 1 |
| 60 | com | 4.4 | 0.60 | 1.00 | 0.6 |
| 61 | rec | 5.6 | 0.00 | 0.00 | 0 |
| 62 | rtl | 4.3 | 1.00 | 1.00 | 1 |
| 63 | low-res | 7.0 | 1.00 | 1.00 | 1 |
| 64 | gtwy | 9.9 | 0.60 | 0.80 | 0.48 |
| 65 | low-res | 693.1 | 0.60 | 0.20 | 0.12 |
| 66 | mid-res | 11.5 | 0.60 | 0.50 | 0.3 |
| 69 | rtl | 29.5 | 0.60 | 0.90 | 0.54 |
| 70 | rtl | 113.7 | 1.00 | 1.00 | 1 |
| 71 | rtl | 63.1 | 1.00 | 0.90 | 0.9 |
| 72 | gtwy | 12.0 | 0.50 | 0.50 | 0.25 |
| 77 | rtl | 2.5 | 0.70 | 1.00 | 0.7 |
| 78 | rtl | 5.8 | 0.70 | 1.00 | 0.7 |
| 79 | rtl | 4.5 | 0.70 | 1.00 | 0.7 |
| 80 | rtl | 26.3 | 1.00 | 0.80 | 0.8 |
| 81 | rtl | 58.7 | 0.80 | 0.80 | 0.64 |
| 82 | sch | 53.2 | 0.70 | 0.30 | 0.21 |
| 86 | low-res | 89.6 | 1.00 | 0.50 | 0.5 |
| 87 | low-res | 64.1 | 0.60 | 0.40 | 0.24 |
| 88 | low-res | 150.2 | 1.00 | 0.50 | 0.5 |
| 89 | low-res | 293.0 | 0.70 | 0.30 | 0.21 |
| 90 | low-res | 272.2 | 0.70 | 0.30 | 0.21 |
| 91 | low-res | 4.3 | 0.70 | 0.30 | 0.21 |
| 92 | low-res | 2.0 | 0.70 | 0.50 | 0.35 |
| 94 | low-res | 509.2 | 0.60 | 0.30 | 0.18 |
| 95 | low-res | 230.4 | 0.70 | 0.50 | 0.35 |
| 97 | low-res | 0.1 | 1.00 | 0.70 | 0.7 |
| 98 | low-res | 49.1 | 1.00 | 1.00 | 1 |
| 99 | low-res | 285.5 | 1.00 | 0.70 | 0.7 |
| 100 | low-res | 151.7 | 1.00 | 0.40 | 0.4 |
| 101 | low-res | 48.0 | 1.00 | 0.60 | 0.6 |
| 102 | low-res | 291.8 | 1.00 | 0.80 | 0.8 |
| 103 | low-res | 3.9 | 0.80 | 0.50 | 0.4 |
| 104 | low-res | 196.1 | 0.80 | 0.50 | 0.4 |
| 105 | low-res | 203.9 | 0.50 | 0.50 | 0.25 |
| 109 | low-res | 51.3 | 0.60 | 0.30 | 0.18 |
| 110 | low-res | 95.7 | 0.60 | 0.30 | 0.18 |
| 111 | ind | 130.9 | 1.00 | 0.50 | 0.5 |
| 112 | com | 37.7 | 0.80 | 0.60 | 0.48 |
| 114 | ind | 115.0 | 1.00 | 0.80 | 0.8 |
| 115 | ind | 88.6 | 0.80 | 0.50 | 0.4 |

| | | | | | |
|---|---|---|---|---|---|
| 116 | rtl | 32.7 | 0.70 | 0.50 | 0.35 |
| 117 | rtl | 1.3 | 0.90 | 0.90 | 0.81 |
| 118 | rtl | 44.7 | 1.00 | 1.00 | 1 |
| 119 | rtl | 35.2 | 1.00 | 1.00 | 1 |
| 120 | rtl | 49.2 | 1.00 | 1.00 | 1 |
| 121 | rtl | 8.4 | 1.00 | 1.00 | 1 |
| 122 | rtl | 2.5 | 1.00 | 0.20 | 0.2 |
| 123 | mid-res | 7.4 | 1.00 | 1.00 | 1 |
| 124 | rtl | 10.1 | 1.00 | 0.20 | 0.2 |
| 125 | rtl | 46.7 | 1.00 | 1.00 | 1 |
| 126 | sch | 20.5 | 1.00 | 1.00 | 1 |
| 131 | rtl | 109.4 | 1.00 | 0.60 | 0.6 |
| 133 | rtl | 6.8 | 1.00 | 0.60 | 0.6 |
| 134 | mid-res | 40.2 | 1.00 | 0.60 | 0.6 |
| 135 | mid-res | 3.8 | 1.00 | 0.60 | 0.6 |
| 140 | low-res | 530.0 | 0.60 | 0.30 | 0.18 |
| 141 | low-res | 12.0 | 1.00 | 0.80 | 0.8 |
| 143 | low-res | 388.4 | 0.50 | 0.30 | 0.15 |
| 144 | low-res | 360.1 | 0.50 | 0.30 | 0.15 |
| 147 | low-res | 362.9 | 0.50 | 0.30 | 0.15 |
| 148 | low-res | 195.3 | 0.30 | 0.30 | 0.09 |
| 149 | low-res | 331.2 | 0.30 | 0.30 | 0.09 |
| 153 | low-res | 109.1 | 0.50 | 0.30 | 0.15 |
| 154 | com | 19.5 | 0.60 | 0.60 | 0.36 |
| 155 | com | 74.7 | 0.60 | 0.50 | 0.3 |
| 156 | low-res | 335.0 | 0.60 | 0.30 | 0.18 |
| 157 | low-res | 29.5 | 0.70 | 0.60 | 0.42 |
| 158 | low-res | 89.8 | 0.80 | 0.80 | 0.64 |
| 160 | low-res | 280.8 | 0.50 | 0.20 | 0.1 |
| 161 | low-res | 48.7 | 0.50 | 0.40 | 0.2 |
| 162 | airport | 125.2 | 0.80 | 0.40 | 0.32 |
| 163 | low-res | 408.5 | 0.60 | 0.30 | 0.18 |
| 164 | rtl | 1.3 | 1.00 | 1.00 | 1 |
| 165 | rtl | 34.5 | 1.00 | 1.00 | 1 |
| 166 | rtl | 0.6 | 1.00 | 1.00 | 1 |
| 167 | rtl | 20.5 | 1.00 | 1.00 | 1 |
| 168 | rtl | 4.5 | 1.00 | 1.00 | 1 |
| 169 | rtl | 17.9 | 1.00 | 1.00 | 1 |
| 170 | rtl | 12.6 | 1.00 | 1.00 | 1 |
| 172 | floodplain | 46.9 | 0.00 | 0.00 | 0 |
| 173 | floodplain | 37.5 | 0.00 | 0.00 | 0 |
| 174 | rec | 82.5 | 0.00 | 0.00 | 0 |
| 175 | rec | 112.1 | 0.00 | 0.00 | 0 |
| 176 | rec | 14.7 | 0.00 | 0.00 | 0 |
| 178 | rec | 215.4 | 0.00 | 0.00 | 0 |
| 179 | dev_fp | 46.8 | 0.80 | 0.60 | 0.48 |
| 180 | floodplain | 7.1 | 0.00 | 0.00 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| 181 | floodplain | 9.0 | 0.00 | 0.00 | 0 |
| 182 | floodplain | 169.7 | 0.00 | 0.00 | 0 |
| 183 | floodplain | 61.3 | 0.00 | 0.00 | 0 |
| 184 | rec | 44.8 | 0.00 | 0.00 | 0 |
| 185 | floodplain | 478.0 | 0.00 | 0.00 | 0 |
| 186 | floodplain | 83.4 | 0.00 | 0.00 | 0 |
| 187 | floodplain | 44.8 | 0.00 | 0.00 | 0 |
| 188 | floodplain | 116.2 | 0.00 | 0.00 | 0 |
| 189 | floodplain | 159.0 | 0.00 | 0.00 | 0 |
| 190 | floodplain | 872.2 | 0.00 | 0.00 | 0 |
| 191 | mid-res | 12.8 | 0.60 | 0.50 | 0.3 |
| 192 | mid-res | 21.2 | 0.50 | 0.80 | 0.4 |
| 193 | rtl | 7.6 | 0.80 | 0.80 | 0.64 |
| 194 | rtl | 17.0 | 0.80 | 0.60 | 0.48 |
| 195 | rtl | 21.2 | 1.00 | 1.00 | 1 |
| 196 | sch | 104.7 | 1.00 | 1.00 | 1 |
| 197 | rtl | 2.8 | 1.00 | 1.00 | 1 |
| 198 | rtl | 0.4 | 1.00 | 1.00 | 1 |
| 199 | rtl | 11.7 | 1.00 | 1.00 | 1 |
| 200 | rtl | 4.1 | 1.00 | 1.00 | 1 |
| 201 | rtl | 10.8 | 1.00 | 1.00 | 1 |
| 202 | mid-res | 5.4 | 1.00 | 1.00 | 1 |
| 203 | ind | 16.0 | 1.00 | 1.00 | 1 |
| 204 | sch | 13.9 | 1.00 | 0.80 | 0.8 |
| 205 | com | 126.1 | 0.80 | 0.50 | 0.4 |
| 208 | mid-res | 8.0 | 0.70 | 1.00 | 0.7 |
| 209 | mid-res | 0.5 | 0.60 | 0.50 | 0.3 |
| 210 | mid-res | 28.0 | 0.60 | 0.50 | 0.3 |
| 211 | ind | 11.3 | 1.00 | 1.00 | 1 |
| 212 | ind | 3.9 | 1.00 | 1.00 | 1 |
| 213 | ind | 7.7 | 1.00 | 1.00 | 1 |
| 214 | ind | 3.0 | 1.00 | 1.00 | 1 |
| 216 | rtl | 28.3 | 1.00 | 1.00 | 1 |
| 217 | com | 4.3 | 0.60 | 0.80 | 0.48 |
| 218 | rtl | 14.8 | 1.00 | 1.00 | 1 |
| 219 | low-res | 127.0 | 1.00 | 1.00 | 1 |
| 220 | low-res | 123.9 | 1.00 | 0.70 | 0.7 |
| 221 | low-res | 348.8 | 0.60 | 0.50 | 0.3 |
| 222 | low-res | 82.2 | 1.00 | 1.00 | 1 |
| 223 | low-res | 8.2 | 1.00 | 1.00 | 1 |
| 224 | low-res | 15.6 | 1.00 | 1.00 | 1 |
| 225 | low-res | 16.3 | 1.00 | 1.00 | 1 |
| 226 | low-res | 6.6 | 1.00 | 1.00 | 1 |
| 227 | low-res | 36.3 | 1.00 | 1.00 | 1 |
| 228 | low-res | 8.9 | 1.00 | 1.00 | 1 |
| 229 | low-res | 131.9 | 1.00 | 1.00 | 1 |
| 230 | low-res | 748.6 | 1.00 | 0.80 | 0.8 |

| | | | | | |
|---|---|---|---|---|---|
| 231 | low-res | 1405.0 | 1.00 | 0.80 | 0.8 |
| 232 | low-res | 551.3 | 1.00 | 0.60 | 0.6 |
| 233 | low-res | 194.8 | 0.50 | 0.50 | 0.25 |
| 234 | low-res | 1177.1 | 0.60 | 0.60 | 0.36 |
| 235 | park | 27.0 | 0.30 | 0.10 | 0.03 |
| 236 | gtwy | 9.4 | 0.60 | 0.80 | 0.48 |
| 237 | gtwy | 9.4 | 0.60 | 0.80 | 0.48 |
| 238 | gtwy | 9.4 | 0.60 | 0.80 | 0.48 |
| 239 | low-res | 5.3 | 0.60 | 0.30 | 0.18 |
| 240 | low-res | 49.4 | 0.60 | 0.30 | 0.18 |
| 241 | low-res | 28.3 | 0.20 | 0.20 | 0.04 |
| 242 | low-res | 336.6 | 0.60 | 0.30 | 0.18 |
| 243 | low-res | 166.8 | 0.60 | 0.30 | 0.18 |
| 245 | rtl | 80.8 | 0.60 | 0.30 | 0.18 |
| 246 | low-res | 184.2 | 0.40 | 0.30 | 0.12 |
| 247 | low-res | 38.6 | 0.50 | 0.60 | 0.3 |
| 248 | mid-res | 19.6 | 0.60 | 0.60 | 0.36 |
| 249 | rtl | 21.6 | 1.00 | 1.00 | 1 |
| 250 | rtl | 1.8 | 1.00 | 1.00 | 1 |
| 251 | sch | 3.1 | 0.70 | 0.30 | 0.21 |

# Appendix B: Water System CIP Project Sheets

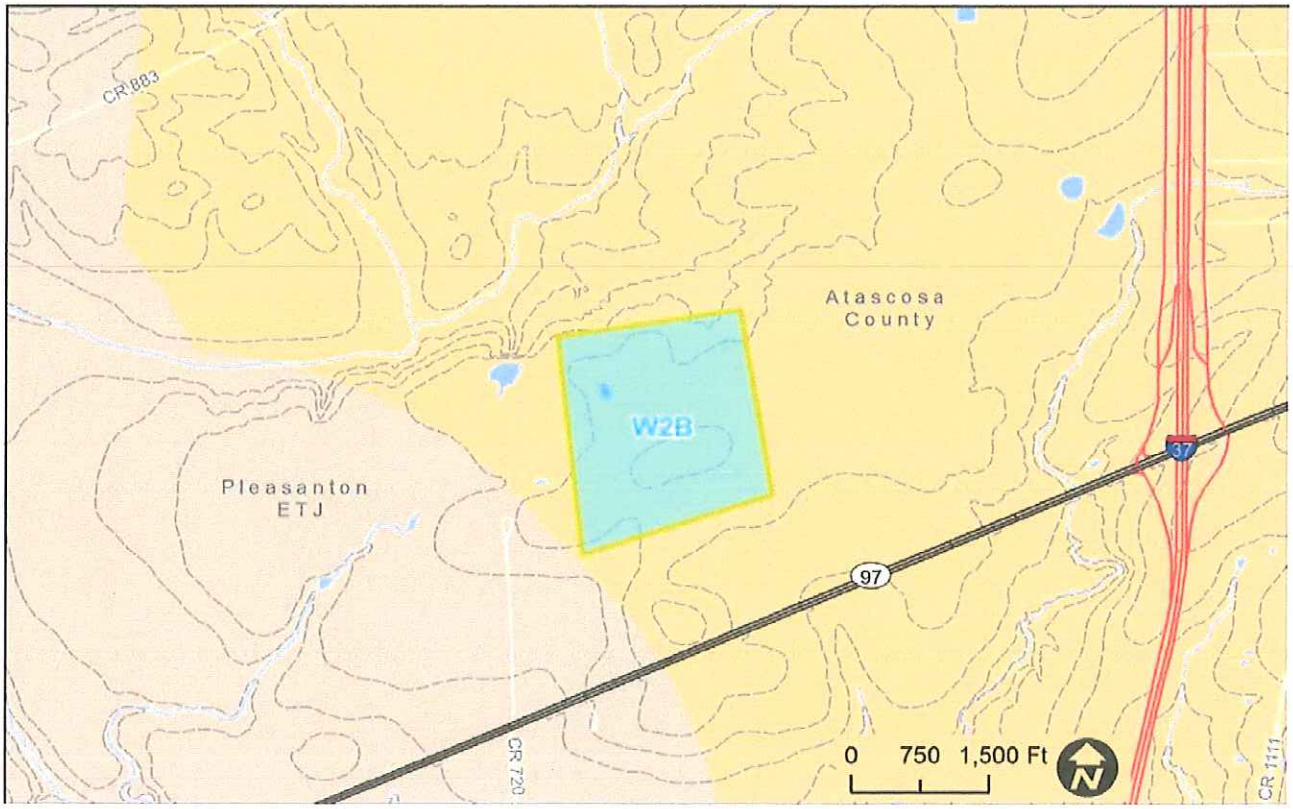
**City of Pleasanton**
**Capital Improvements Plan - Water System**

W2B

**Project Name:** SH 97 Corridor East - New Elevated Storage Tank
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 3,973,000
**Project Description:**

New 1.0 MG EST at approximate high point near SH 97 and I-37, to provide pressure/storage to SH 97 growth corridor.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 2,900,000 |
| Contingency (20%) | $ | 580,000 |
| Engineering/Survey/Geotech (17%) | $ | 493,000 |
| Total Estimated Project Cost* | $ | 3,973,000 |

* ROW/Easement/Land Acquisition costs not included

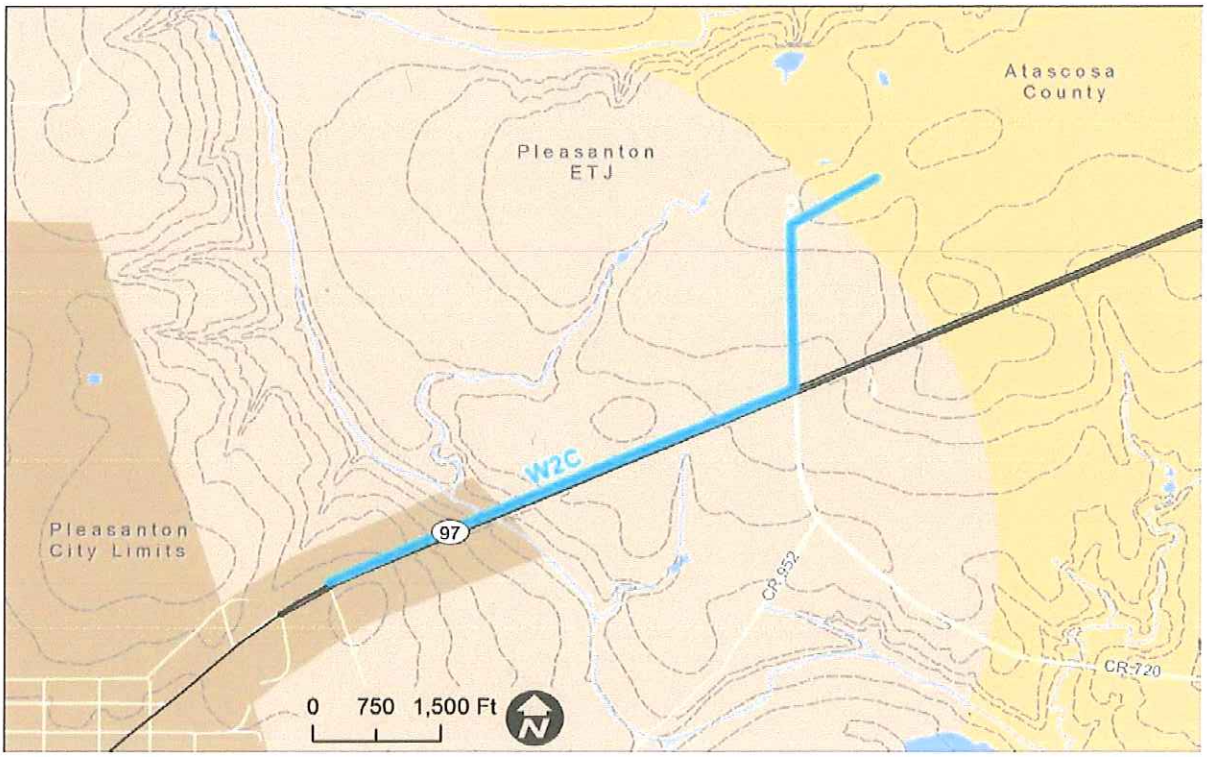
**City of Pleasanton**
**Capital Improvements Plan - Water System**

W2C-rev

**Project Name:** SH 97 Corridor East - 16" pipeline extension
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 1,735,346
**Project Description:**

New 16" pipeline extension (~15,000 l.f.) to provide domestic and fireflow service to new development along SH 97 east to I-37 S. Access Rd. to eastern ETJ boundary.

**Project Schematic:**




Cost Estimate

| | |
|---|---|
| Capital Cost | $ 1,450,315.00 |
| Contingency (10%) | $ 145,031.50 |
| Engineering/Survey/Geotech (9%) | $ 140,000.00 |
| Total Estimated Project Cost* | $ 1,735,346.50 |

* ROW/Easement/Land Acquisition costs not included

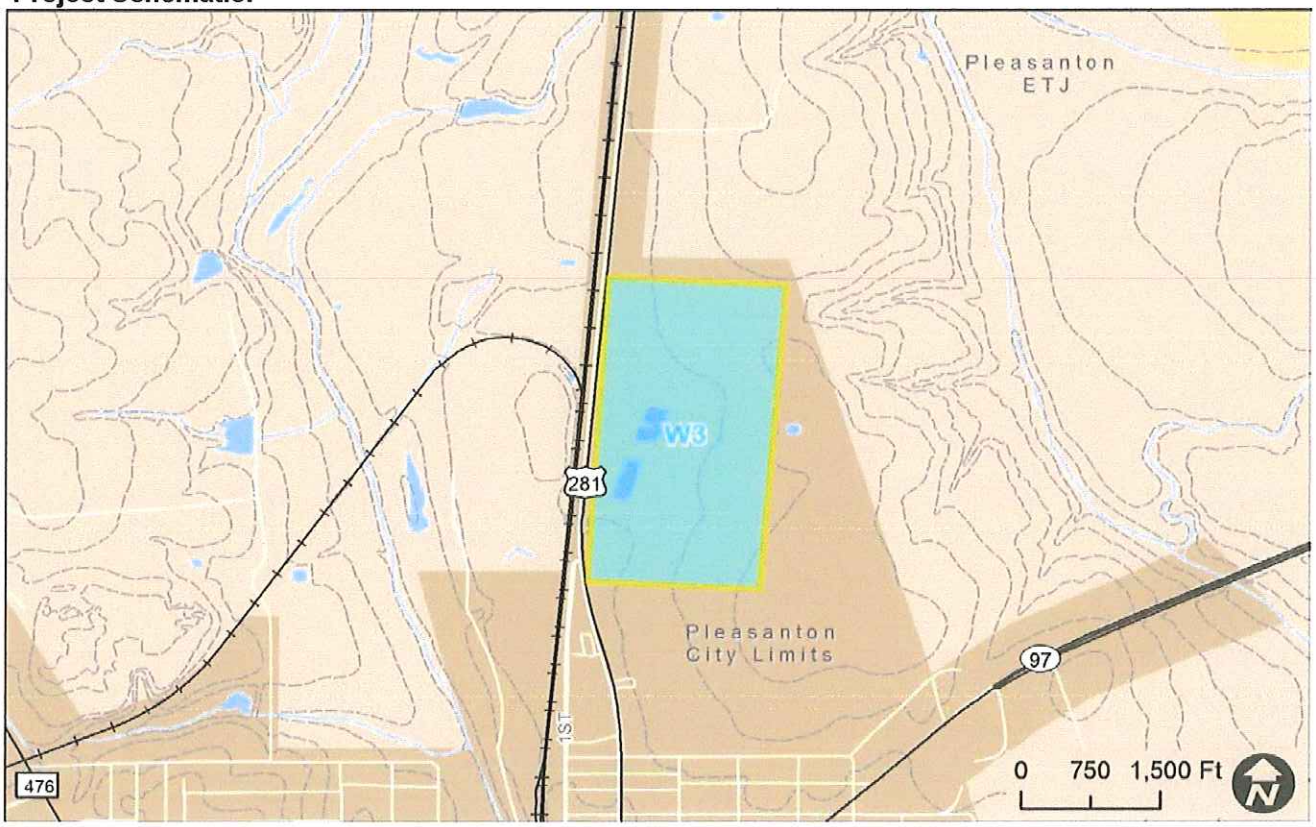
**City of Pleasanton**
**Capital Improvements Plan - Water System**

W3

**Project Name:** 281N Corridor - One New Well and Ground Storage Tank
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 2,520,416
**Project Description:**

One new Carrizo well (1500 gpm) in the US 281 North corridor to FM 3006, incl. coagulation treatment and 0.5 MG GST and yard piping, depending on development; Construct 12" pipeline from Haverlah Rd. and US 281 (12" Tee); 7200 l.f. of new 12" pipeline replacing existing 6" pipeline; construct 6000 l.f. of new 12" pipeline from Crane Rd. (located 1200' south) to FM 3006.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 1,839,720 |
| Contingency (20%) | $ | 367,944 |
| Engineering/Survey/Geotech (17%) | $ | 312,752 |
| Total Estimated Project Cost* | $ | 2,520,416 |

* ROW/Easement/Land Acquisition costs not included

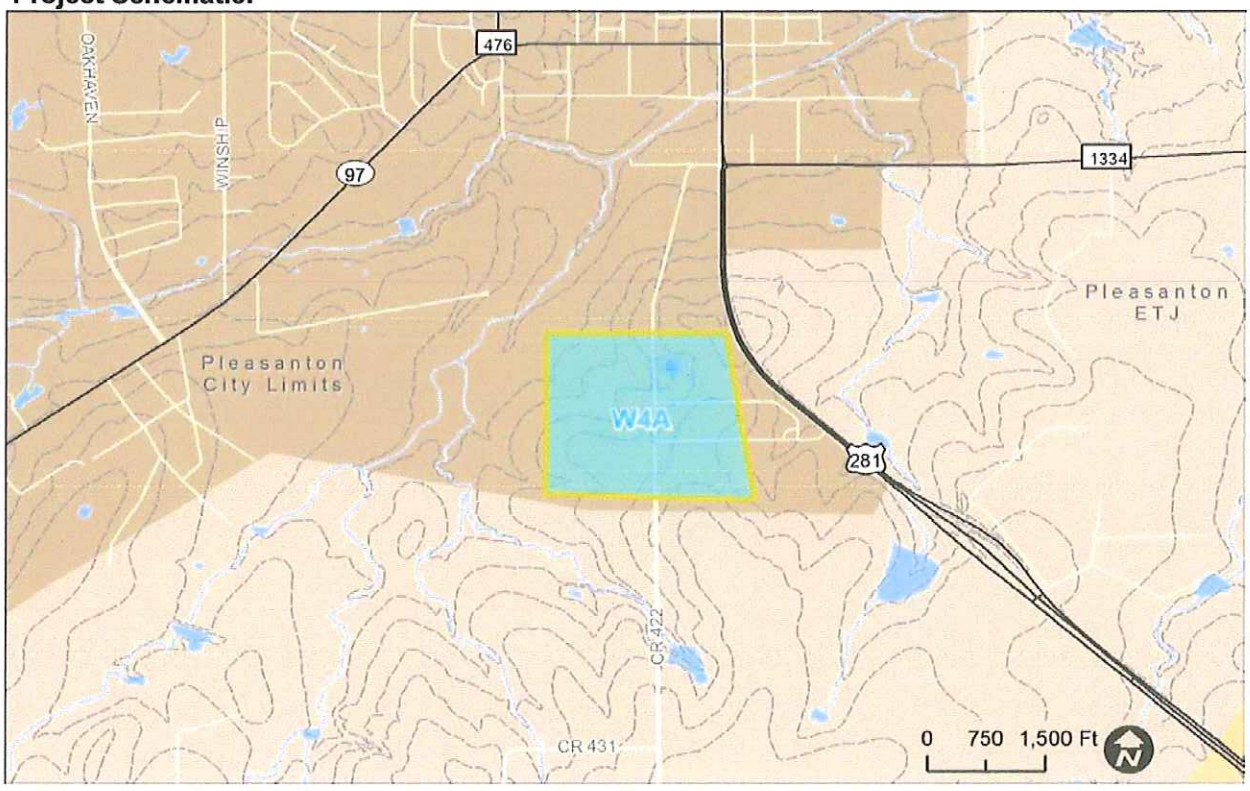
**City of Pleasanton**
**Capital Improvements Plan - Water System**

W4A

**Project Name:** Industrial Park/281 S Well and Ground Storage Tank
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 1,849,500
**Project Description:**

One Carrizo well (1500 gpm) to be drilled in Industrial Park, 281 S, including coagulation treatment, 0.5 MG GST & yard piping.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 1,350,000 |
| Contingency (20%) | $ | 270,000 |
| Engineering/Survey/Geotech (17%) | $ | 229,500 |
| Total Estimated Project Cost* | $ | 1,849,500 |

*ROW/Easement/Land Acquisition costs not included

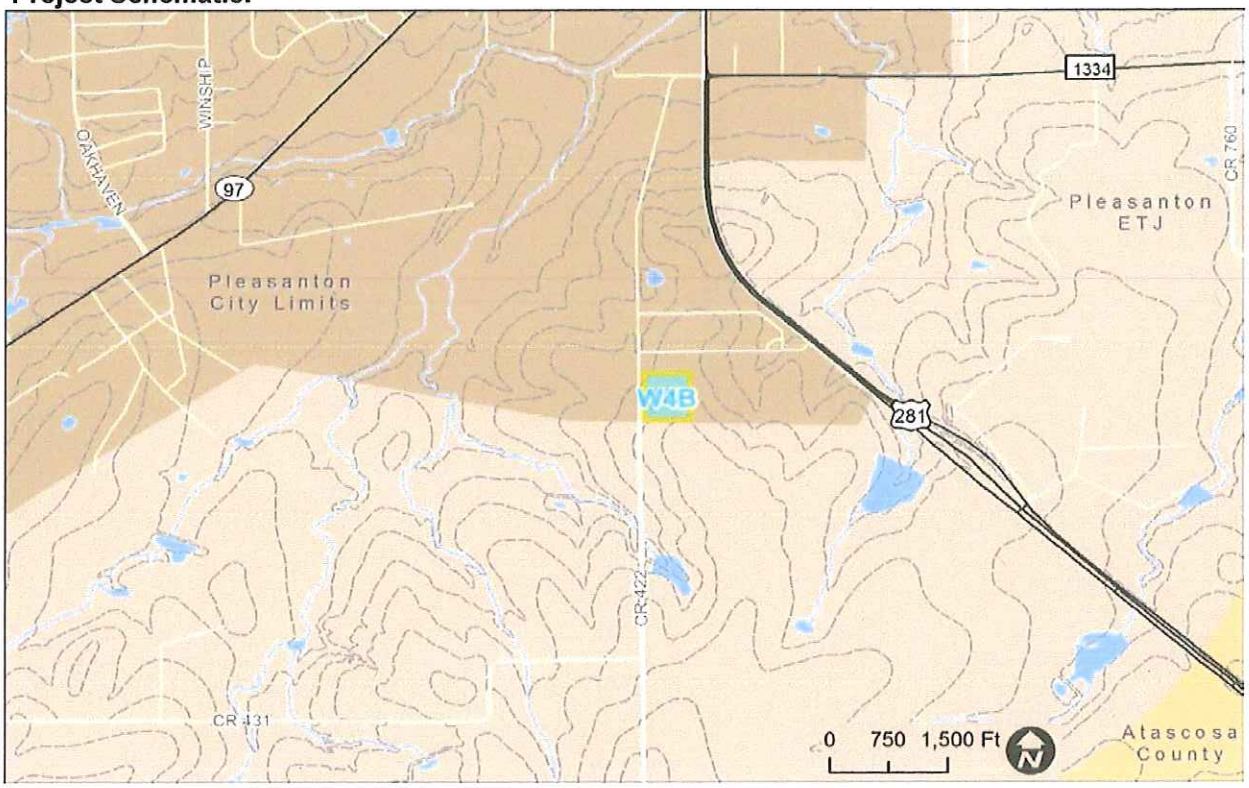
**City of Pleasanton**
**Capital Improvements Plan - Water System**

W4B

**Project Name:** Industrial Park/281 S - 1.0 MG Elevated Storage Tank
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 3,973,000
**Project Description:**

1.0 MG EST in Industrial Park, 281 S, including yard piping, to meet future domestic and fireflow demands.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 2,900,000 |
| Contingency (20%) | $ | 580,000 |
| Engineering/Survey/Geotech (17%) | $ | 493,000 |
| Total Estimated Project Cost* | $ | 3,973,000 |

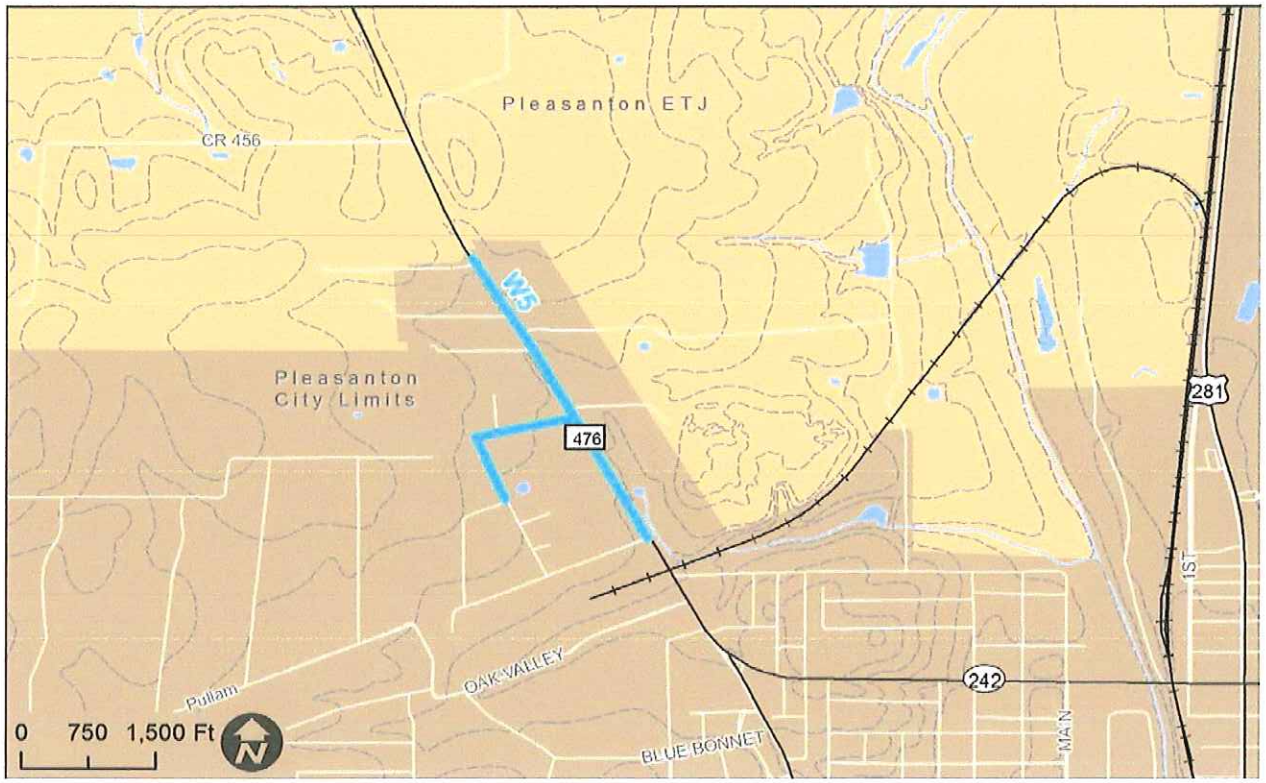
* ROW/Easement/Land Acquisition costs not included

**City of Pleasanton**
**Capital Improvements Plan - Water System**

**Project Name:** 12" Pipeline - FM 476 North Extension
**Project Purpose:** To provide domestic and fireflow demands to meet growth.
**Project Cost:** $ 279,549
**Project Description:**

12" main extension from Yellowstone Rd. along FM 476 (east side), cross at Encino, to CR 456 (5,200 l.f.)

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 204,050 |
| Contingency (20%) | $ | 40,810 |
| Engineering/Survey/Geotech (17%) | $ | 34,689 |
| Total Estimated Project Cost* | $ | 279,549 |

* ROW/Easement/Land Acquisition costs not included

# Appendix C: Wastewater System CIP Project Sheets

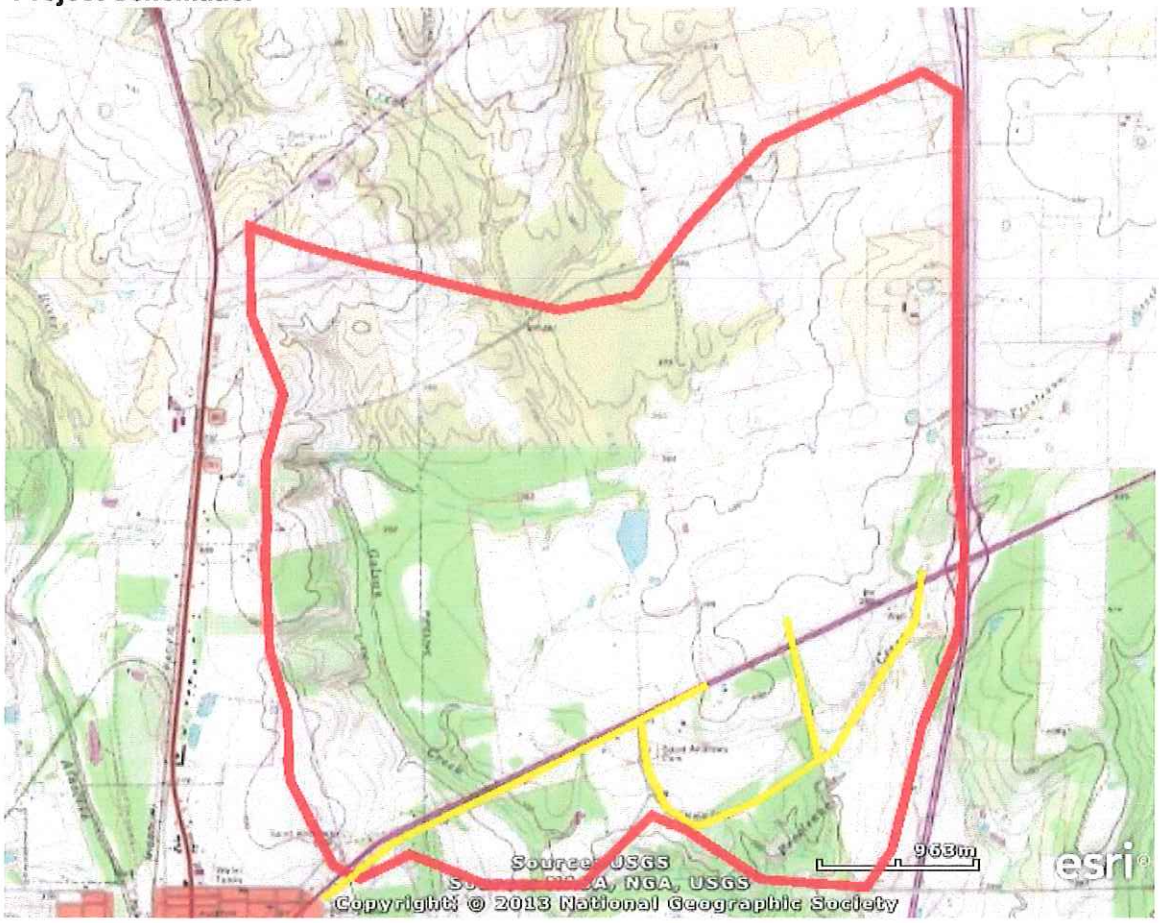
**City of Pleasanton**
**Capital Improvements Plan - Wastewater System**

WW1-rev

**Project Name:** 97 East Sanitary Sewer Extension & Force Main
**Project Purpose:** To provide sanitary sewer capacity to meet growth.
**Project Cost:** $ 3,564,072
**Project Description:**

New gravity main, force main, and lift station to serve corridor east of SH-97 and areas south and downstream of existing wastewater treatment plant.

**Project Schematic:**




| | | |
|---|---|---|
| Capital Cost | $ | 2,894,611 |
| Contingency (10%) | $ | 289,461 |
| Engineering/Survey/Geotech (9.5%) | $ | 280,000 |
| Easement Acquisition | $ | 100,000 |
| Total Estimated Project Cost* | $ | 3,564,072 |

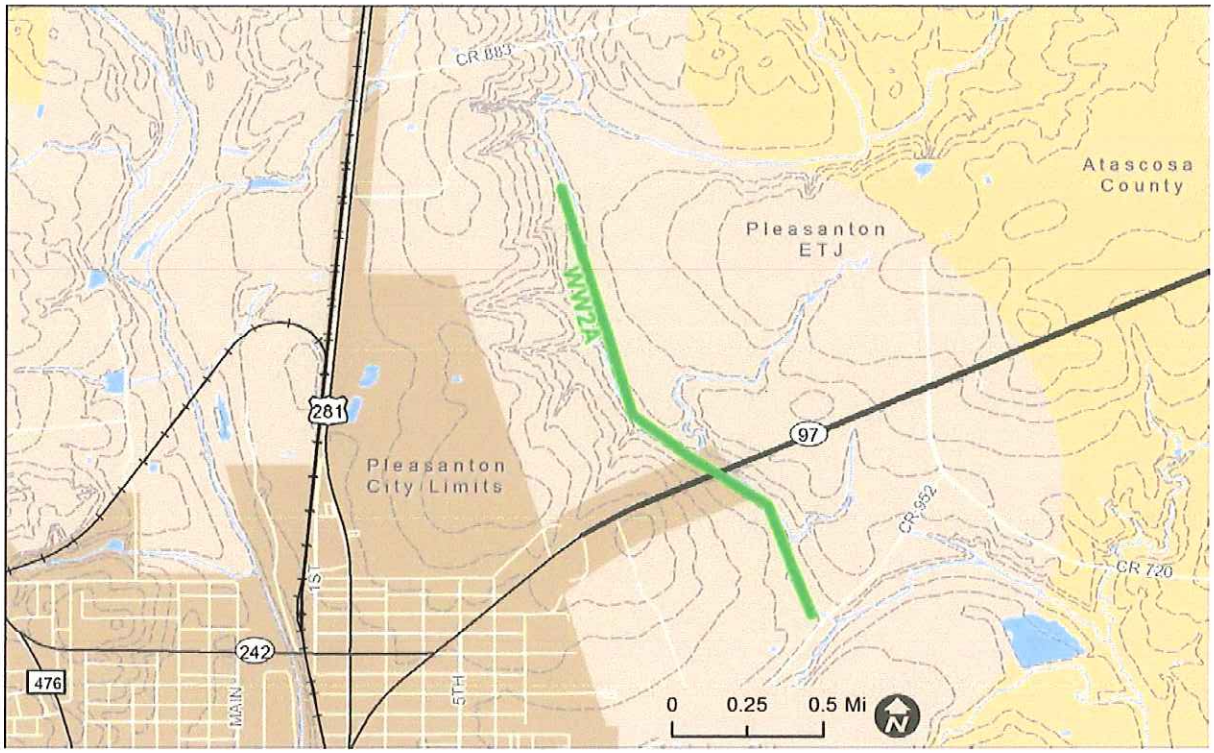
**City of Pleasanton**
**Capital Improvements Plan - Wastewater System**

WW2A

**Project Name:** First Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006
**Project Purpose:** To provide sanitary sewer capacity to meet growth.
**Project Cost:** $ 628,830
**Project Description:**

New wastewater main (18") to serve the northeast quadrant of the city, extending from Galvan Creek,across SH 97 approximately 9,000 lf in the first phase.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 459,000 |
| Contingency (20%) | $ | 91,800 |
| Engineering/Survey/Geotech (17% | $ | 78,030 |
| Total Estimated Project Cost* | $ | 628,830 |

*ROW/Easement/Land Acquisition costs not included

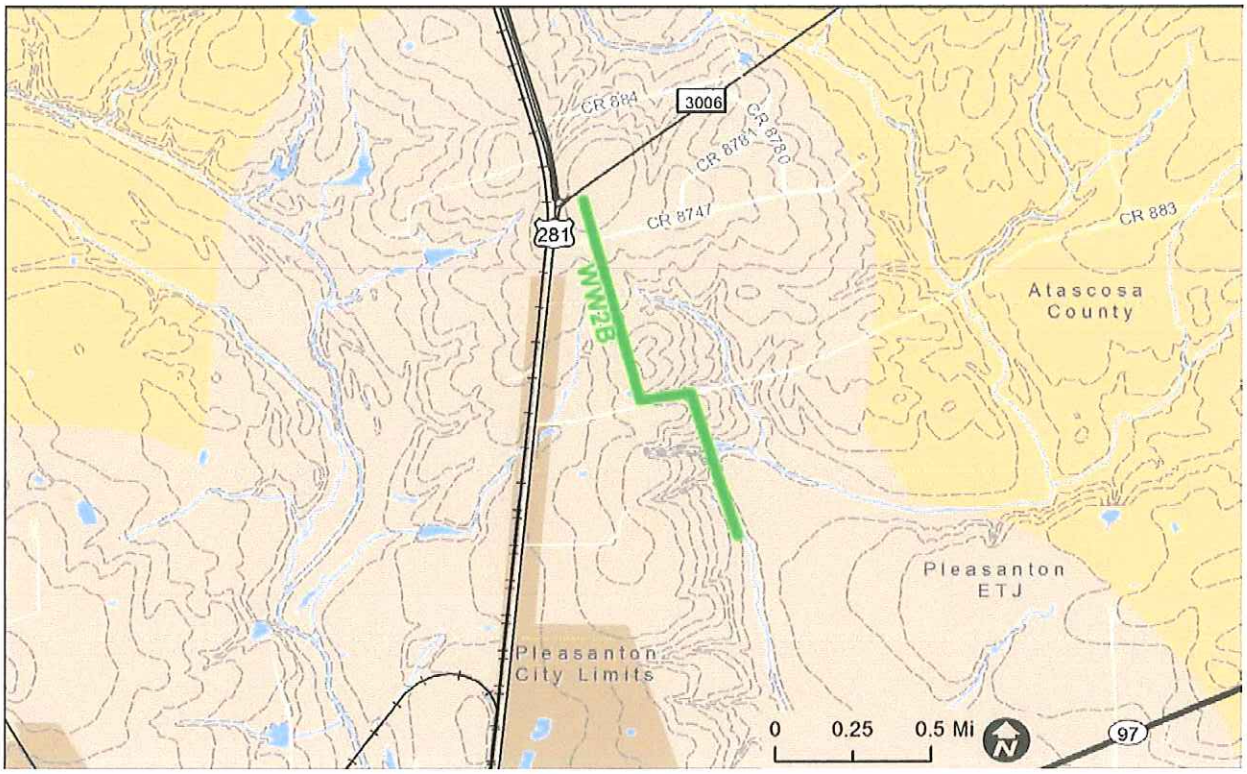
**City of Pleasanton**
**Capital Improvements Plan - Wastewater System**

WW2B

**Project Name:** First Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006
**Project Purpose:** To provide sanitary sewer capacity to meet growth.
**Project Cost:** $ 489,090
**Project Description:**

New wastewater main (18") to serve the northeast quadrant of the city, extending along Galvan Creek to the area near US 281 and FM 3006, approximately 7,000 lf in this second phase.

**Project Schematic:**




Cost Estimate

| | | |
|---|---|---|
| Capital Cost | $ | 357,000 |
| Contingency (20%) | $ | 71,400 |
| Engineering/Survey/Geotech (17% | $ | 60,690 |
| Total Estimated Project Cost* | $ | 489,090 |

*ROW/Easement/Land Acquisition costs not included

# Appendix D: Support Documentation for Water Impact Fee Calculation

## TABLE D1 - WATER CIP PROJECTS
## IMPACT FEE CALCULATION

| Project ID | Project Name | Capital Cost Estimate | 10-Year Cost Allocation |
|---|---|---|---|
| W2B | SH 97 Corridor East - New Elevated Storage Tank | $3,973,000 | $1,549,470 |
| W2C-Revised* | SH 97 Corridor East - 16" Pipeline Extension | $3,774,348 | $1,471,996 |
| W3 | 281N Corridor - One New Well and Ground Storage Tank | $1,849,500 | $721,305 |
| W4A | Industrial Park/281 S Well and Ground Storage Tank | $1,849,500 | $721,305 |
| W4B | Industrial Park/281 S - 1.0 MG Elevated Storage Tank | $3,973,000 | $1,549,470 |
| W5 | 12" Pipeline - FM 476 North Extension | $279,549 | $109,024 |
| **TOTAL** | | **$15,698,897** | **$6,122,570** |

* Cost estimate prepared by Klein Engineering

## TABLE D2 - PLEASANTON WATER IMPACT FEE CALCULATION

| Year | CIP Expenditures | New Connections | Impact Fees Collected | Principal & Interest Balance | Annual Interest |
|---|---|---|---|---|---|
| 2014 | $3,021,466 | 98 | $315,560 | $2,705,905.72 | $67,918 |
| 2015 | | 101 | $324,576 | $2,449,247.95 | $61,476 |
| 2016 | $830,329 | 103 | $332,304 | $3,008,748.99 | $75,520 |
| 2017 | $2,270,775 | 106 | $340,032 | $5,015,011.59 | $125,877 |
| 2018 | | 108 | $349,048 | $4,791,840.38 | $120,275 |
| 2019 | | 111 | $358,064 | $4,554,051.58 | $114,307 |
| 2020 | | 114 | $365,792 | $4,302,566.27 | $107,994 |
| 2021 | | 117 | $376,096 | $4,034,464.68 | $101,265 |
| 2022 | | 120 | $385,112 | $3,750,617.75 | $94,141 |
| **2023** | | 123 | $395,416 | **$3,449,342.25** | $86,578 |
| **Total** | **$6,122,570** | **1100** | **$3,542,000** | | **$955,351** |

| | |
|---|---|
| Total Estimated Water CIP = | $6,122,570 |
| Total Prep Cost for Impact Fee Study = | $5,000 |
| Total Interest = | **$955,351** |
| Total Estimated Costs Attributed to 2014-2023 Development (CIP + Interest) = | $7,082,921 |
| Total LUEs= | 1100 |
| Total Cost Per LUE = | $6,439 |
| **Maximum Allowable Impact Fee Per LUE =** | **$3,220** |

| | |
|---|---|
| Assumed Interest* = | 2.51% |
| Assumed Impact Fee = | $3,220 |

* Based on TWDB Drinking Water SRF (Non-rated) Program; lending rates posted on TWDB website as of May 23, 2014

# Appendix E: Support Documentation for Wastewater Impact Fee Calculation

## TABLE E1 - WASTEWATER CIP PROJECTS
## IMPACT FEE CALCULATION

| Project ID | Project Name | Capital Cost Estimate | 10-Year Cost Allocation |
|---|---|---|---|
| WW1-revised* | SH 97 East Sanitary Sewer Extension & Force Main | $3,564,073 | $1,639,474 |
| WW2A | First Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006 | $628,830 | $289,262 |
| WW2B | First Phase Northeast Main 18" from Galvan Creek/SH 97 to FM 3006 | $489,090 | $224,981 |
| **TOTAL** | | **$4,681,993** | **$2,153,717** |

* Cost estimate prepared by Klein Engineering

## TABLE E2 - PLEASANTON WASTEWATER IMPACT FEE CALCULATION

| Year | CIP Expenditures | New Connections | Impact Fees Collected | Principal & Interest Balance | Annual Interest |
|---|---|---|---|---|---|
| 2014 | $1,639,474 | 98 | $112,602 | $1,526,871.58 | |
| 2015 | $514,243 | 101 | $115,819 | $1,925,295.58 | $49,288 |
| 2016 | | 103 | $118,577 | $1,856,006.35 | $47,514 |
| 2017 | | 106 | $121,334 | $1,782,185.71 | $45,624 |
| 2018 | | 108 | $124,552 | $1,703,258.06 | $43,603 |
| 2019 | | 111 | $127,769 | $1,619,092.67 | $41,449 |
| 2020 | | 114 | $130,526 | $1,530,015.04 | $39,168 |
| 2021 | | 117 | $134,203 | $1,434,980.23 | $36,735 |
| 2022 | | 120 | $137,420 | $1,334,295.32 | $34,158 |
| **2023** | | 123 | $141,097 | **$1,227,356.08** | $31,420 |
| **Total** | **$2,153,717** | **1100** | **$1,263,900** | | **$368,960** |

| | |
|---|---|
| Total Estimated CIP = | $2,153,717 |
| Total Prep Cost for Impact Fee Study = | $5,000 |
| Total Interest = | **$368,960** |
| Total Estimated Costs Attributed to 2014-2023 Development (CIP + Interest) = | $2,527,676 |
| Total LUEs= | 1100 |
| Total Cost Per LUE = | $2,298 |
| **Maximum Allowable Impact Fee Per LUE =** | **$1,149** |

| | |
|---|---|
| Assumed Interest* = | 2.56% |
| Assumed Impact Fee = | $1,149 |

* Based on TWDB Clean Water SRF (Non-equivalency; non-rated) Program; lending rates posted on TWDB website as of May 23, 2014

# Appendix F: Glossary of Impact Fee-Related Terms

## GLOSSARY OF TERMS

Most of these are the statutory definitions. In some instances, a simpler definition is provided to help (see the ***IOWs*** {In Other Words} below, but in the preparation of the fees and study, the statutory definitions are adhered to strictly.)

"**Capital improvement**" means any of the following facilities that have a life expectancy of three or more years and are owned and operated by or on behalf of a political subdivision:
(A) water supply, treatment, and distribution facilities; wastewater collection and treatment facilities; and storm water, drainage, and flood control facilities; whether or not they are located within the service area; and
(B) roadway facilities.
***IOW***: A project.

"**Capital improvements plan**" means a plan required by this chapter that identifies capital improvements or facility expansions for which impact fees may be assessed. ***IOW***: The CIP, the list of projects.

"**Impact fee**" means 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. The term includes amortized charges, lump-sum charges, capital recovery fees, contributions in aid of construction, and any other fee that functions as described by this definition. The term does not include:

(A) dedication of land for public parks or payment in lieu of the dedication to serve park needs;
(B) dedication of rights-of-way or easements or construction or dedication of on-site or off-site water distribution, wastewater collection or drainage facilities, or streets, sidewalks, or curbs if the dedication or construction is required by a valid ordinance and is necessitated by and attributable to the new development;
(C) lot or acreage fees to be placed in trust funds for the purpose of reimbursing developers for oversizing or constructing water or sewer mains or lines; or
(D) other pro rata fees for reimbursement of water or sewer mains or lines extended by the political subdivision.

"**Land use assumptions**" includes a description of the service area and projections of changes in land uses, densities, intensities, and population in the service area over at least a 10-year period. ***IOW***: The Future Land Use Map and how it is applied to size the projects.

"**LUE or Living Unit Equivalent**", see "Service Unit".

"**New development**" means the subdivision of land; the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure; or any use or extension of the use of land; any of which increases the number of service units.

"**Service area**" means the area within the corporate boundaries or extraterritorial jurisdiction, as determined under Chapter 42, of the political subdivision to be served by the capital improvements or

facilities expansions specified in the capital improvements plan, except roadway facilities and storm water, drainage, and flood control facilities. The service area, for the purposes of this chapter, may include all or part of the land within the political subdivision or its extraterritorial jurisdiction, except for roadway facilities and storm water, drainage, and flood control facilities.

"**Service unit**" (also commonly called **LUE**) means a standardized measure of consumption, use, generation, or discharge 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. ***IOW***: How we measure the 'impact'.