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Infrastructure Improvements Plan, and Development Fee Report

Prepared for:
San Luis, Arizona

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EXECUTIVE SUMMARY

The City of San Luis, Arizona, contracted with TischlerBise to document land use assumptions, prepare the Infrastructure Improvements Plan (hereinafter referred to as the "IIP"), and update development fees within the San Luis Service Area pursuant to Arizona Revised Statutes ("ARS") § 9-436.05 (hereafter referred to as the "Enabling Legislation"). Municipalities in Arizona may assess development fees to offset infrastructure costs to a municipality for necessary public services. The development fees must be based on an Infrastructure Improvements Plan and Land Use Assumptions. The IIP for each type of infrastructure is in the middle section of this document. The proposed development fees are displayed in the Development Fee Report in the next section.

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fee represents future development's proportionate share of infrastructure costs. Development fees may be used for infrastructure improvements or debt service for growth-related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement, or correcting existing deficiencies.

This update of San Luis's Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

1. General Government Facilities
2. Fire Facilities
3. Parks Facilities
4. Police Facilities
5. Street Facilities
6. Water Facilities
7. Wastewater Facilities

This plan includes all necessary elements required to be in full compliance with SB 1525.

ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for municipalities in Arizona.

Necessary Public Services

Under the requirements of the Enabling Legislation, development fees may only be used for construction, acquisition or expansion of public facilities that are necessary public services. "Necessary public service" means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the municipality: water, wastewater, storm water, library, street, fire, police, and neighborhood parks and recreational. Additionally, a necessary public service includes any facility that was financed before June 1, 2011 and that meets the following requirements:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
2. After August 1, 2014, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2011 to finance construction of the facility.

Infrastructure Improvements Plan

Development fees must be calculated pursuant to an IIP. For each necessary public service that is the subject of a development fee, by law, the IIP shall include the following seven elements:

1. A description of the existing necessary public services in the service area and the costs to update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable.
2. An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable.
3. A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved Land Use Assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable.
4. A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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.
5. The total number of projected service units necessitated by and attributable to new development in the service area based on the approved Land Use Assumptions and calculated pursuant to generally accepted engineering and planning criteria.
6. The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.
7. A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved Land Use Assumptions and a plan to include these contributions in determining the extent of the burden imposed by the development.

Qualified Professionals

The IIP must be developed by qualified professionals using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education, or experience." TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

Conceptual Development Fee Calculation

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure improvement units per service unit, typically called level-of-service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/ or park improvements.

Evaluation of Credits/Offsets

Regardless of the methodology, a consideration of credits/offsets is integral to the development of a legally defensible development fee. There are two types of credits/offsets that should be addressed in development fee studies and ordinances. The first is a revenue credit/offset due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the development fee. This type of credit/offset is integrated into the fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

DEVELOPMENT FEE REPORT

METHODOLOGY

Development fees for the necessary public services made necessary by new development must be based on the same level of service ("LOS") provided to existing development in the service area. There are three basic methodologies used to calculate development fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity. Each method has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating development fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss basic methods for calculating development fees and how those methods can be applied.

- **Cost Recovery** (past improvements) - The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- **Incremental Expansion** (concurrent improvements) - The incremental expansion method documents current LOS standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.
- **Plan-Based** (future improvements) - The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).

DEVELOPMENT FEE COMPONENTS

Figure 1 summarizes service areas, methodology, and infrastructure cost components for each development fee. Because San Luis plans to provide a uniform level of service for all types of infrastructure included in this IIP, the service area for all fee components is the City of San Luis.

Figure 1: Proposed Development Fee Service Areas, Methods, and Cost Components

Necessary Public Service	Service Area	Incremental Expansion	Plan-Based	Cost Recovery	Cost Allocation
Fire	Citywide	Apparatus, Communications Equipment	Fire Stations, Development Fee Report	N/A	Population, Jobs
General Government	Citywide	N/A	N/A	City Hall	Population, Jobs
Parks	Citywide	Community Park Land and Amenities, Neighborhood Park Amenities	Development Fee Report	N/A	Population, Jobs
Police	Citywide	Stations, Vehicles, Communications Equipment	Development Fee Report	N/A	Population, Vehicle Trips
Street	Citywide	Arterials	Development Fee Report	N/A	Vehicle Miles of Travel
Water	Citywide	N/A	Water Storage, Development Fee Report	Water Production	Gallons
Wastewater	Citywide	N/A	Wastewater Treatment, Development Fee Report	N/A	Gallons

PROPOSED DEVELOPMENT FEES

Development fees for residential development will be assessed per dwelling unit, based on the type of unit. Nonresidential development fees will be assessed per square foot of floor area (non-utility) or per meter (utility). Fees shown below represent the maximum allowable fees – development fees fund 100 percent of growth-related infrastructure.

San Luis may adopt fees that are less than the amounts shown; however, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements, and/or a decrease in San Luis' LOS standards. All costs in the Development Fee Report are in current dollars with no assumed inflation rate over time. If cost estimates change significantly over time, development fees should be recalibrated.

Figure 2: Proposed Non-Utility Development Fees

Residential Development	Development Fees per Unit					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Single Family	$562	$308	$753	$446	$1,709	**$3,778**
Multi-Family	$363	$199	$487	$288	$799	**$2,136**

Nonresidential Development	Development Fees per 1,000 Square Feet					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Industrial	$433	$238	$127	$135	$378	**$1,311**
Commercial	$622	$341	$183	$678	$1,718	**$3,542**
Institutional	$247	$136	$73	$350	$982	**$1,788**
Office & Other Services	$789	$433	$232	$265	$743	**$2,462**

Figure 3: Proposed Utility Development Fees

Residential Development	Development Fees per Meter		
Land Use	Water	Wastewater	Total
Single Family	$542	$912	**$1,454**

Nonresidential Development	Development Fees per Meter		
Meter Size (inches)	Water	Wastewater	Total
0.75 Displacement	$542	$912	**$1,454**
1.00 Displacement	$905	$1,523	**$2,428**
1.50 Displacement	$1,804	$3,036	**$4,840**
2.00 Compound	$2,888	$4,860	**$7,748**
3.00 Compound	$5,781	$9,729	**$15,510**
4.00 Compound	$9,031	$15,200	**$24,231**
6.00 Compound	$18,058	$30,391	**$48,449**
8.00 Compound	$28,893	$48,628	**$77,521**

CURRENT DEVELOPMENT FEES

San Luis's current development fees are displayed below in Figure 4 and Figure 5.

Figure 4: Current Non-Utility Development Fees

Residential Development	Development Fees per Unit					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Single Family	$405	$476	$735	$503	$943	**$3,062**
Multi-Family	$365	$428	$662	$452	$801	**$2,708**

Nonresidential Development	Development Fees per 1,000 Square Feet					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Industrial	$163	$461	$320	$177	$336	**$1,457**
Commercial	$659	$399	$277	$716	$1,231	**$3,282**
Institutional	$238	$196	$136	$259	$492	**$1,321**
Office & Other Services	$258	$663	$461	$280	$533	**$2,195**

Figure 5: Current Utility Development Fees

Residential Development	Development Fees per Meter		
Land Use	Water	Wastewater	Total
Single Family	$0	$1,634	**$1,634**

Nonresidential Development	Development Fees per Meter		
Meter Size (inches)	Water	Wastewater	Total
0.75 Displacement	$0	$1,634	**$1,634**
1.00 Displacement	$0	$2,721	**$2,721**
1.50 Displacement	$0	$5,412	**$5,412**
2.00 Compound	$0	$8,654	**$8,654**
3.00 Compound	$0	$17,311	**$17,311**
4.00 Compound	$0	$27,039	**$27,039**
6.00 Compound	$0	$54,048	**$54,048**
8.00 Compound	$0	$86,472	**$86,472**

Difference Between Proposed and Current Development Fees

The differences between the proposed and current development fees are displayed below in Figure 6 and Figure 7.

Figure 6: Difference Between Proposed and Current Non-Utility Development Fees

Residential Development	Development Fees per Unit					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Single Family	$157	($168)	$18	($57)	$766	**$716**
Multi-Family	($2)	($229)	($175)	($164)	($2)	**($572)**

Nonresidential Development	Development Fees per 1,000 Square Feet					
Land Use	Fire	General Government	Parks	Police	Streets	Total
Industrial	$270	($223)	($193)	($42)	$42	**($146)**
Commercial	($37)	($58)	($94)	($38)	$487	**$260**
Institutional	$9	($60)	($63)	$91	$490	**$467**
Office & Other Services	$531	($230)	($229)	($15)	$210	**$267**

Figure 7: Difference Between Proposed and Current Utility Development Fees

Residential Development	Development Fees per Meter		
Land Use	Water	Wastewater	Total
Single Family	$542	($722)	**($180)**

Nonresidential Development	Development Fees per Meter		
Meter Size (inches)	Water	Wastewater	Total
0.75 Displacement	$542	($722)	**($180)**
1.00 Displacement	$905	($1,198)	**($293)**
1.50 Displacement	$1,804	($2,376)	**($572)**
2.00 Compound	$2,888	($3,794)	**($906)**
3.00 Compound	$5,781	($7,582)	**($1,801)**
4.00 Compound	$9,031	($11,839)	**($2,808)**
6.00 Compound	$18,058	($23,657)	**($5,599)**
8.00 Compound	$28,893	($37,844)	**($8,951)**

FIRE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the facilities and assets that can be included in the Fire Facilities IIP:

> *"Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training police and firefighters from more than one station or substation."*

The Fire Facilities IIP includes components for fire stations, apparatus, communications equipment, and the cost of preparing the Fire Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used to calculate the apparatus and communications equipment components of the Fire Facilities IIP and Development Fees. A plan-based methodology is used for fire stations and the Development Fee Report.

Service Area

San Luis's Fire Department strives to provide a uniform response time citywide, and its fire stations operate as an integrated network. Depending on the number and type of calls, apparatus can be dispatched citywide from any of the stations. As a result, the service area for the Fire Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Fire Facilities IIP and related Development Fee Report will allocate the cost of public services between residential and nonresidential based on functional population.

For certain infrastructure facilities TischlerBise often uses "functional population" to establish the relative demand for infrastructure from both residential and nonresidential development. As shown in the Appendix C, functional population accounts for people living and working in a jurisdiction. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in San Luis are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside San Luis are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data, the most recent year available, the resulting proportionate share is 80 percent residential and 20 percent nonresidential.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Shown below, Figure F1 displays the demand indicators for residential and nonresidential land uses. For residential development the table displays the persons per housing unit. For nonresidential development the table displays the number of employees per thousand square feet of floor area.

Figure F1: Fire Facilities Ratio of Service Unit to Development Unit

Residential Development	
Land Use	**Persons per Housing Unit[1]**
Single Family	3.45
Multi-Family	2.23

Nonresidential Development	
Land Use	**Jobs per 1,000 Sq Ft[1]**
Industrial	1.63
Commercial	2.34
Institutional	0.93
Office & Other Services	2.97

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

Fire Stations – Plan-Based

The City of San Luis plans to expand its current inventory of fire stations to serve existing and future development. Shown below in Figure F2, San Luis's existing fire station includes 14,466 square feet. To allocate the proportionate share of demand for fire stations to residential and nonresidential development, this analysis uses functional population. San Luis's existing level of service for residential development is 0.34069 square feet per person (14,466 square feet X 80 percent residential share / 33,969 persons), and the nonresidential level of service is 0.55596 square feet per job (14,466 square feet X 20 percent nonresidential share / 5,204 jobs).

Figure F2: Existing Fire Stations

Description	Square Feet
Fire Station #1	14,466

Level-of-Service (LOS) Standards	
Existing Square Feet	14,466
Residential	
Residential Share	80%
2018 Population	33,969
Square Feet per Person	0.34069
Nonresidential	
Nonresidential Share	20%
2018 Jobs	5,204
Square Feet per Job	0.55596

Fire Stations Planned Level of Service

San Luis plans to spend $2,500,000 to construct a 15,000-square-foot facility, Fire Station #2, by 2028 to serve all development in 2028. Upon completion of Fire Station #2, San Luis fire stations will include 29,466 square feet of floor area. To allocate the proportionate share of demand for fire stations to residential and nonresidential development, this analysis uses functional population. San Luis's planned (2028) level of service for residential development in 2028 is 0.48814 square feet per person (29,466 square feet X 80 percent residential share / 48,291 persons), and the planned (2028) nonresidential level of service in 2028 is 0.79659 square feet per job (29,466 square feet X 20 percent nonresidential share / 7,398 jobs). Since the planned level of service exceeds the existing level of service, San Luis will need to identify funding from sources other than development fees to pay for existing development's share of Fire Station #2 – a requirement of the Enabling Legislation to ensure future development receives the same level of service as existing development.

Based on San Luis Fire Department estimates for Fire Station #2, the cost is $167 per square foot ($2,500,000 / 15,000 square feet). The residential cost is $81.36 per person (0.48814 square feet per person X $167 per square foot) and the nonresidential cost is $132.77 per job (0.79659 square feet per job X $167 per square foot).

Figure 8: Planned Fire Station Level of Service

Description	Square Feet	Total Cost
Fire Station #2	15,000	$2,500,000

Cost Allocation Factors	
Cost per Square Foot	$167

Level-of-Service (LOS) Standards	
Existing Square Feet	14,466
Additional Square Feet	15,000
2028 Square Feet	29,466
Residential	
Residential Share	80%
2028 Population	48,291
Square Feet per Person	0.48814
Cost per Person	**$81.36**
Nonresidential	
Nonresidential Share	20%
2028 Jobs	7,398
Square Feet per Job	0.79659
Cost per Job	**$132.77**

Source: City of San Luis Fire Department.

Fire Apparatus – Incremental Expansion

Development fees will be used to expand San Luis Fire Department's inventory of fire apparatus in order to serve future development. Figure F3 lists the current apparatus used by the San Luis Fire Department, and it includes 5 apparatus with a total replacement cost of approximately $2,865,000. The replacement cost per unit is $573,000 ($2,865,000 / 5 apparatus).

Figure F3: Existing Fire Apparatus and Equipment

Description	Units	Unit Cost	Replacement Cost
Pumper	2	$765,000	$1,530,000
Ladder Truck	1	$1,000,000	$1,000,000
Rescue Vehicle	1	$85,000	$85,000
Special Ops Truck	1	$250,000	$250,000
Total	5	$573,000	$2,865,000

Fire Apparatus Level of Service

As previously discussed, functional population is used to allocate the proportionate share of demand to residential and nonresidential development. The existing LOS for residential development is 0.00012 apparatus per person (5 apparatus X 80 percent residential share / 33,969 persons), and the nonresidential level of service is 0.00019 apparatus per job (5 apparatus X 20 percent nonresidential share / 5,204 jobs). For fire apparatus, the residential cost is $67.47 per person (0.00012 apparatus per person X $573,000 per apparatus), and the nonresidential cost is $110.11 (0.00019 units per job X $573,000 per apparatus).

Figure 9: Existing Fire Apparatus Level of Service

Level-of-Service (LOS) Standards	
Existing Apparatus	5
Residential	
Residential Share	80%
2018 Population	33,969
Apparatus per Person	0.00012
Cost per Person	**$67.47**
Nonresidential	
Nonresidential Share	20%
2018 Jobs	5,204
Apparatus per Job	0.00019
Cost per Job	**$110.11**

Source: City of San Luis Fire Department.

Communications Equipment – Incremental Expansion

Development fees will be used to expand San Luis Fire Department's inventory of communications equipment in order to serve future development. Figure F4 lists the current communications equipment used by the San Luis Fire Department, and it does not include communications equipment used by the San Luis Police Department. The existing inventory includes 45.5 units of communications equipment with a total replacement cost of $532,000. The replacement cost per unit is $11,692 ($532,000 / 45.5 units).

Figure F4: Existing Communications Equipment

Description	Units	Unit Cost	Replacement Cost
Mobile Radios	10.0	$6,000	$60,000
Portable Radios	30.0	$5,000	$150,000
Console Radios	5.0	$29,000	$145,000
Communication Equipment	0.5	$354,000	$177,000
Total	45.5	$11,692	$532,000

Communications Equipment Level of Service

As previously discussed, functional population is used to allocate the proportionate share of demand to residential and nonresidential development. The existing LOS for residential development is 0.00107 units per person (45.5 units X 80 percent residential share / 33,969 persons), and the nonresidential level of service is 0.00175 units per job (45.5 units X 20 percent nonresidential share / 5,204 jobs). For communications equipment, the residential cost is $12.53 per person (0.00107 units per person X $11,692 per unit), and the nonresidential cost is $20.45 (0.00175 units per job X $11,692 per unit).

Figure F5: Existing Communications Equipment Level of Service

Level-of-Service (LOS) Standards	
Existing Units	45.5
Residential	
Residential Share	80%
2018 Population	33,969
Units per Person	0.00107
Cost per Person	**$12.53**
Nonresidential	
Nonresidential Share	20%
2018 Jobs	5,204
Units per Job	0.00175
Cost per Job	**$20.45**

Source: City of San Luis Fire Department.

IIP and Development Fee Report – Plan-Based

The cost to prepare the Fire Facilities IIP and development fees totals $11,500. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is $1.41 per person and $2.30 per job.

Figure F6: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential Nonresidential	100%	VMT	216,030	257,566	41,536	$0.29
Water	$11,500	Residential Nonresidential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
Wastewater	$11,500	Residential Nonresidential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
Total	$69,460							

PROJECTED SERVICE UNITS AND PROJECTED DEMAND FOR SERVICES

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

The *Land Use Assumptions* document projects an additional 14,322 persons and 2,194 jobs over the next 10 years, as shown in Figure F7.

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Based on projected residential and nonresidential development over the next 10 years, and the level-of-service analysis discussed in this section, San Luis needs to construct approximately 8,700 square feet of fire stations, acquire approximately 2 fire apparatus, and acquire approximately 19 units of communications equipment to serve future development.

Fire Stations

Shown in Figure F7, San Luis' population is projected to increase by 14,322 persons by 2028, and employment is projected to increase by 2,194 jobs during the same period. Using the planned (2028) LOS, future development will demand 8,739 additional square feet of fire stations. Based on the average cost of $167 per square foot, the growth-related expenditure on fire stations is $1.5 million (8,739 square feet X $167 per square foot). Based on the planned (2028) LOS, San Luis should have 20,727 square feet of fire stations in the 2018 base year. Since San Luis has only 14,466 square feet of fire facilities, existing development will be required to fund 6,261 square feet of Fire Station #2. Therefore, existing development's share of Fire Station #2 is approximately $1.0 million (6,261 square feet X $167 per square foot).

Figure F7: Projected Demand for Fire Stations

Type of Infrastructure	Level of Service	Demand Unit	Cost per Square Foot
Fire Stations	0.48814 Square Feet	per Person	$167
	0.79659 Square Feet	per Job	

Need for Fire Stations					
Year	Population	Jobs	Residential Square Feet	Nonresidential Square Feet	Total Square Feet
2018	33,969	5,204	16,582	4,145	20,727
2019	35,187	5,390	17,176	4,294	21,470
2020	36,447	5,583	17,791	4,447	22,239
2021	37,753	5,783	18,429	4,607	23,035
2022	39,102	5,990	19,087	4,772	23,859
2023	40,503	6,205	19,771	4,943	24,714
2024	41,954	6,427	20,479	5,120	25,599
2025	43,454	6,657	21,212	5,303	26,515
2026	45,010	6,895	21,971	5,493	27,464
2027	46,623	7,142	22,759	5,689	28,448
2028	48,291	7,398	23,573	5,893	29,466
10-Yr Increase	14,322	2,194	6,991	1,748	8,739

Growth-Related Expenditures	$1,165,192	$291,288	$1,456,480

Fire Apparatus

Shown in Figure F8, San Luis' population is projected to increase by 14,322 persons by 2028, and employment is projected to increase by 2,194 jobs during the same period. Using the 2018 LOS, future development will demand 2.1 additional apparatus. Based on the average cost of $573,000 per unit, the growth-related expenditure on apparatus is $1.2 million (2.1 units X $573,000).

Figure F8: Projected Demand for Fire Apparatus

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Fire Apparatus	0.00012 Apparatus	per Person	$573,000
	0.00019 Apparatus	per Job	

Need for Fire Apparatus					
Year	Population	Jobs	Residential Apparatus	Nonresidential Apparatus	Total Apparatus
2018	33,969	5,204	4.0	1.0	5.0
2019	35,187	5,390	4.1	1.0	5.2
2020	36,447	5,583	4.3	1.1	5.4
2021	37,753	5,783	4.4	1.1	5.6
2022	39,102	5,990	4.6	1.2	5.8
2023	40,503	6,205	4.8	1.2	6.0
2024	41,954	6,427	4.9	1.2	6.2
2025	43,454	6,657	5.1	1.3	6.4
2026	45,010	6,895	5.3	1.3	6.6
2027	46,623	7,142	5.5	1.4	6.9
2028	48,291	7,398	5.7	1.4	7.1
10-Yr Increase	14,322	2,194	1.7	0.4	2.1
Growth-Related Expenditures			**$966,352**	**$241,576**	**$1,207,928**

Communications Equipment

Shown in Figure F9, San Luis' population is projected to increase by 14,322 persons by 2028, and employment is projected to increase by 2,194 jobs during the same period. Using the 2018 LOS, future development will demand 19.2 additional units of communications equipment. Based on the average cost of $11,692 per unit, the growth-related expenditure on communications equipment is $224,313 (19.2 units X $11,692).

Figure F9: Projected Demand for Communications Equipment

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Communications Equipment	0.00107 Units	per Person	$11,692
	0.00175 Units	per Job	

Need for Communications Equipment					
Year	Population	Jobs	Residential Units	Nonresidential Units	Total Units
2018	33,969	5,204	36.4	9.1	45.5
2019	35,187	5,390	37.7	9.4	47.1
2020	36,447	5,583	39.1	9.8	48.8
2021	37,753	5,783	40.5	10.1	50.6
2022	39,102	5,990	41.9	10.5	52.4
2023	40,503	6,205	43.4	10.9	54.3
2024	41,954	6,427	45.0	11.2	56.2
2025	43,454	6,657	46.6	11.6	58.2
2026	45,010	6,895	48.2	12.1	60.3
2027	46,623	7,142	50.0	12.5	62.4
2028	48,291	7,398	51.7	12.9	64.7
10-Yr Increase	14,322	2,194	15.4	3.8	19.2
Growth-Related Expenditures			**$179,455**	**$44,858**	**$224,313**

Fire Facilities Development Fees

Revenue Credit/Offset

A revenue credit/offset is not necessary for Fire Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Fire Facilities Development Fees

Infrastructure components and cost factors for Fire Facilities are summarized in the upper portion of Figure F10. The cost per service unit is $162.77 per person and $265.62 per job. Figure F10 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

Fire Facilities development fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of $562 is calculated using a cost per service unit of $162.77 per person multiplied by a demand unit of 3.45 persons per housing unit.

Nonresidential development fees are assessed according to the number of jobs per 1,000 square feet of floor area. The fee of $622 per 1,000 square feet of commercial development is derived from a cost per service unit of $265.62 per job multiplied by a demand unit of 2.34 jobs per 1,000 square feet.

Figure F10: Schedule of Fire Facilities Development Fees

Fee Component	Cost per Person	Cost per Job
Fire Station	$81.36	$132.77
Fire Apparatus	$67.47	$110.11
Communications Equipment	$12.53	$20.45
Development Fee Report	$1.41	$2.30
Total	$162.77	$265.62

Residential Development	Development Fees per Unit			
Land Use	Persons per Housing Unit[1]	Proposed Fees	Current Fees[2]	Increase / Decrease
Single Family	3.45	**$562**	$405	$157
Multi-Family	2.23	**$363**	$365	($2)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Land Use	Jobs per 1,000 Sq Ft[1]	Proposed Fees	Current Fees[2]	Increase / Decrease
Industrial	1.63	**$433**	$163	$270
Commercial	2.34	**$622**	$659	($37)
Institutional	0.93	**$247**	$238	$9
Office & Other Services	2.97	**$789**	$258	$531

1. See Land Use Assumptions
2. Fire share of current Public Safety Fees.

PROJECTED FIRE FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected Fire Facilities Development Fee Revenue

Projected fee revenue shown in Figure F11 is based on the development projections in the *Land Use Assumptions* document and the updated Fire Facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Anticipated development fee revenue of approximately $2.899 million over the next 10 years is approximately equal to the projected growth-related cost of fire infrastructure ($2.900 million). Existing development's share of Fire Station #2 is approximately $1.043 million and should be funded with revenue other than development fees.

Figure F11: Projected Fire Facilities Development Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Fire Station	$1,456,479	$1,043,521	$2,500,000
Fire Apparatus	$1,207,928	$0	$1,207,928
Communications Equipment	$224,313	$0	$224,313
Development Fee Report	$11,500	$0	$11,500
Total	$2,900,220	$1,043,521	$3,943,741

		Residential Units $536 per unit	Industrial $433 per 1,000 sq. ft.	Commercial $622 per 1,000 sq. ft.	Institutional $247 per 1,000 sq. ft.	Office & Other $789 per 1,000 sq. ft.
Year		Hsg Unit	KSF	KSF		KSF
Base	2018	10,325	390	524	1,465	668
Year 1	2019	10,695	404	542	1,518	692
Year 2	2020	11,078	418	562	1,572	717
Year 3	2021	11,475	433	582	1,629	742
Year 4	2022	11,885	449	602	1,687	769
Year 5	2023	12,311	465	624	1,747	796
Year 6	2024	12,752	482	646	1,810	825
Year 7	2025	13,208	499	670	1,875	854
Year 8	2026	13,681	517	693	1,942	885
Year 9	2027	14,171	535	718	2,012	917
Year 10	2028	14,678	554	744	2,084	949
10-Yr Increase		4,353	164	220	619	281
Projected Revenue		$2,320,110	$70,672	$136,095	$152,188	$220,633

Projected Fee Revenue	**$2,899,697**
Total Expenditures	**$3,943,741**
Existing Development Share	**$1,044,044**

General Government Facilities IIP

ARS § 9-463.05 (T)(7)(h) defines the facilities and assets that can be included in the General Government Facilities IIP:

> *"any facility that was financed and that meets all of the requirements prescribed in Subsection R of this section."*

ARS § 9-463.05 (R) states:

> *"A municipality may continue to assess a development fee adopted before January 1, 2012 for any facility that was financed before June 1, 2011 if:*
>
> *1. Development fees were pledged to repay debt service obligations related to the construction of the facility.*
>
> *2. After August 1, 2014, any development fees collected under this subsection are used solely for the payment of principal and interest on the portion of the bonds, notes or other debt service obligations issued before June 1, 2011 to finance construction of the facility."*

The General Government Facilities IIP includes a component for facilities financed before June 1, 2011. San Luis issued bonds in 2005 to finance its City Hall and issued a bond in 2014 to refund the 2005 bond. The cost recovery method is used to repay future development's share of the remaining principal and interest.

Service Area

San Luis provides a uniform level of service and equal access to City Hall within the city limits. As a result, the service area for the General Government Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The General Government Facilities IIP and development fees will allocate the cost of public services between residential and nonresidential based on functional population. As shown in the *Land Use Assumptions* document, residential development generates 80 percent of demand and nonresidential development generates the remaining 20 percent of demand.

Ratio of Service Unit to Development Unit

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Figure GG1**Error! Reference source not found.** displays the demand indicators for residential and nonresidential land uses. For residential development the table displays the persons per housing unit. For nonresidential development the table displays the number of jobs per thousand square feet of floor area.

Figure GG1: General Government Facilities Ratio of Service Unit to Development Unit

Residential Development	
Land Use	**Persons per Housing Unit[1]**
Single Family	3.45
Multi-Family	2.23

Nonresidential Development	
Land Use	**Jobs per 1,000 Sq Ft[1]**
Industrial	1.63
Commercial	2.34
Institutional	0.93
Office & Other Services	2.97

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

General Government Facilities – Cost Recovery

San Luis issued bonds to finance its City Hall in 2005 and issued a bond in 2014 to refund the 2005 debt, so the development fees will be used solely for the repayment of principal and interest. San Luis plans to retire the City Hall debt in 2038, and City Hall is projected to serve both existing and future development. Therefore, remaining principal and interest costs are allocated to total projected residential and nonresidential development in 2038. San Luis's population in 2038 is projected to be 68,649 persons of whom 33,969 are from existing development with the remaining 34,680 persons from future development. Total employment in 2038 is projected to be 10,516 jobs. Existing employment is estimated to equal 5,204 jobs, and the projected employment increase equals 5,312 jobs from future development. For both residential and nonresidential development, the growth share (future development's share) equals 50.5 percent of total development in 2038.

Based on remaining principal and interest of $7.67 million, the residential cost is $89.38 per person ($7,672,619 X 80 percent residential share X 50.5 percent growth share / 34,680 population increase) and the nonresidential cost is $145.88 per job ($7,672,619 X 20 percent nonresidential share X 50.5 percent growth share / 5,312 employment increase).

Figure GG2: Planned Level of Service

Description	Year of Debt Obligation[1]	Year of Final Payment	Remaining Principal and Interest
2014 Series Bond (City Hall Share)	2014	2038	$ 7,672,619

Development Type	Proportionate Share	Proportionate Cost	Growth Share[2]	Growth Cost	2018 - 2038 Demand Unit Increase		Cost per Demand Unit	
Residential	80%	$6,138,095	50.5%	$3,099,738	34,680	persons	**$89.38**	**per person**
Nonresidential	20%	$1,534,524	50.5%	$774,934	5,312	jobs	**$145.88**	**per job**
Total		$7,672,619	50.5%	$3,874,672				

1. Original debt issued in 2005. Refunding bond issued in 2014.

2. Residential Growth Share (50.5%) is 1 - (33,969 residents in 2018/ 68,649 residents in 2038). Nonresidential Growth Share (50.5%) is 1 - (5,204 jobs in 2018/ 10,516 jobs in 2038).

PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

As shown in the *Land Use Assumptions* document, population is expected to increase by an additional 34,680 persons and employment is expected to increase by 5,312 jobs over the next 20 years.

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

General Government Facilities Development Fees

Revenue Credit/Offset

A revenue credit/offset is not necessary for General Government Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected General Government Facilities Development Fees

Infrastructure components and cost factors for General Government Facilities are summarized in the upper portion of Figure GG3. The cost per service unit for General Government Facilities is $89.38 per person and $145.88 per job. Figure GG3 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

General Government Facilities development fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of $308 is calculated using a cost per service unit of $89.38 per person multiplied by a demand unit of 3.45 persons per housing unit.

Nonresidential development fees are assessed using jobs as the service unit. The fee of $341 per 1,000 square feet of commercial development is derived from a cost per service unit of $145.88 per job multiplied by a demand unit of 2.34 jobs per 1,000 square feet.

Figure GG3: Schedule of General Government Facilities Development Fees

Fee Component	Cost per Person	Cost per Job
City Hall Debt	$89.38	$145.88
Total	$89.38	$145.88

Residential Development	Development Fees per Unit			
Land Use	Persons per Housing Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	3.45	**$308**	$476	($168)
Multi-Family	2.23	**$199**	$428	($229)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Land Use	Jobs per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	1.63	**$238**	$461	($223)
Commercial	2.34	**$341**	$399	($58)
Institutional	0.93	**$136**	$196	($60)
Office & Other Services	2.97	**$433**	$663	($230)

1. See Land Use Assumptions

PROJECTED GENERAL GOVERNMENT FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's enabling legislation (ARS § 9-463.05(E)(7)).

In accordance with state law, this report includes an IIP for General Government Facilities needed to accommodate new development. Projected fee revenue shown in Figure GG4 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for General Government Facilities. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than is projected, the demand for infrastructure will also decrease, along with development fee revenue. Anticipated 10-year development fee revenue of $1.60 million is approximately equal to the projected growth-related cost of City Hall debt ($1.60 million) during the next 10 years. Existing development's share will need to be funded with other sources of revenue.

Figure GG4: Projected General Government Facilities Development Fee Revenue

Fee Component	Growth Share	Existing Share	Total
City Hall Debt	$3,874,672	$3,797,947	$7,672,619
Total	$3,874,672	$3,797,947	$7,672,619

		Residential Units $294 per unit	Industrial $238 per 1,000 sq. ft.	Commercial $341 per 1,000 sq. ft.	Institutional $136 per 1,000 sq. ft.	Office & Other $433 per 1,000 sq. ft.
Year		Hsg Unit	KSF	KSF		KSF
Base	2018	10,325	390	524	1,465	668
Year 1	2019	10,695	404	542	1,518	692
Year 2	2020	11,078	418	562	1,572	717
Year 3	2021	11,475	433	582	1,629	742
Year 4	2022	11,885	449	602	1,687	769
Year 5	2023	12,311	465	624	1,747	796
Year 6	2024	12,752	482	646	1,810	825
Year 7	2025	13,208	499	670	1,875	854
Year 8	2026	13,681	517	693	1,942	885
Year 9	2027	14,171	535	718	2,012	917
Year 10	2028	14,678	554	744	2,084	949
10-Year Increase		4,353	164	220	619	281
Projected Revenue		$1,280,044	$38,997	$75,099	$83,979	$121,747

Projected Fee Revenue	**$1,599,866**
Total Expenditures	**$7,672,619**

PARKS FACILITIES IIP

ARS § 9-463.05 (T)(7)(g) defines the facilities and assets that can be included in the Parks Facilities IIP:

> *"Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include vehicles, equipment or that portion of any facility that is used for amusement parks, aquariums, aquatic centers, auditoriums, arenas, arts and cultural facilities, bandstand and orchestra facilities, bathhouses, boathouses, clubhouses, community centers greater than three thousand square feet in floor area, environmental education centers, equestrian facilities, golf course facilities, greenhouses, lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools."*

The Parks Facilities IIP includes components for community park land, community park amenities, neighborhood park amenities, and the cost of preparing the Parks Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used to calculate the community park land, community park amenities, and neighborhood park amenities components. A plan-based methodology is used for the Development Fee Report.

Service Area

San Luis plans to provide a uniform level of service and equal access to parks and recreational facilities within the city limits. The parks and recreation programs are structured and provided to make full use of San Luis' total inventory of facilities. As a result, the service area for the Parks Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Parks Facilities IIP and development fees will allocate the cost of public services between residential and nonresidential based on daytime population. According to the U.S. Census Bureau's OnTheMap web application, there were 2,655 inflow commuters traveling to San Luis for work in 2015. The proportionate share is based on cumulative impact days per year with residents potentially impacting parks and recreational facilities 365 days per year. Inflow commuters potentially impact park and recreational facilities 250 days per year, assuming 5 workdays per week multiplied by 50 weeks per year. For parks and recreational facilities, residential development generates 95 percent of demand and nonresidential development generates the remaining five percent of demand.

Figure PR1: Daytime Population

Land Use	Population / Inflow Commuters[1]	Annual Impact Days per Capita[2]	Cumulative Annual Impact Days	Proportionate Share
Residential	33,969	365	12,398,685	95%
Nonresidential	2,655	250	663,750	5%

1. Inflow commuters from Inflow/ Outflow Analysis, OnTheMap Web Application 6.5, U.S. Census Bureau.

2. Residential: 365 Days per Year, Nonresidential: 5 Days per Week x 50 Weeks per Year

Ratio of Service Unit to Development Unit

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Figure PR2 displays the demand indicators for residential and nonresidential land uses. For residential development the table displays the persons per housing unit. For nonresidential development the table displays the number of jobs per thousand square feet of floor area.

Figure PR2: Parks Facilities Ratio of Service Unit to Development Unit

Residential Development	
Land Use	**Persons per Housing Unit[1]**
Single Family	3.45
Multi-Family	2.23

Nonresidential Development	
Land Use	**Jobs per 1,000 Sq Ft[1]**
Industrial	1.63
Commercial	2.34
Institutional	0.93
Office & Other Services	2.97

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

Community Park Land – Incremental Expansion

San Luis plans to maintain its current LOS for community park land over the next 10 years. Shown below in Figure PR3, San Luis' existing community parks include 33.1 acres of land. The definition of necessary public services for parks and recreational facilities includes parks or facilities on real property up to 30 acres in area, or parks and facilities larger than 30 acres if the facilities provide a direct benefit to the development. All of San Luis' community parks are less than 30 acres.

Figure PR3: Existing Community Park Land

Description	Acres
Friendship Park	6.5
Joe Cabello Park	3.1
Joe Orduño Park	16.7
Moctezuma Park	6.8
Total	33.1

Community Park Land Level of Service

To allocate the proportionate share of demand for developed park land to residential and nonresidential development, this analysis uses daytime population shown in Figure PR1. San Luis' existing LOS for residential development is approximately 0.00092 acres of community park land per person (33.1 acres of community park land X 95 percent residential share / 33,969 persons). For nonresidential development, the existing LOS is approximately 0.00032 acres of community park land per job (33.1 acres of community park land X 5 percent nonresidential share / 5,204 jobs).

Shown in Figure PR4, San Luis plans to spend $2.2 million to acquire 30 acres of community park land, therefore, this analysis uses $73,333 per acre of community park land. The residential cost of community park land is $67.83 per person (0.00092 acres of community park land per person X $73,333 per acre of community park land) and the nonresidential cost of community park land is $23.70 per job (0.00032 acres of community park land per job X $73,333 per acre of community park land).

Figure PR4: Existing Community Park Land Level of Service

Cost Allocation Factors	
Cost per Acre - Land Acquisition[1]	$73,333

Level-of-Service (LOS) Standards	
Total Acres	33.1
Residential	
Residential Share	95%
2018 Population	33,969
Total Acres per Person	0.00092
Cost per Person	**$67.83**
Nonresidential	
Nonresidential Share	5%
2018 Jobs	5,204
Total Acres per Job	0.00032
Cost per Job	**$23.70**

Description	Acres[1]	Cost per Acre	Total Cost[1]
Land	30	$73,333	$2,200,000
Amenities	30	$92,167	$2,765,000
Total	30	$165,500	$4,965,000

1. City of San Luis Parks and Recreation Department

Community Park Amenities – Incremental Expansion

San Luis will use development fees to expand its inventory of community park amenities. The current inventory of community park amenities, shown below in Figure PR5, includes 33.1 acres of amenities.

Figure PR5: Existing Community Park Amenities

Description	Acres
Friendship Park	6.5
Joe Cabello Park	3.1
Joe Orduño Park	16.7
Moctezuma Park	6.8
Total	33.1

Community Park Amenities Level of Service

As previously discussed, daytime population is used to allocate the proportionate share of demand to residential and nonresidential development. San Luis' existing community park amenity level of service for residential development is 0.00092 acres of amenities per person (33.1 acres of amenities X 95 percent residential share / 33,969 persons). The nonresidential level of service is 0.00032 acres of amenities per job (33.1 acres of amenities X 5 percent nonresidential share / 5,204 jobs).

Shown in Figure PR6, San Luis plans to spend $2.765 million to construct amenities on 30 acres of community park land, therefore, this analysis uses $92,167 per acre of community park amenities. The community park amenities cost for residential development is $85.25 per person (0.00092 acres of amenities per person X $92,167 per acre of amenities). The community park amenities cost for nonresidential development is $29.79 per job (0.00032 acres of amenities per job X $92,167 per amenity).

Figure PR6: Existing Community Park Amenities Level of Service

Cost Allocation Factors	
Cost per Acre - Amenities[1]	$92,167

Level-of-Service (LOS) Standards	
Developed Acres	33.1
Residential	
Residential Share	95%
2018 Population	33,969
Developed Acres per Person	0.00092
Cost per Person	**$85.25**
Nonresidential	
Nonresidential Share	5%
2018 Jobs	5,204
Developed Acres per Job	0.00032
Cost per Job	**$29.79**

Cost Basis from Planned Community / Regional Park

Description	Acres[1]	Cost per Acre	Total Cost[1]
Land	30	$73,333	$2,200,000
Amenities	30	$92,167	$2,765,000
Total	30	$165,500	$4,965,000

1. City of San Luis Parks and Recreation Department

Neighborhood Park Amenities – Incremental Expansion

San Luis will use development fees to expand its inventory of neighborhood park amenities. Since San Luis receives most land for neighborhood parks through land dedications for storm drainage, this analysis excludes the cost of land acquisition for neighborhood parks. The current inventory of neighborhood park amenities includes 28 amenities with a replacement cost of $2.28 million. Neighborhood park amenities are distributed across 36.4 acres of neighborhood park land; therefore, neighborhood park amenities cost $62,637 per acre ($2,280,000 replacement cost / 36.4 acres of neighborhood park land).

Figure PR7: Existing Neighborhood Park Amenities

Description	Units[1]	Unit Cost	Replacement Cost[1]
Playground	26	$80,000	$2,080,000
Skate Park	2	$100,000	$200,000
Total	28	$81,429	$2,280,000

Cost Allocation Factors	
Replacement Cost	$2,280,000
Acres of Amenities[1]	36.4
Cost per Acre - Amenities	$62,637

1. City of San Luis Parks and Recreation Department

Community Park Amenities Level of Service

As previously discussed, daytime population is used to allocate the proportionate share of demand to residential and nonresidential development. San Luis' existing neighborhood park amenity level of service for residential development is 0.00102 acres of amenities per person (36.4 acres of amenities X 95 percent residential share / 33,969 persons). The nonresidential level of service is 0.00036 acres of amenities per job (36.4 acres of amenities X 5 percent nonresidential share / 5,204 jobs).

Shown in Figure PR7, San Luis spends $62,637 per acre for neighborhood park amenities. The neighborhood park amenities cost for residential development is $63.71 per person (0.00102 acres of amenities per person X $62,637 per acre of amenities). The neighborhood park amenities cost for nonresidential development is $22.26 per job (0.00036 acres of amenities per job X $62,637 per amenity).

Figure PR8: Existing Neighborhood Park Amenities Level of Service

Cost Allocation Factors	
Cost per Acre - Land Acquisition	$0
Cost per Acre - Amenities[1]	$62,637
Total Cost per Acre	$62,637

Level-of-Service (LOS) Standards	
Existing Developed Acres	36.4
Residential	
Residential Share	95%
2018 Population	33,969
Developed Acres per Person	0.00102
Cost per Person	**$63.71**
Nonresidential	
Nonresidential Share	5%
2018 Jobs	5,204
Developed Acres per Job	0.00036
Cost per Job	**$22.26**

1. City of San Luis Parks and Recreation Department

Development Fee Report – Plan-Based

The cost to prepare the Parks Facilities IIP and development fees totals $11,500. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is $1.41 per person and $2.30 per job.

Figure PR9: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential Nonresidential	100%	VMT	216,030	257,566	41,536	$0.29
Water	$11,500	Residential Nonresidential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
Wastewater	$11,500	Residential Nonresidential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
Total	$69,460							

PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

The *Land Use Assumptions* document projects an additional 14,322 persons and 2,194 jobs over the next 10 years, as shown in Figure PR10.

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Based on projected residential and nonresidential development over the next 10 years, and the level-of-service analysis discussed in this section, San Luis needs to acquire and construct approximately 14 acres of community park land and amenities, and construct approximately 15 acres of neighborhood park amenities to serve future development.

Community Park Land

San Luis plans to maintain its current community park land level of service over the next 10 years. Based on a projected population increase of 14,322 persons, San Luis's future residential development demands 13.2 additional acres of community park land (14,322 additional persons X 0.00092 acres per person). Future nonresidential development demands 0.7 additional acres of community park land (2,194 additional jobs X 0.00032 acres per job) over the next 10 years. Future development demands 13.9 additional acres of community park land over the next 10 years at a cost of approximately $1.0 million.

Figure PR10: Projected Demand for Community Park Land

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Community Park Land	0.00092 Acres	per Person	$73,333
	0.00032 Acres	per Job	

Need for Community Parks					
Year	Population	Jobs	Residential Acres	Nonresidential Acres	Total Acres
2,018	33,969	5,204	31.4	1.7	33.1
2,019	35,187	5,390	32.5	1.7	34.3
2,020	36,447	5,583	33.7	1.8	35.5
2,021	37,753	5,783	34.9	1.9	36.8
2,022	39,102	5,990	36.2	1.9	38.1
2,023	40,503	6,205	37.5	2.0	39.5
2,024	41,954	6,427	38.8	2.1	40.9
2,025	43,454	6,657	40.2	2.2	42.3
2,026	45,010	6,895	41.6	2.2	43.9
2,027	46,623	7,142	43.1	2.3	45.4
2,028	48,291	7,398	44.7	2.4	47.1
10-Yr Increase	14,322	2,194	13.2	0.7	13.9

Growth-Related Expenditures	**$971,461**	**$51,998**	**$1,023,459**

Community Park Amenities

San Luis also plans to maintain its current community park amenities level of service over the next 10 years. Based on a projected population increase of 14,322 persons, San Luis's future residential development demands 13.2 additional acres of community park amenities (14,322 additional persons X 0.00092 acres of amenities per person). Future nonresidential development demands 0.7 additional acres of community park amenities (2,194 additional jobs X 0.00032 acres of park amenities per job) over the next 10 years. Future development demands 13.9 additional acres of community park amenities over the next 10 years at a cost of approximately $1.3 million.

Figure PR11: Projected Demand for Community Park Amenities

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Community Park Amenities	0.00092 Developed Acres	per Person	$92,167
	0.00032 Developed Acres	per Job	

Need for Community Park Amenities					
Year	Population	Jobs	Residential Acres	Nonresidential Acres	Total Acres
2,018	33,969	5,204	31.4	1.7	33.1
2,019	35,187	5,390	32.5	1.7	34.3
2,020	36,447	5,583	33.7	1.8	35.5
2,021	37,753	5,783	34.9	1.9	36.8
2,022	39,102	5,990	36.2	1.9	38.1
2,023	40,503	6,205	37.5	2.0	39.5
2,024	41,954	6,427	38.8	2.1	40.9
2,025	43,454	6,657	40.2	2.2	42.3
2,026	45,010	6,895	41.6	2.2	43.9
2,027	46,623	7,142	43.1	2.3	45.4
2,028	48,291	7,398	44.7	2.4	47.1
10-Yr Increase	14,322	2,194	13.2	0.7	13.9

Growth-Related Expenditures	**$1,220,951**	**$65,359**	**$1,286,310**

Neighborhood Park Amenities

San Luis also plans to maintain its current neighborhood park amenities level of service over the next 10 years. Based on a projected population increase of 14,322 persons, San Luis's future residential development demands 14.6 additional acres of neighborhood park amenities (14,322 additional persons X 0.00102 acres of amenities per person). Future nonresidential development demands 0.8 additional acres of neighborhood park amenities (2,194 additional jobs X 0.00036 acres of park amenities per job) over the next 10 years. Future development demands 15.4 additional acres of neighborhood park amenities over the next 10 years at a cost of approximately $961,000.

Figure PR12: Projected Demand for Neighborhood Park Amenities

Type of Infrastructure	Level of Service	Demand Unit	Cost per Acre
Neighborhood Park Amenities	0.00102 Developed Acres	per Person	$62,637
	0.00036 Developed Acres	per Job	

Need for Neighborhood Park Amenities					
Year	Population	Jobs	Residential Acres	Nonresidential Acres	Total Acres
2,018	33,969	5,204	34.6	1.8	36.4
2,019	35,187	5,390	35.8	1.9	37.7
2,020	36,447	5,583	37.1	2.0	39.1
2,021	37,753	5,783	38.4	2.1	40.5
2,022	39,102	5,990	39.8	2.1	41.9
2,023	40,503	6,205	41.2	2.2	43.4
2,024	41,954	6,427	42.7	2.3	45.0
2,025	43,454	6,657	44.2	2.4	46.6
2,026	45,010	6,895	45.8	2.5	48.2
2,027	46,623	7,142	47.4	2.5	50.0
2,028	48,291	7,398	49.1	2.6	51.7
10-Yr Increase	14,322	2,194	14.6	0.8	15.4
Growth-Related Expenditures			**$912,455**	**$48,838**	**$961,293**

PARKS FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue credit/offset is not necessary for Parks Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Parks Facilities Development Fees

Infrastructure components and cost factors for Parks Facilities are summarized in the upper portion of Figure PR13. The cost per service unit for Parks Facilities is $218.20 per person and $78.05 per job. Figure PR13 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

Parks Facilities development fees for residential development are assessed according to the number of persons per housing unit. For example, the single-family fee of $753 is calculated using a cost per service unit of $218.20 per person multiplied by a demand unit of 3.45 persons per housing unit.

Nonresidential development fees are calculated using jobs as the service unit. The fee of $183 per 1,000 square feet of commercial development is derived from a cost per service unit of $78.05 per job multiplied by a demand unit of 2.34 jobs per 1,000 square feet.

Figure PR13: Schedule of Parks Facilities Development Fees

Fee Component	Cost per Person	Cost per Job
Community Park Land	$67.83	$23.70
Community Park Amenities	$85.25	$29.79
Neighborhood Park Amenities	$63.71	$22.26
Development Fee Report	$1.41	$2.30
Total	$218.20	$78.05

Residential Development	Development Fees per Unit			
Land Use	Persons per Housing Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	3.45	**$753**	$735	$18
Multi-Family	2.23	**$487**	$662	($175)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Land Use	Jobs per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	1.63	**$127**	$320	($193)
Commercial	2.34	**$183**	$277	($94)
Institutional	0.93	**$73**	$136	($63)
Office & Other Service	2.97	**$232**	$461	($229)

1. See Land Use Assumptions

PROJECTED PARKS FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

In accordance with state law, this report includes an IIP for Parks Facilities needed to accommodate new development. Projected fee revenue shown in Figure PR14 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Parks Facilities. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than is projected, the demand for infrastructure will also decrease, along with development fee revenue. Anticipated development fee revenue of $3.3 million is approximately equal to the projected growth-related cost of parks facilities ($3.3 million).

Figure PR14: Projected Parks Facilities Development Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Community Park Land	$1,023,459	$0	$1,023,459
Community Park Amenities	$1,286,310	$0	$1,286,310
Neighborhood Park Amenities	$961,293	$0	$961,293
Development Fee Report	$11,500	$0	$11,500
Total	$3,282,562	$0	$3,282,562

		Residential Units $718 per unit	Industrial $127 per 1,000 sq. ft.	Commercial $183 per 1,000 sq. ft.	Institutional $73 per 1,000 sq. ft.	Office & Other $232 per 1,000 sq. ft.
Year		Hsg Unit	KSF	KSF		KSF
Base	2018	10,325	390	524	1,465	668
Year 1	2019	10,695	404	542	1,518	692
Year 2	2020	11,078	418	562	1,572	717
Year 3	2021	11,475	433	582	1,629	742
Year 4	2022	11,885	449	602	1,687	769
Year 5	2023	12,311	465	624	1,747	796
Year 6	2024	12,752	482	646	1,810	825
Year 7	2025	13,208	499	670	1,875	854
Year 8	2026	13,681	517	693	1,942	885
Year 9	2027	14,171	535	718	2,012	917
Year 10	2028	14,678	554	744	2,084	949
10-Yr Increase		4,353	164	220	619	281
Projected Revenue		$3,113,943	$20,531	$39,534	$44,210	$64,093

Projected Fee Revenue	**$3,282,311**
Total Expenditures	**$3,282,562**

POLICE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the facilities and assets that can be included in the Police Facilities IIP:

> *"Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation."*

The Police Facilities IIP includes components for police stations, vehicles, communications equipment, and the cost of preparing the Police Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used to calculate the components for stations, vehicles, and communications equipment. A plan-based methodology is used for the Development Fee Report.

Service Area

San Luis's Police Department strives to provide a uniform response time citywide. As a result, the service area for the Police Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. The Police Facilities IIP and development fees are assessed on both residential and nonresidential development based on functional population shown in the *Land Use Assumptions* document. Based on 2015 functional population data, residential development accounts for approximately 80 percent of demand for police services and nonresidential development is responsible for the remaining 20 percent.

Ratio of Service Unit to Development Unit

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Figure P1 displays the demand indicators for residential and nonresidential land uses. For residential development the table displays the persons per housing unit. For nonresidential development the table displays the number of vehicle trips generated per thousand square feet of floor area.

Figure P1: Police Facilities Ratio of Service Unit to Development Unit

Residential Development	
Land Use	Persons per Housing Unit[1]
Single Family	3.45
Multi-Family	2.23

Nonresidential Development	
Land Use	Avg Wkdy Veh Trips[1]
Industrial	2.48
Commercial	12.46
Institutional	6.44
Office & Other Service	4.87

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

Police Stations – Incremental Expansion

San Luis plans to use development fees to expand its current inventory of police stations to serve future development. Shown below in Figure P2, San Luis' existing police station includes 19,856 square feet. This is San Luis's only police station, and a substation will be needed as the east side of San Luis becomes more developed.

Figure P2: Existing Police Stations

Description	Square Feet
Police Station #1	19,856
Total	19,856

Police Station Level of Service

Functional population provides the proportionate share of demand for police stations from residential and nonresidential development. San Luis' existing level of service for residential development is 0.46763 square feet per person (19,856 square feet X 80 percent residential share / 33,696 persons). The nonresidential level of service is 0.19674 square feet per vehicle trip (19,856 square feet X 20 percent nonresidential share / 20,185 vehicle trips). Using estimates for the planned police substation, the cost is $167 per square foot ($1,118,900 / 6,700 square feet). The residential cost is $78.09 per person (0.46763 square feet per person X $167 per square foot), and the nonresidential cost is $32.86 per vehicle trip (0.19674 square feet per vehicle trip X $167 per square foot).

Figure P3: Existing Police Station Level of Service

Level-of-Service (LOS) Standards	
Existing Square Feet	19,856
Residential	
Residential Share	80%
2018 Population	33,969
Square Feet per Person	0.46763
Cost per Person	**$78.09**
Nonresidential	
Nonresidential Share	20%
2018 Vehicle Trips	20,185
Square Feet per Vehicle Trip	0.19674
Cost per Vehicle Trip	**$32.86**

Cost Basis from Planned Stations

Description	Square Feet[1]	Total Cost[1]
New Substation	6,700	$1,118,900

1. City of San Luis Police Department.

Police Vehicles – Incremental Expansion

Development fees will be used to expand San Luis' inventory of police vehicles. Figure P4 lists the current vehicles used by San Luis's Police Department – 37 vehicles representing a replacement cost of approximately $1.58 million.

Figure P4: Existing Police Vehicles

Description	Units	Unit Cost	Replacement Cost
Patrol Vehicles	25	$48,000	$1,200,000
Motor Unit Vehicles	4	$32,000	$128,000
K-9 Vehicles	2	$37,000	$74,000
Detective Vehicles	4	$27,000	$108,000
Command Staff Vehicles	2	$37,000	$74,000
Total	37	$42,811	$1,584,000

Police Vehicle Level of Service

Functional population is used to allocate the proportionate share of demand to residential and nonresidential development. San Luis' existing level of service for residential development is 0.00087 vehicles per person (37 vehicles X 80 percent residential share / 33,969 persons). The nonresidential level of service is 0.00037 vehicles per vehicle trip (37 vehicles X 20 percent nonresidential share / 20,185 vehicle trips). The residential cost is $37.30 per person ($42,811 per vehicle X 0.00087 vehicles per person), and the nonresidential cost is $15.69 per vehicle trip ($42,811 per vehicle X 0.00037 vehicles per vehicle trip).

Figure P5: Existing Police Vehicle Level of Service

Cost Allocation Factors	
Cost per Vehicle	$42,811

Level-of-Service (LOS) Standards	
Existing Vehicles	37
Residential	
Residential Share	80%
2018 Population	33,969
Units per Person	0.00087
Cost per Person	**$37.30**
Nonresidential	
Nonresidential Share	20%
2018 Vehicle Trips	20,185
Units per Vehicle Trip	0.00037
Cost per Vehicle Trip	**$15.69**

Source: City of San Luis Police Department.

Communications Equipment – Incremental Expansion

Development fees will be used to expand San Luis' inventory of communications equipment. Figure P6 lists the current communications equipment used by San Luis' Police Department and does not include communications equipment used by San Luis' Fire Department. San Luis currently has 43.5 units of communications equipment representing a replacement cost of $531,000 ($12,207 per unit).

Figure P6: Existing Communications Equipment

Description	Units	Unit Cost	Replacement Cost
Mobile Radios	12.0	$5,000	$60,000
Portable Radios	25.0	$5,000	$125,000
Radio Console 5000	2.0	$29,000	$58,000
Digital Video Recorders	3.0	$23,000	$69,000
Radio Console 7500	1.0	$42,000	$42,000
Communication Equipment	0.5	$354,000	$177,000
Total	43.5	$12,207	$531,000

Communications Equipment Level of Service

Communications equipment costs are allocated according to functional population – 80 percent to residential development and 20 percent to nonresidential development. San Luis' existing level of service for residential development is 0.00102 units per person (43.5 units X 80 percent residential share / 33,969 persons). The nonresidential level of service is 0.00043 units per vehicle trip (43.5 units X 20 percent nonresidential share / 20,185 vehicle trips). The residential cost is $12.51 per person ($12,207 per unit X 0.00102 units per person), and the nonresidential cost is $5.26 per vehicle trip ($12,207 per unit X 0.00043 units per vehicle trip).

Figure P7: Existing Communications Equipment Level of Service

Cost Allocation Factors	
Cost per Unit	$12,207

Level-of-Service (LOS) Standards	
Existing Units	43.5
Residential	
Residential Share	80%
2018 Population	33,969
Units per Person	0.00102
Cost per Person	**$12.51**
Nonresidential	
Nonresidential Share	20%
2018 Vehicle Trips	20,185
Units per Vehicle Trip	0.00043
Cost per Vehicle Trip	**$5.26**

Source: City of San Luis Police Department.

Development Fee Report – Plan-Based

The cost to prepare the Police Facilities IIP and related Development Fee Report totals $11,500. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is $1.41 per person and $0.59 per vehicle trip.

Figure P8: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential	100%	VMT	216,030	257,566	41,536	$0.29
		Nonresidential						
Water	$11,500	Residential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
		Nonresidential						
Wastewater	$11,500	Residential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
		Nonresidential						
Total	$69,460							

Projected Service Units and Projected Demand for Services

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

As shown in the *Land Use Assumptions* document, San Luis expects an additional 14,322 persons and 8,503 nonresidential vehicle trips over the next 10 years.

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Based on projected residential and nonresidential development over the next 10 years, and the level-of-service analysis discussed in this section, San Luis needs to construct approximately 8,400 square feet of police facilities, acquire approximately 16 additional vehicles, and acquire approximately 18 additional units of communications equipment to serve future development.

Police Stations

Over the next 10 years, San Luis' population is projected to increase by 14,322 persons and nonresidential vehicle trips are projected to increase by 8,503. Using the 2018 LOS standards shown at the top of Figure P9, future residential development generates demand for 6,697 additional square feet of police stations (0.46763 square feet per person X 14,322 additional persons), and future nonresidential development generates demand for 1,673 additional square feet of police stations (0.19674 square feet per vehicle trip X 8,053 additional vehicle trips). The 10-year demand for additional police stations equals 8,370 square feet at a cost of approximately $1.40 million.

Figure P9: Projected Demand for Police Stations

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Stations	0.46763 Units	per Person	$167
	0.19674 Units	per Vehicle Trip	

Need for Police Stations					
Year	Population	Vehicle Trips	Residential Square Feet	Nonresidential Square Feet	Total Square Feet
2018	33,969	20,185	15,885	3,971	19,856
2019	35,187	20,902	16,454	4,112	20,567
2020	36,447	21,656	17,044	4,261	21,304
2021	37,753	22,431	17,654	4,413	22,067
2022	39,102	23,225	18,285	4,569	22,854
2023	40,503	24,057	18,940	4,733	23,673
2024	41,954	24,920	19,619	4,903	24,522
2025	43,454	25,821	20,320	5,080	25,400
2026	45,010	26,735	21,048	5,260	26,308
2027	46,623	27,698	21,802	5,449	27,251
2028	48,291	28,688	22,582	5,644	28,226
10-Yr Increase	14,322	8,503	6,697	1,673	8,370

Growth-Related Expenditures	$1,118,405	$279,415	$1,397,820

Police Vehicles

Shown in Figure P10, population is projected to increase by 14,322 persons by 2028, and nonresidential trips will increase by 8,503 trips during the same period. Using the 2018 LOS standards shown in Figure P10, future residential development generates demand for 12.5 additional vehicles (0.00087 vehicles per person X 14,322 additional persons), and future nonresidential development generates demand for 3.1 additional vehicles (0.00037 vehicles per vehicle trip X 8,503 additional vehicle trips). The 10-year demand for additional police vehicles equals 15.6 vehicles at a cost of approximately $670,000.

Figure P10: Projected Demand for Police Vehicles

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Vehicles	0.00087 Units	per Person	$42,811
	0.00037 Units	per Vehicle Trip	

Need for Police Vehicles					
Year	Population	Vehicle Trips	Residential Units	Nonresidential Units	Total Units
2018	33,969	20,185	29.6	7.4	37.0
2019	35,187	20,902	30.7	7.7	38.3
2020	36,447	21,656	31.8	7.9	39.7
2021	37,753	22,431	32.9	8.2	41.1
2022	39,102	23,225	34.1	8.5	42.6
2023	40,503	24,057	35.3	8.8	44.1
2024	41,954	24,920	36.6	9.1	45.7
2025	43,454	25,821	37.9	9.5	47.3
2026	45,010	26,735	39.2	9.8	49.0
2027	46,623	27,698	40.6	10.2	50.8
2028	48,291	28,688	42.1	10.5	52.6
10-Yr Increase	14,322	8,503	12.5	3.1	15.6

Growth-Related Expenditures	**$534,211**	**$133,415**	**$667,626**

Communications Equipment

As shown in Figure P11, population and nonresidential trips drive the need for communications equipment. Based on the development projections in the *Land Use Assumptions* document, San Luis will need approximately 18 additional units of communications equipment over the next 10 years [(0.00102 units per person X 14,322 additional persons) + (0.00043 units per vehicle trip X 8,503 additional vehicle trips). The 10-year, growth-related capital cost associated with these additional units of communications equipment is $223,895.

Figure P11: Projected Demand for Communications Equipment

Type of Infrastructure	Level of Service	Demand Unit	Cost per Unit
Police Communications Equipment	0.00102 Units	per Person	$12,207
	0.00043 Units	per Vehicle Trip	

Need for Police Communications Equipment					
Year	Population	Vehicle Trips	Residential Units	Nonresidential Units	Total Units
2018	33,969	20,185	34.8	8.7	43.5
2019	35,187	20,902	36.0	9.0	45.1
2020	36,447	21,656	37.3	9.3	46.7
2021	37,753	22,431	38.7	9.7	48.3
2022	39,102	23,225	40.1	10.0	50.1
2023	40,503	24,057	41.5	10.4	51.9
2024	41,954	24,920	43.0	10.7	53.7
2025	43,454	25,821	44.5	11.1	55.6
2026	45,010	26,735	46.1	11.5	57.6
2027	46,623	27,698	47.8	11.9	59.7
2028	48,291	28,688	49.5	12.4	61.8
10-Yr Increase	14,322	8,503	14.7	3.7	18.3

Growth-Related Expenditures	**$179,168**	**$44,727**	**$223,895**

POLICE FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue credit/offset is not necessary for Police Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Police Facilities Development Fees

Figure P12 displays the ratio of a service unit to various types of land uses for residential and nonresidential development. Police Facilities development fees for residential development are assessed according to the number of persons per housing unit. Nonresidential development fees are calculated using vehicle trips as the service unit. The multipliers for each land use, which include average weekday vehicle trips ends per thousand square feet and a trip adjustment factor, are shown below. The cost per service unit for Police Facilities is $129.31 per person and $54.40 per vehicle trip.

Development fees for residential development are determined by type of housing unit. For example, the single-family fee of $446 is calculated using a cost per service unit of $129.31 per person multiplied by the demand unit of 3.45 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. Trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 10th Edition 2017). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate development fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent.

For commercial development, the trip adjustment factor is less than 50 percent because retail development and some services attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, the ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends. These factors are shown to derive inbound vehicle trips for each type of nonresidential land use.

The fee of $678 per 1,000 square feet of commercial development is derived from a cost per service unit of $54.40 per vehicle trip, ,multiplied by a demand unit of 37.75 average weekday vehicle trip ends per 1,000 square feet, multiplied by a trip rate adjustment factor of 33 percent.

Figure P12: Schedule of Police Facilities Development Fees

Fee Component	Cost per Person	Cost per Vehicle Trip
Police Station	$78.09	$32.86
Vehicles	$37.30	$15.69
Communications Equipment	$12.51	$5.26
Development Fee Report	$1.41	$0.59
Total	$129.31	$54.40

Residential Development	Development Fees per Unit			
Land Use	Persons per Housing Unit[1]	Proposed Fees	Current Fees[2]	Increase / Decrease
Single Family	3.45	**$446**	$503	($57)
Multi-Family	2.23	**$288**	$452	($164)

Nonresidential Development	Development Fees per 1,000 Square Feet				
Land Use	Avg Wkdy Veh Trip Ends[1]	Trip Rate Adjustment	Proposed Fees	Current Fees[2]	Increase / Decrease
Industrial	4.96	50%	**$135**	$177	($42)
Commercial	37.75	33%	**$678**	$716	($38)
Institutional	19.52	33%	**$350**	$259	$91
Office & Other Service	9.74	50%	**$265**	$280	($15)

1. See Land Use Assumptions
2. Police share of current Public Safety Fees.

PROJECTED POLICE FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains revenue forecasts required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected Police Facilities Development Fee Revenue

Projected fee revenue shown in Figure P13 is based on the development projections in the *Land Use Assumptions* document and the updated Police Facilities development fees. If development occurs faster than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs slower than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Anticipated development fee revenue of approximately $2.3 million over the next 10 years is approximately equal to the projected growth-related cost of police facilities ($2.3 million).

Figure P13: Projected Revenue from Police Facilities Development Fees

Fee Component	Growth Share	Existing Share	Total
Police Station	$1,397,820	$0	$1,397,820
Vehicles and Equipment	$667,626	$0	$667,626
Communications Equipment	$223,895	$0	$223,895
Development Fee Report	$11,500	$0	$11,500
Total	$2,300,841	$0	$2,300,841

		Residential Units $425 per unit	Industrial $135 per 1,000 sq. ft.	Commercial $678 per 1,000 sq. ft.	Institutional $350 per 1,000 sq. ft.	Office & Other $265 per 1,000 sq. ft.
Year		Hsg Unit	KSF	KSF		KSF
Base	2018	10,325	390	524	1,465	668
Year 1	2019	10,695	404	542	1,518	692
Year 2	2020	11,078	418	562	1,572	717
Year 3	2021	11,475	433	582	1,629	742
Year 4	2022	11,885	449	602	1,687	769
Year 5	2023	12,311	465	624	1,747	796
Year 6	2024	12,752	482	646	1,810	825
Year 7	2025	13,208	499	670	1,875	854
Year 8	2026	13,681	517	693	1,942	885
Year 9	2027	14,171	535	718	2,012	917
Year 10	2028	14,678	554	744	2,084	949
10-Yr Increase		4,353	164	220	619	281
Projected Revenue		$1,840,916	$21,995	$148,209	$215,631	$74,005

Projected Fee Revenue	**$2,300,757**
Total Expenditures	**$2,300,841**

STREET FACILITIES IIP

ARS § 9-463.05 (T)(7)(e) defines the facilities and assets that can be included in the Street Facilities IIP:

> *"Street facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon."*

The Street Facilities IIP includes components for arterial improvements and the cost of professional services for preparing the Street Facilities IIP and related Development Fee Report. The incremental expansion methodology is used for arterial improvements, and the plan-based methodology is used for the related Development Fee Report.

Service Area

San Luis' arterial street network is designed to efficiently move traffic throughout the city; therefore, the service area for the Street Facilities IIP and Development Fees is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to provide necessary public services to the development. Trip generation rates and trip adjustment factors are used to determine the proportionate impact of residential, commercial, office, and industrial land uses San Luis' street network.

Ratio of Service Unit to Development Unit

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Figure S1 displays the demand indicators for residential and nonresidential land uses. For residential development the table displays VMT generated per housing unit. For nonresidential development the table displays VMT generated per thousand square feet of floor area.

Figure S1: Street Facilities Ratio of Service Unit to Development Unit

Residential Development	per Unit				
Land Use	AWVTE per Unit[1]	Trip Adj Factor[1]	Trip Length Weight Factor[1]	Average Miles per Trip	Vehicle Miles of Travel
Single Family	10.90	62%	1.21	2.325	19.01
Multi-Family	5.10	62%	1.21	2.325	8.90

Nonresidential Development	per 1,000 Square Feet				
Land Use	AWVTE per 1,000 Sq Ft[1]	Trip Adj Factor[1]	Trip Length Weight Factor[1]	Average Miles per Trip	Vehicle Miles of Travel
Industrial	4.96	50%	0.73	2.325	4.21
Commercial	37.75	33%	0.66	2.325	19.12
Institutional	19.52	33%	0.73	2.325	10.93
Office & Other Servuces	9.74	50%	0.73	2.325	8.27

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

The existing public services included in the Street Facilities IIP are 24 lane miles of arterials.

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

The daily lane capacity used in this analysis is 9,000, which is the roadway capacity of a two-lane rural arterial, found in the City of San Luis Small Area Transportation Study.

LEVEL OF SERVICE AND RATIO OF SERVICE UNIT TO LAND USE

Service Units

San Luis will use average weekday vehicle trip ends as the service units for documenting existing level-of-service standards and allocating the costs of future improvements. Components used to determine the service units and input variables are discussed, including trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

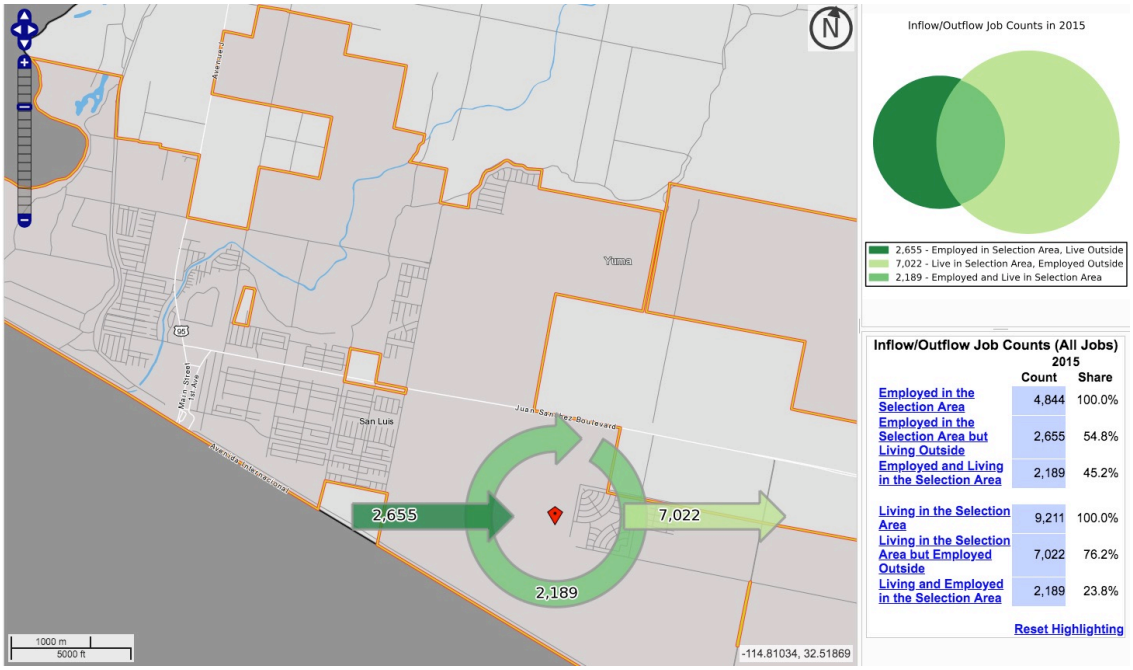
Trip Rate Adjustments

San Luis's Street Facilities Development Fees use average weekday trip generation rates from the reference book *Trip Generation* published by the Institute of Transportation Engineers (ITE 2017). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate Street Facilities Development Fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed further below, the development fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Adjustment for Commuting Patterns

Residential development has a trip adjustment factor of 65 percent to account for commuters leaving San Luis for work. According to the 2009 National Household Travel Survey, weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure S2, the Census Bureau's web application OnTheMap indicates 76.2 percent of resident workers traveled outside San Luis for work in 2015. In combination, these factors (0.31 x 0.50 x 0.756 = 0.118) support the additional 12 percent allocation of trips to residential development.

Figure S2: Inflow / Outflow Analysis



Adjustment for Pass-By Trips

For commercial development, the trip adjustment factor is less than 50 percent because retail development attracts vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

Trip Length Weighting Factor by Type of Land Use

The Street Facilities Development Fees methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6 of the 2009 National Household Travel Survey, vehicle trips from residential development are approximately 121 percent of the average trip length. The residential trip length adjustment factor includes data on home-based work trips, social, and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 66 percent of the average trip length while other nonresidential development typically accounts for trips that are 73 percent of the average for all trips.

PROJECTED SERVICE UNITS, DEMAND, AND COSTS FOR SERVICES

TischlerBise created an aggregate travel model to convert development units within San Luis to project vehicle trips and vehicle miles of travel. Figure S3 summarizes the input variables used in the aggregate travel demand model.

Figure S3: Input Variables for Travel Demand Model

Development Type	ITE Code	Weekday VTE	Dev Unit	Trip Adj	Trip Length Wt Factor
Single Family	210	10.90	HU	62%	121%
Multi-Family	221	5.10	HU	62%	121%
Industrial	110	4.96	KSF	50%	73%
Commercial	820	37.75	KSF	33%	66%
Institutional	520	19.52	KSF	33%	73%
Office & Other Service	710	9.74	KSF	50%	73%

Avg Trip Length (miles)	2.325
Vehicle Capacity Per Lane	9,000

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

Projected development in San Luis over the next 10 years, and the corresponding need for additional lane miles of arterials, are shown in Figure S4. Trip generation rates and trip adjustment factors convert projected development into average weekday vehicle trips. As shown in Figure S4, future development in San Luis will generate 35,903 additional vehicle trips.

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

The travel demand model inputs are used to derive level of service in Vehicle Miles of Travel and future needs of lane miles. A Vehicle Mile of Travel (VMT) is a measurement unit equal to one vehicle traveling one mile. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length. Based on estimates shown in Figure S4, existing infrastructure standards using the average trip length of 2.325 miles in San Luis are 1.11 lane miles per 10,000 VMT (24.0 arterial lane miles / (216,030 VMT / 10,000)).

As shown on the lower right side of Figure S4, future development generates an additional 91,070 VMT over the next 10 years. To maintain the existing infrastructure standards, San Luis needs 10.12 additional lane miles of arterials to accommodate projected development over the next 10 years.

Figure S4: Projected Travel Demand

Development Type	ITE Code	Weekday VTE	Dev Unit	Trip Adj	Trip Length Wt Factor
Single Family	210	10.90	HU	62%	121%
Multi-Family	221	5.10	HU	62%	121%
Industrial	110	4.96	KSF	50%	73%
Commercial	820	37.75	KSF	33%	66%
Institutional	520	19.52	KSF	33%	73%
Office & Other Service	710	9.74	KSF	50%	73%

Avg Trip Length (miles)	2.325
Vehicle Capacity Per Lane	9,000

		2018	2019	2020	2021	2022	2023	2028	10-Year
		Base	1	2	3	4	5	10	Increase
Development Base	Single-Family Units	8,994	9,316	9,650	9,996	10,353	10,724	12,786	3,792
	Multi-Family Units	1,331	1,379	1,428	1,479	1,532	1,587	1,892	561
	Industrial KSF	390	404	418	433	449	465	554	164
	Commercial KSF	524	542	562	582	602	624	744	220
	Institutional KSF	1,465	1,518	1,572	1,629	1,687	1,747	2,084	619
	Office & Other Service KSF	668	692	717	742	769	796	949	281
Average Weekday Vehicle Trips	Single-Family Trips	60,781	62,958	65,215	67,553	69,966	72,473	86,408	25,626
	Multi-Family Trips	4,209	4,360	4,515	4,677	4,844	5,018	5,983	1,774
	Residential Trips	64,990	67,318	69,730	72,230	74,810	77,491	92,390	27,400
	Industrial Trips	967	1,002	1,037	1,074	1,114	1,153	1,374	407
	Commercial Trips	6,528	6,752	7,001	7,250	7,499	7,773	9,268	2,741
	Institutional Trips	9,437	9,778	10,126	10,493	10,867	11,253	13,424	3,987
	Office & Other Service Trips	3,253	3,370	3,492	3,614	3,745	3,877	4,622	1,368
	Nonresidential Trips	20,185	20,902	21,656	22,431	23,225	24,057	28,688	8,503
	Total Vehicle Trips	85,175	88,220	91,386	94,661	98,035	101,548	121,079	35,903
Demand	**Vehicle Miles of Travel (VMT)**	**216,030**	**223,760**	**231,784**	**240,091**	**248,657**	**257,566**	**307,100**	**91,070**
	Arterial Lane Miles Cumulative)	**24.00**	**24.86**	**25.75**	**26.68**	**27.63**	**28.62**	**34.12**	**10.12**
	Annual Lane Miles (Annual)		0.86	0.89	0.93	0.95	0.99	1.18	
								10-Year VMT Increase	42.2%

ARS § 9-463.05(E)(3) requires:

> *"A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

Arterial Improvements – Incremental Expansion

San Luis' current level of service for arterials is 1.11 lane miles per 10,000 VMT (24 lane miles / (216,030 VMT / 10,000)), and San Luis plans to maintain this level of service over the next 10 years. As shown in Figure S4, San Luis needs to construct 10.12 additional lane miles of arterials to maintain this standard over the next 10 years ((91,070 additional VMT / 10,000) X 1.11 lane miles per 10,000 VMT).

Shown below in Figure S5, San Luis' staff identified 23 lane miles of potential arterial improvements with an average cost of $806,087 per lane mile ($18,540,000 / 23 lane miles). San Luis may use development fees to fund 10.12 lane miles of the arterial improvements included in Figure S5. The cost per VMT for arterial improvements is $89.58 ($806,087 per lane mile X 10.12 additional lane miles / 91,070 additional VMT).

Figure S5: Planned Arterial Improvements

Project	Lane Miles	Eligible Cost
Juan Sanchez Blvd (Ave E to Main St)	8	$11,440,000
Juan Sanchez and 4th St Intersection Project	3	$1,100,000
Juan Sanchez and 6th St Intersection Project	1	$500,000
10th Ave Widening (Juan Sanchez to Co 22nd)	3	$1,500,000
Co 24th St Paving Project	3	$1,500,000
Co 22nd St and Sidewinder Rd Intersection	1	$500,000
Co 22nd St Widening (Sidewinder Rd to Main St)	4	$2,000,000
Total	23	$18,540,000

Source: City of San Luis Public Works Dept.

Cost per Lane Mile	$806,087
10-Year Demand for Additional Lane Miles	10.12
10-Year Cost for Additional Lane Miles	$8,157,600
10-Year VMT Increase	91,070
Cost per VMT	$89.58

Development Fee Report – Plan-Based

The cost to prepare the Street Facilities IIP and related Development Fee Report totals $11,960. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is $0.29 per VMT.

Figure S6: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential						
		Nonresidential	100%	VMT	216,030	257,566	41,536	$0.29
Water	$11,500	Residential						
		Nonresidential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
Wastewater	$11,500	Residential						
		Nonresidential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
Total	$69,460							

STREET FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue credit/offset is not necessary for the Street Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Street Facilities Development Fees

Infrastructure standards and cost factors for Street Facilities are summarized in the upper portion of Figure S7. The cost per service unit is $89.87 per vehicle mile of travel. Figure S7 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

Street Facilities development fees for residential development are assessed according to VMT generated per unit. The single-family fee of $1,709 is calculated using a cost per service unit of $89.87 per VMT multiplied by 10.90 average weekday vehicle trip ends, multiplied by 62 percent trip adjustment factor, multiplied by 2.325 miles per trip, multiplied by 121 percent trip length adjustment.

Nonresidential development fees are calculated using VMT as the service unit. The fee of $1,718 per 1,000 square feet of commercial development is derived from a cost per service unit of $89.87 per VMT multiplied by 37.75 average weekday vehicle trip ends, multiplied by 33 percent trip adjustment factor, multiplied by 2.325 miles per trip, multiplied by 66 percent trip length adjustment.

Figure S7: Schedule of Street Facilities Development Fees

Fee Component	Cost per VMT
Arterial Improvements	$89.58
Development Fee Report	$0.29
Total	$89.87

Avg Trip Length (miles)	2.325

Residential Development	Development Fees per Unit					
Land Use	AWVTE per Unit[1]	Trip Adj Factor[1]	Trip Length Weight Factor[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	10.90	62%	1.21	**$1,709**	$943	$766
Multi-Family	5.10	62%	1.21	**$799**	$801	($2)

Nonresidential Development	Development Fees per 1,000 Square Feet					
Land Use	AWVTE per 1,000 Sq Ft[1]	Trip Adj Factor[1]	Trip Length Weight Factor[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	4.96	50%	0.73	**$378**	$336	$42
Commercial	37.75	33%	0.66	**$1,718**	$1,231	$487
Institutional	19.52	33%	0.73	**$982**	$492	$490
Office & Other Servuces	9.74	50%	0.73	**$743**	$533	$210

1. See Land Use Assumptions

PROJECTED STREET FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected Street Facilities Development Fee Revenue

Projected fee revenue shown in Figure S8 is based on the development projections in the *Land Use Assumptions* document and the updated Street Facilities development fees. If development occurs at a faster rate than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs at a slower rate than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Anticipated development fee revenue of approximately $8.13 million over the next 10 years is approximately equal to the projected growth-related cost of street facilities ($8.17 million).

Figure S8: Projected Street Facilities Development Fee Revenue

Fee Component	Growth Share	Existing Share	Total
Arterial Improvements	$8,157,600	$0	$8,157,600
Development Fee Report	$11,960	$0	$11,960
Total	$8,169,560	$0	$8,169,560

Year		Residential Units $1,583 per unit	Industrial $378 per 1,000 sq. ft.	Commercial $1,718 per 1,000 sq. ft.	Institutional $982 per 1,000 sq. ft.	Office & Other $743 per 1,000 sq. ft.
		Hsg Unit	KSF	KSF	KSF	KSF
Base	2018	10,325	390	524	1,465	668
Year 1	2019	10,695	404	542	1,518	692
Year 2	2020	11,078	418	562	1,572	717
Year 3	2021	11,475	433	582	1,629	742
Year 4	2022	11,885	449	602	1,687	769
Year 5	2023	12,311	465	624	1,747	796
Year 6	2024	12,752	482	646	1,810	825
Year 7	2025	13,208	499	670	1,875	854
Year 8	2026	13,681	517	693	1,942	885
Year 9	2027	14,171	535	718	2,012	917
Year 10	2028	14,678	554	744	2,084	949
10-Yr Increase		4,353	164	220	619	281
Projected Revenue		$6,879,229	$61,926	$377,266	$607,098	$208,358

Projected Fee Revenue	**$8,133,877**
Total Expenditures	**$8,169,560**

WATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines facilities and assets that can be included in the Water Facilities IIP:

> *"Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities."*

The Water Facilities IIP includes components for existing water production, water storage, and the cost of preparing the Wastewater Facilities IIP and development fees. The cost recovery methodology is used for water production. The plan-based methodology is used for water storage and the Development Fee Report.

Service Area

The service area for the Water Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to provide necessary public services to the development. The water fees assessed pursuant to the Water Facilities IIP and related Development Fee Report are assessed on both residential and nonresidential development. City staff provided water demand to differentiate demand for water facilities from residential and nonresidential development. In 2018, residential water customers accounted for approximately 94 percent of total customers and 68 percent of max day demand. Nonresidential customers accounted for approximately six percent of total customers and 32 percent of max day demand.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Residential Water Facilities development fees are assessed per meter, based on max day gallons per connection. Development fees assume a residential unit in a multi-unit structure with a single meter would be served by a 0.75-inch meter. If not, then the corresponding meter size and capacity ratio shown below would be used to establish a ratio of service unit to land use.

For nonresidential Water Facilities development fees, capacity ratios by meter size are the appropriate demand indicator for water facilities. Capacity ratios equate 0.75-inch meters to the max day gallons per average single-family residential unit. Utilizing max day gallons is the most efficient way to show a direct relationship between development units, usage, and system capacity. The nonresidential Water Facilities development fees are calculated by multiplying the number of gallons per residential unit by the capacity ratio for the corresponding size and type of water meter, which are provided by the American Water Works Association (2017) and shown in Figure W1.

Figure W1: Water Facilities Ratio of Service Unit to Development Unit

Demand Indicators	
Residential Gallons per Max Day	510

Meter Size (inches)		Capacity Ratio[1]
0.75	Displacement	1.00
1.00	Displacement	1.67
1.50	Displacement	3.33
2.00	Compound	5.33
3.00	Compound	10.67
4.00	Compound	16.67
6.00	Compound	33.33
8.00	Compound	53.33

1. AWWA, Principles of Water Rates, Fees, and Charges, M1.

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

Existing Capacity and Usage

San Luis has seven well sites with a total capacity of 9.94 MGD. Production facilities for the water system should have sufficient capacity to meet the demands of the maximum day of the year. According to the City of San Luis Public Works Department, 2018 average day consumption is approximately 3.22 MGD. Using peaking factors from the San Luis Water System Master Plan (2016), max day demand is 1.5 times greater than average day demand. Applying the max day peaking factor to the average day demand of 3.22 MGD results in max day demand of 4.84 MGD – leaving 5.10 MGD of excess capacity in San Luis' water production facilities to serve future development (9.94 MGD – 4.84 MGD).

Figure W2: Well Capacity

Existing Wells	Capacity (MGD)	Max Day Usage (MGD)	Remaining (MGD)
Well Site 1	0.29	4.84	5.10
Well Site 2	0.43		
Well Site 3	1.44		
Well Site 4	1.44		
Well Site 5	0.00		
Well Site 6	3.17		
Well Site 7	3.17		
Total	**9.94**	**4.84**	**5.10**

Source: City of San Luis Public Works.

Water Demand

The following factors are used to differentiate the demand for water infrastructure between residential and nonresidential development. In 2018, average day water demand totaled 3.22 MGD. Residential water customers accounted for approximately 2.20 MGD of average day demand, and nonresidential water customers accounted for the remaining 1.03 MGD. Since this analysis uses max day demand to more accurately assess demand for water infrastructure to future development, Figure W3 shows the conversion of average day demand to max day demand using peaking factors from the San Luis Water System Master Plan (2016). Based on the analysis in the master plan, max day demand is 1.5 times greater than average day demand.

The existing level of service for water infrastructure is based on max demand in 2018. The current level of service for residential development for water service is approximately 510 gallons per connection per day. For nonresidential connections, water demand averages 4,029 gallons per connection per day. Each nonresidential connection averages approximately 13.5 jobs, and the projected increase in jobs drives the demand for water capacity from nonresidential development.

Figure W3: Water Demand Factors

Land Use	Avg Gallons per Day[1]	2018 Connections	Gallons per Day per Connection
Residential	2,190,620	6,443	340
Nonresidential	1,034,110	385	2,686
Total	3,224,730	6,828	

1. Average of water use in 2018, provided by the City of San Luis. Nonresidential includes Commercial, Government, Schools, and City.

Land Use	Max Gallons per Day[1]	2018 Connections	Gallons per Day per Connection
Residential	3,285,930	6,443	**510**
Nonresidential	1,551,165	385	4,029
Total	4,837,095	6,828	

1. Max Day Demand = Average Day Demand X 1.5, San Luis Water System Master Plan 2016.

PROJECTED SERVICE UNITS AND PROJECTED DEMAND FOR SERVICES

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Over the next 10 years, it is projected there will be an increase of 2,879 connections. Accordingly, the projected water demand increases by 2,039,311 max day gallons during the same period.

Figure W4: Projected Water Demand

Water Demand Projections								
Year		Residential Connections	Nonresidential Connections	Total Connections	Residential Gallons	Nonresidential Gallons	Average Day Gallons	Max Day Gallons
Base	2018	6,443	385	6,828	2,190,620	1,034,110	3,224,730	4,837,095
Year 1	2019	6,674	399	7,073	2,269,122	1,071,071	3,340,193	5,010,289
Year 2	2020	6,913	413	7,326	2,350,381	1,109,423	3,459,804	5,189,706
Year 3	2021	7,161	428	7,588	2,434,612	1,149,166	3,583,777	5,375,666
Year 4	2022	7,416	443	7,860	2,521,600	1,190,300	3,711,899	5,567,849
Year 5	2023	7,682	459	8,141	2,611,983	1,233,023	3,845,006	5,767,509
Year 6	2024	7,957	475	8,433	2,705,548	1,277,138	3,982,686	5,974,029
Year 7	2025	8,242	492	8,735	2,802,296	1,322,842	4,125,138	6,187,708
Year 8	2026	8,537	510	9,047	2,902,651	1,370,136	4,272,787	6,409,181
Year 9	2027	8,843	528	9,371	3,006,613	1,419,219	4,425,831	6,638,747
Year 10	2028	9,159	547	9,707	3,114,181	1,470,090	4,584,271	6,876,406
10-Yr Increase		2,716	162	2,879	923,561	435,980	1,359,541	2,039,311

Water Production – Cost Recovery

As shown in Figure W2, San Luis' water production facilities have 5.10 MGD of available capacity to serve future development. San Luis installed iron and manganese filters to increase water production capacity within the water system by 1.728 MGD, and development fees will be used to pay for future development's share of the production capacity created by the iron and manganese filters. Based on a cost of $2.3 million and additional capacity of 1.728 MGD, the cost of water production is $1.33 per gallon of capacity.

San Luis included $1.0 million of funding for the iron and manganese filters during its most recent rate study, so it is necessary to provide a credit for this potential double payment. Allocating $1.0 million of rate revenue to 1,728,000 gallons of capacity provides a credit of $0.58 per gallon.

Figure W5: Water Production Cost Allocation Factors

Project	Total Capacity	Total Cost	Cost per Gallon
Iron and Manganese Filters	1,728,000	$2,300,000	$1.33

Water Rate Revenue Credit	
Cost Supported by Rates	$1,000,000
Total Capacity (Gallons)	1,728,000
Rate Credit per Gallon	($0.58)

Water Storage – Plan-Based

San Luis plans to construct a new water storage tank with 1.0 MG of capacity to serve future development. Shown below in Figure W6, San Luis staff identified a growth-related water storage tank with a cost of $1.3 million. When allocated to the planned capacity of 1.0 MG, the cost is $1.30 per gallon of capacity.

San Luis included $1.0 million of funding for the water storage tank during its most recent rate study, so it is necessary to provide a credit for this potential double payment. Allocating $1.0 million of rate revenue to 1,000,000 gallons of capacity provides a credit of $1.00 per gallon.

Figure W6: Water Storage Cost Allocation Factors

Project	Total Capacity	Total Cost	Cost per Gallon
Water Storage Tank	1,000,000	$1,300,000	$1.30

Water Rate Revenue Credit	
Cost Supported by Rates	$1,000,000
Total Capacity (Gallons)	1,000,000
Rate Credit per Gallon	($1.00)

IIP and Development Fee Report – Plan-Based

The cost to prepare the Water Facilities IIP and development fees totals $11,500. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is $0.01 per gallon.

Figure W7: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential Nonresidential	100%	VMT	216,030	257,566	41,536	$0.29
Water	$11,500	Residential Nonresidential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
Wastewater	$11,500	Residential Nonresidential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
Total	$69,460							

WATER FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue credit/offset is necessary for the Water Facilities development fees, because costs include projects funded with water rate revenue. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Water Facilities Development Fees

Infrastructure components and cost factors for Water Facilities are summarized in the upper portion of Figure W8. The cost per service unit is $1.06 per gallon. Figure W8 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

Residential Water Facilities development fees are assessed on a per meter basis, based on max day demand – approximately 510 gallons. Development fees assume a residential unit in a multi-unit structure with a single meter would be served by a 0.75-inch meter. If not, then the corresponding meter size and capacity ratio shown below would be used to establish a ratio of service unit to land use. The single-family fee of $542 is calculated using a cost per service unit of $1.06 per gallon multiplied by max day demand per residential unit of approximately 510 gallons.

For nonresidential Water Facilities development fees, capacity ratios by meter size are the appropriate demand indicator for Water Facilities. Capacity ratios equate 0.75-inch meters to the max day demand per residential unit. Utilizing max day demand is the most efficient way to show a direct relationship between development units, usage, and system capacity. The nonresidential Water Facilities development fees are calculated by multiplying the max day demand per residential unit by the capacity ratio for the corresponding size and type of water meter, which are provided by the American Water Works Association (2017) and shown below in Figure W8. The fee for a 1.0-inch meter, $905, is calculated using a cost per service unit of $1.06 per gallon multiplied by max day demand per residential unit of approximately 510 gallons, multiplied by the capacity ratio of 1.67.

Figure W8: Schedule of Water Facilities Development Fees

Demand Indicators	
Residential Gallons per Max Day	510
Cost Factors per Gallon of Capacity	
Water Production	$1.33
Water Production Rate Credit	($0.58)
Water Storage	$1.30
Water Storage Rate Credit	($1.00)
Development Fee Report	$0.01
Total Cost per Gallon of Capacity	**$1.06**

Residential Development	Development Fees per Meter		
Land Use	Proposed Fees	Current Fees	Increase / Decrease
Single Family	**$542**	$0	$542

Nonresidential Development			Development Fees per Meter		
Meter Size (inches)		Capacity Ratio[1]	Proposed Fees	Current Fees	Increase / Decrease
0.75	Displacement	1.00	**$542**	$0	$542
1.00	Displacement	1.67	**$905**	$0	$905
1.50	Displacement	3.33	**$1,804**	$0	$1,804
2.00	Compound	5.33	**$2,888**	$0	$2,888
3.00	Compound	10.67	**$5,781**	$0	$5,781
4.00	Compound	16.67	**$9,031**	$0	$9,031
6.00	Compound	33.33	**$18,058**	$0	$18,058
8.00	Compound	53.33	**$28,893**	$0	$28,893

1. AWWA, Principles of Water Rates, Fees, and Charges, M1.

PROJECTED WATER FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected Water Facilities Development Fee Revenue

Projected fee revenue shown in Figure W9 is based on the development projections in the *Land Use Assumptions* document and the updated Water Facilities development fees. If development occurs at a faster rate than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs at a slower rate than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Anticipated development fee revenue of approximately $2.16 million over the next 10 years exceeds the projected growth-related cost of water facilities ($1.61 million). San Luis should include additional water facilities or stop collecting Water Facilities development fees when no additional capacity exists in the water production and water storage facilities included in the Water Facilities IIP.

Figure W9: Projected Water Facilities Development Fee Revenue

Fee Component	Growth Share
Water Production	$2,300,000
Water Production Credit	($1,000,000)
Water Storage	$1,300,000
Water Storage Credit	($1,000,000)
Development Fee Report	$11,500
Total	$1,611,500

		$1.06 per gallon
Year		Gallons
Base	2018	4,837,095
Year 1	2019	5,010,289
Year 2	2020	5,189,706
Year 3	2021	5,375,666
Year 4	2022	5,567,849
Year 5	2023	5,767,509
Year 6	2024	5,974,029
Year 7	2025	6,187,708
Year 8	2026	6,409,181
Year 9	2027	6,638,747
Year 10	2028	6,876,406
10-Yr Increase		2,039,311
Projected Revenue		$2,155,301

WASTEWATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(b) defines facilities and assets that can be included in the Wastewater Facilities IIP:

> *"Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities"*

The Wastewater Facilities IIP includes components for treatment and the cost of preparing the Wastewater Facilities IIP and related Development Fee Report. The plan-based methodology is used for the treatment component and the Development Fee Report.

Service Area

The service area for the Wastewater Facilities IIP is citywide.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to provide necessary public services to the development. The Wastewater Facilities IIP is based, and development fees are assessed, on both residential and nonresidential development. City staff provided wastewater flows to differentiate demand for wastewater facilities from residential and nonresidential development. In 2018, residential wastewater customers accounted for approximately 96 percent of total customers and 73 percent of average day flows. Nonresidential customers accounted for approximately four percent of total customers and 27 percent of average day flows.

RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services 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."*

Residential Wastewater Facilities development fees are assessed on a per meter basis, based on average day gallons per connection. Development fees assume a residential unit in a multi-unit structure with a single meter would be served by a 0.75-inch meter. If not, then the corresponding meter size and capacity ratio shown below would be used to establish a ratio of service unit to land use.

For nonresidential Wastewater Facilities development fees, capacity ratios by meter size are the appropriate demand indicator for Wastewater Facilities. Capacity ratios equate 0.75-inch meters to the average day gallons per average single-family residential unit. Utilizing average day gallons is the most efficient way to show a direct relationship between development units, usage, and system capacity. The nonresidential Wastewater Facilities development fees are calculated by multiplying the number of gallons per single-family unit by the capacity ratio for the corresponding size and type of water meter, which are provided by the American Water Works Association (2017) and shown below in Figure WW1.

Figure WW1: Wastewater Facilities Ratio of Service Unit to Development Unit

Demand Indicators	
Residential Gallons per Average Day	207

Meter Size (inches)		Capacity Ratio[1]
0.75	Displacement	1.00
1.00	Displacement	1.67
1.50	Displacement	3.33
2.00	Compound	5.33
3.00	Compound	10.67
4.00	Compound	16.67
6.00	Compound	33.33
8.00	Compound	53.33

1. AWWA, Principles of Water Rates, Fees, and Charges, M1.

Analysis of Capacity, Usage, and Costs of Existing Public Services

ARS § 9-463.05(E)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

ARS § 9-463.05(E)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

San Luis has two wastewater treatment plants. The West Wastewater Treatment Plant has a total capacity of 1.50 MGD and generally receives wastewater flows from development on the west side of San Luis. The East Mesa Wastewater Treatment Plant has a total capacity of 1.00 MGD and generally receives wastewater flows from development on the east side of San Luis and any flows the West Wastewater Treatment Plant cannot treat. The total capacity of citywide wastewater treatment is 2.50 MGD, but San Luis can only use 80 percent of the total capacity under existing Arizona law. According to the City of San Luis Public Works Department, current usage is approximately 1.78 MGD, leaving 0.72 MGD of excess capacity to serve growth.

Figure WW2: Wastewater Treatment Plant Capacity

Facility	Capacity (MGD)	Average Day Flows (MGD)	Remaining (MGD)
East Mesa Wastewater Treatment Plant	1.00	0.28	0.72
West Wastewater Treatement Plant	1.50	1.50	0.00
Total	**2.50**	**1.78**	**0.72**

Source: City of San Luis Public Works Department

Average Day Flows

The following factors are used to differentiate the demand for wastewater infrastructure between residential and nonresidential development. The existing level of service for wastewater infrastructure is based on average flows in 2018. The current level of service for residential development for wastewater service is 207 average day gallons per connection. For nonresidential connections, wastewater flows average 1,842 average day gallons per connection. Each nonresidential connection averages approximately 20 jobs, and the projected increase in jobs drives the demand for wastewater capacity from nonresidential development.

Figure WW3: Wastewater Flow Factors

Land Use	Avg Gallons per Day[1]	2018 Connections	Gallons per Day per Connection
Residential	1,302,030	6,290	207
Nonresidential	475,236	258	1,842
Total	1,777,266	6,548	

1. Average Gallons per Day based on approximate usage provided by City of San Luis. Division between residential and nonresidental based on portions of City of San Luis water usage in 2018.

PROJECTED SERVICE UNITS AND PROJECTED DEMAND FOR SERVICES

ARS § 9-463.05(E)(5) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

ARS § 9-463.05(E)(6) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Over the next 10 years, it is projected there will be an increase of 2,761 connections and 749,292 gallons.

Figure WW4: Projected Wastewater Flows

Wastewater Flow Projections							
Year		Residential Connections	Nonresidential Connections	Total Connections	Residential Gallons	Nonresidential Gallons	Total Gallons
Base	2018	6,290	258	6,548	1,302,030	475,236	1,777,266
Year 1	2019	6,515	267	6,783	1,348,689	492,222	1,840,910
Year 2	2020	6,749	277	7,026	1,396,987	509,847	1,906,834
Year 3	2021	6,991	287	7,277	1,447,050	528,111	1,975,161
Year 4	2022	7,240	297	7,537	1,498,753	547,015	2,045,768
Year 5	2023	7,500	308	7,807	1,552,474	566,649	2,119,122
Year 6	2024	7,769	319	8,087	1,608,086	586,922	2,195,008
Year 7	2025	8,046	330	8,376	1,665,590	607,926	2,273,515
Year 8	2026	8,334	342	8,676	1,725,237	629,660	2,354,897
Year 9	2027	8,633	354	8,987	1,787,028	652,217	2,439,245
Year 10	2028	8,942	367	9,309	1,850,963	675,595	2,526,558
10-Yr Increase		2,652	109	2,761	548,933	200,359	749,292

Wastewater Treatment

San Luis plans to expand its wastewater treatment capacity with 1.60 MGD of capacity to serve future development. Shown below in Figure WW5, San Luis plans to spend $10.0 million on the planned wastewater treatment plant expansion. When allocated to the planned capacity of 1.60 MGD, the cost is $6.25 per gallon of capacity.

San Luis included $3.0 million of funding for the wastewater treatment plant expansion during its most recent rate study, so it is necessary to provide a credit for this potential double payment. Allocating $3.0 million of rate revenue to 1.60 MGD of capacity provides a credit of $1.88 per gallon.

Figure WW5: Wastewater Treatment Cost Allocation Factors

Description	Capacity[1]	Cost	Cost per Gallon
Wastewater Treatment Plant Exansion	1,600,000	$10,000,000	$6.25

1. Represents 80 percent of 2.0 MGD capacity.

Water Rate Revenue Credit	
Cost Supported by Rates	$3,000,000
Total Capacity (Gallons)	1,600,000
Rate Credit per Gallon	($1.88)

IIP and Development Fee Report – Plan-Based

The cost to prepare the Wastewater Facilities IIP and related Development Fee Report totals $11,500. San Luis plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the *Land Use Assumptions* document, the cost is $0.03 per gallon.

Figure WW6: IIP and Development Fee Report

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential Nonresidential	100%	VMT	216,030	257,566	41,536	$0.29
Water	$11,500	Residential Nonresidential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
Wastewater	$11,500	Residential Nonresidential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
Total	$69,460							

WASTEWATER FACILITIES DEVELOPMENT FEES

Revenue Credit

A revenue credit is necessary for the Wastewater Facilities development fees, because costs include projects funded with sewer rate revenue. Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Proposed Wastewater Facilities Development Fees

Infrastructure components and cost factors for Wastewater Facilities are summarized in the upper portion of Figure WW7. The cost per service unit is $4.41 per gallon. Figure WW7 displays the ratio of a service unit to various types of land uses for residential and nonresidential development.

Residential Wastewater Facilities development fees are assessed on a per meter basis, based on average day flows – approximately 207 gallons. Development fees assume a residential unit in a multi-unit structure with a single meter would be served by a 0.75-inch meter. If not, then the corresponding meter size and capacity ratio shown below would be used to establish a ratio of service unit to land use. The single-family fee of $912 is calculated using a cost per service unit of $4.41 per gallon multiplied by average day flows per residential unit of approximately 207 gallons.

For nonresidential Wastewater Facilities development fees, capacity ratios by meter size are the appropriate demand indicator for Wastewater Facilities. Capacity ratios equate 0.75-inch meters to the average day flows per residential unit. Utilizing average day flows is the most efficient way to show a direct relationship between development units, usage, and system capacity. The nonresidential Wastewater Facilities development fees are calculated by multiplying the average day flows per residential unit by the capacity ratio for the corresponding size and type of water meter, which are provided by the American Water Works Association (2017) and shown in Figure WW7. The fee for a 1.0-inch meter, $1,523, is calculated using a cost per service unit of $4.41 per gallon multiplied by average day flows per residential unit of approximately 207 gallons, multiplied by the capacity ratio of 1.67.

Figure WW7: Schedule of Wastewater Facilities Development Fees

Demand Indicators	
Residential Gallons per Average Day	207
Cost Factors per Gallon of Capacity	
Wastewater Treatment	$6.25
Wastewater Treatment Rate Credit	($1.88)
Development Fee Report	$0.03
Total Cost per Gallon of Capacity	**$4.41**

Residential Development	Development Fees per Meter		
Land Use	Proposed Fees	Current Fees	Increase / Decrease
Single Family	**$912**	$1,634	($722)

Nonresidential			Development Fees per Meter		
Meter Size (inches)		Capacity Ratio[1]	Proposed Fees	Current Fees	Increase / Decrease
0.75	Displacement	1.00	**$912**	$1,634	($722)
1.00	Displacement	1.67	**$1,523**	$2,721	($1,198)
1.50	Displacement	3.33	**$3,036**	$5,412	($2,376)
2.00	Compound	5.33	**$4,860**	$8,654	($3,794)
3.00	Compound	10.67	**$9,729**	$17,311	($7,582)
4.00	Compound	16.67	**$15,200**	$27,039	($11,839)
6.00	Compound	33.33	**$30,391**	$54,048	($23,657)
8.00	Compound	53.33	**$48,628**	$86,472	($37,844)

1. AWWA, Principles of Water Rates, Fees, and Charges, M1.

PROJECTED WASTEWATER FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)).

Projected Wastewater Facilities Development Fee Revenue

Projected fee revenue shown in Figure WW8 is based on the development projections in the *Land Use Assumptions* document and the updated Wastewater Facilities development fees. If development occurs at a faster rate than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs at a slower rate than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Over the next 10 years, anticipated development fee revenue equals approximately $3.3 million.

Figure WW8: Projected Wastewater Facilities Development Fee Revenue

Fee Component	Growth Share
Wastewater Treatment	$10,000,000
Wastewater Treatment Credit	($3,000,000)
Development Fee Report	$11,500
Total	$7,011,500

		$4.41 per gallon
Year		Gallons
Base	2018	1,777,266
Year 1	2019	1,840,910
Year 2	2020	1,906,834
Year 3	2021	1,975,161
Year 4	2022	2,045,768
Year 5	2023	2,119,122
Year 6	2024	2,195,008
Year 7	2025	2,273,515
Year 8	2026	2,354,897
Year 9	2027	2,439,245
Year 10	2028	2,526,558
10-Yr Increase		749,292
Projected Revenue		$3,288,409

APPENDIX A: FORECAST OF REVENUES OTHER THAN FEES

ARS 9-463.05(E)(7) requires:

> *"A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved Land Use Assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."*

ARS 9-463.05(B)(12) states:

> *"The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection."*

San Luis does not have a higher than normal construction excise tax rate; therefore, the required offset described above is not applicable. The required forecast of non-development fee revenue from identified sources that can be attributed to new development over the next five years is summarized in Figure A1. These funds are available for capital investments; however, the City of San Luis directs these revenues to non-development fee eligible capital needs including maintenance, repair, and replacement. The forecast of revenues beyond 2019 was derived from a linear regression analysis. Historical revenue data from 2015 through 2019, obtained from the City of San Luis, were correlated to population and job growth. Projected population plus jobs, from the Land Use Assumptions, is the independent variable that drives each revenue forecast.

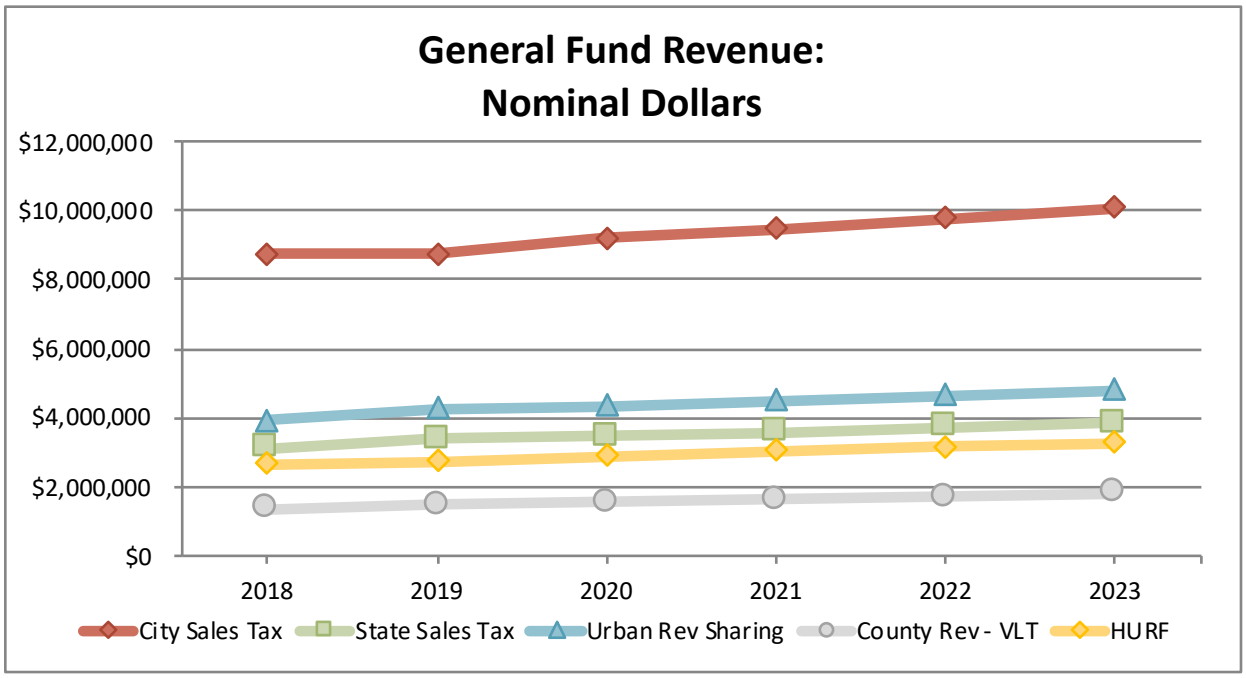
Figure A1: Revenue Projections

General Fund	2018	2019	2020	2021	2022	2023
City Sales Tax	$8,725,400	$8,725,400	$9,184,840	$9,477,378	$9,779,629	$10,093,535
State Sales Tax	$3,130,230	$3,409,700	$3,477,516	$3,604,808	$3,736,327	$3,872,917
Urban Rev Sharing	$3,929,200	$4,294,480	$4,359,156	$4,499,299	$4,644,096	$4,794,476
County Rev - VLT	$1,372,270	$1,490,800	$1,565,887	$1,649,187	$1,735,252	$1,824,635
HURF	$2,691,590	$2,760,000	$2,922,042	$3,043,490	$3,168,970	$3,299,288
Enterprise Fund	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Water Revenue	$4,644,880	$4,645,200	$4,889,959	$5,062,981	$5,241,748	$5,427,408
Wastewater Revenue	$3,989,690	$3,981,000	$4,142,701	$4,253,745	$4,368,475	$4,487,629

Only revenue generated by future development that is dedicated to growth-related capital improvements needs to be considered in determining the extent of the burden imposed by future development. Offsets against development fees are warranted in the following cases: (1) new development will be paying taxes or fees used to retire debt on existing facilities serving existing development; (2) new development will be paying taxes or fees used to fund an existing deficiency, or (3) new development will be paying taxes or fees that are dedicated for growth-related improvements. The analysis provided in the individual sections of this report identified no need for offsets against the proposed development fees.

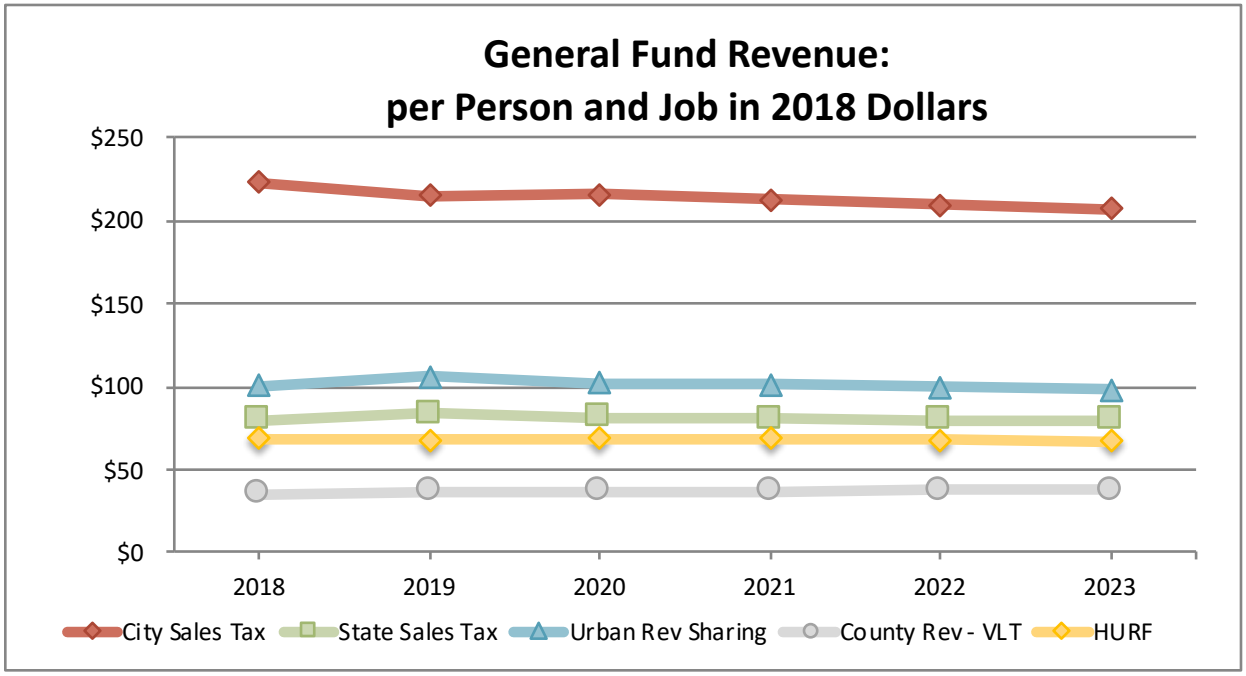
The graph in Figure A2 gives the impression that all General Fund revenues are expected to increase over the next five years. When nominal dollars are converted to constant 2018 dollars, to account for inflation, and then divided by population and jobs, the results are somewhat different.

Figure A2: General Fund Revenue in Nominal Dollars



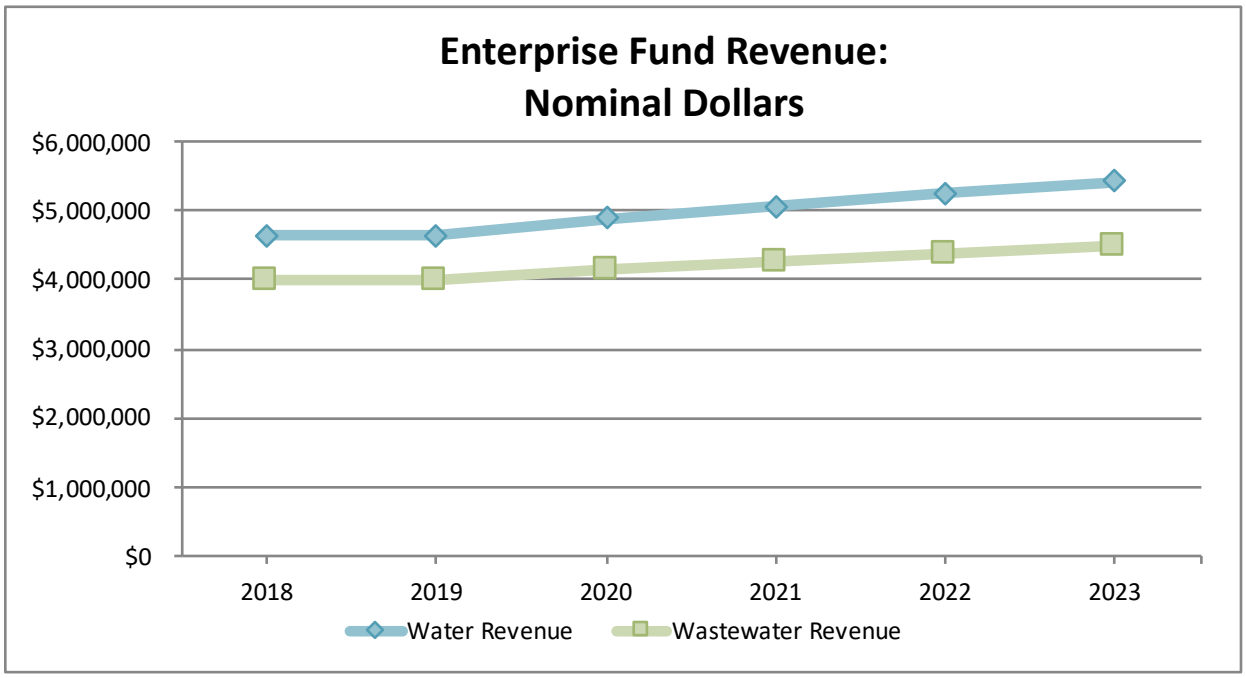
As shown in Figure A3, city sales tax revenue and urban revenue sharing revenue, in constant 2018 dollars, are projected to decline relative to population and job growth. State sales tax revenue, county revenue – VLT, and HURF revenue, in constant 2018 dollars, are projected to remain constant. These funds are available for capital investments; however, the City of San Luis directs these revenues to non-development fee eligible capital needs including maintenance, repair, and replacement. In other words, there is no General Fund surplus available for growth-related capital improvements.

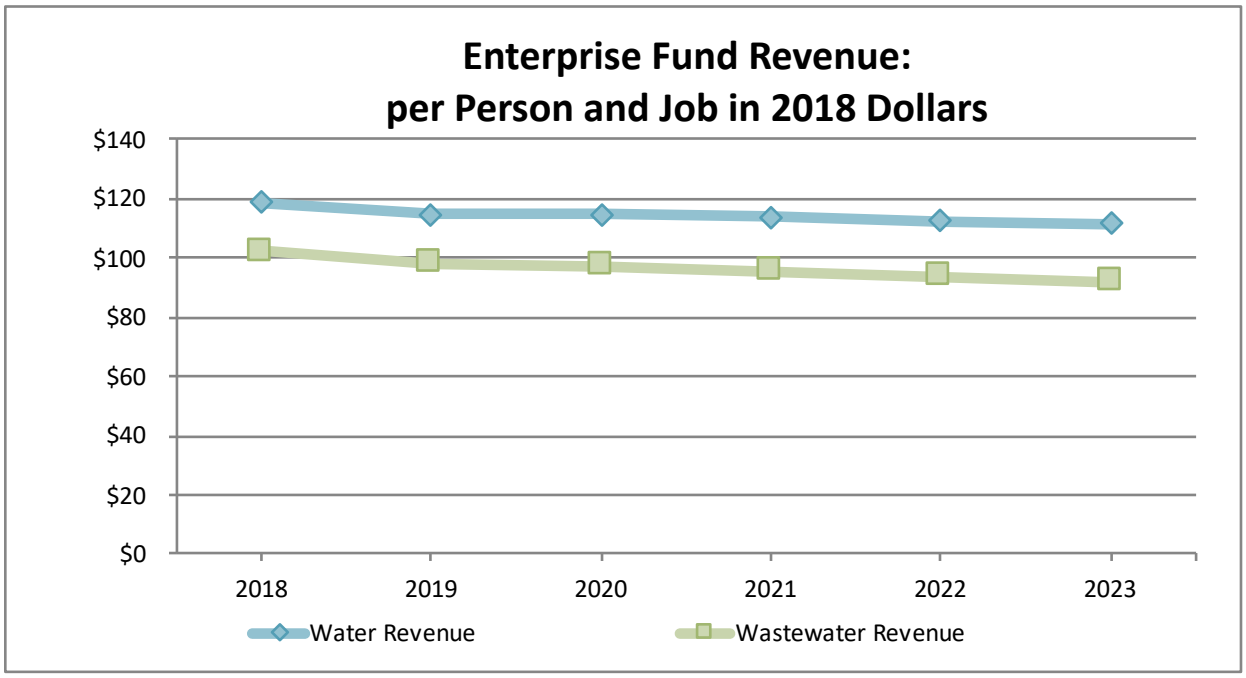
Figure A3: General Fund Revenue in 2018 Dollars



Finally, the top of Figure A4 displays historical and projected revenues from the Water and Wastewater Enterprise Funds in nominal dollars – this excludes transfers from other funds. Revenues include connection fees, water/sewer sales, interest earned, and miscellaneous revenues. The bottom part of Figure A4 shows the revenue per person and job in 2018 dollars, which results in a projected decrease per person and job. There is no Enterprise Fund surplus available for growth-related capital improvements.

Figure A4: Enterprise Fund Revenue





APPENDIX B: PROFESSIONAL SERVICES

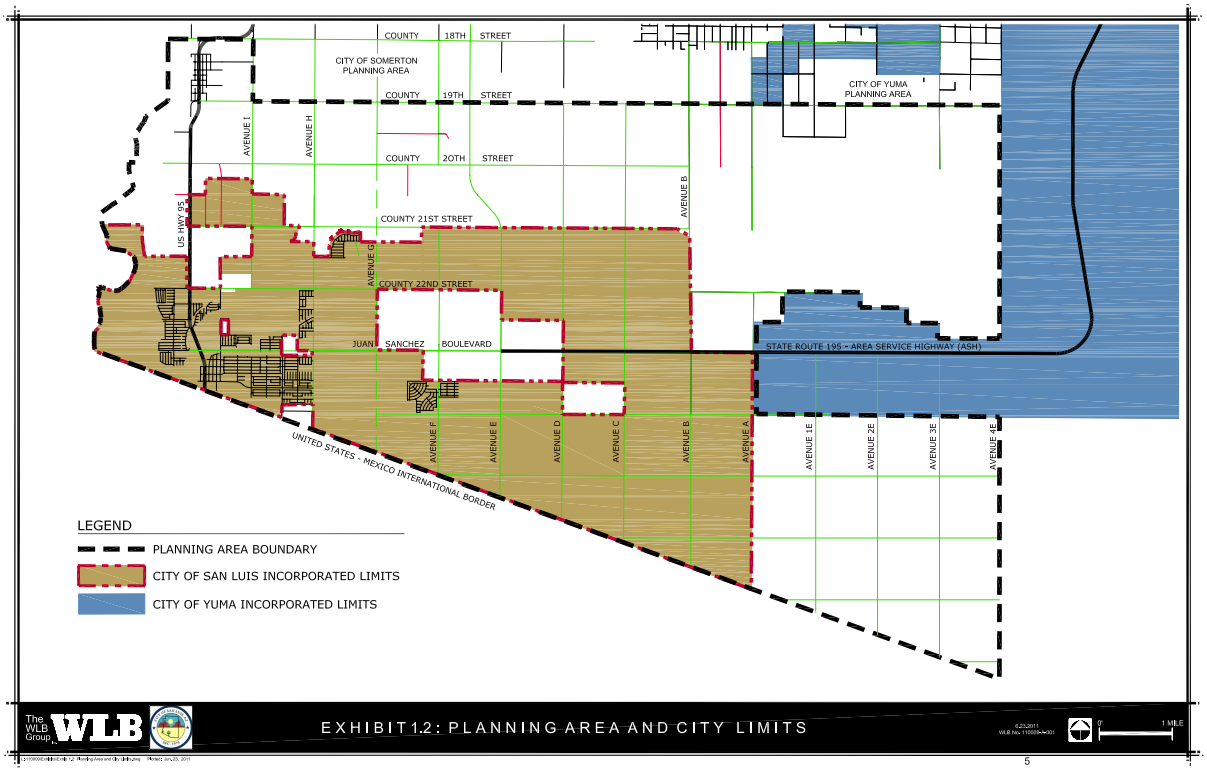
As stated in Arizona's development fee enabling legislation, "a municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing and professional services required for the preparation or revision of a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan" (see ARS § 9-463.05.A). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units, over five years (see Figure B1). Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience".

Figure B1: Cost of Professional Services

Necessary Public Service	Cost	Assessed Against	Proportionate Share	Demand Unit	2018	2023	Change	Cost per Demand Unit
Fire	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Parks	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Jobs	5,204	6,205	1,001	$2.30
Police	$11,500	Residential	80%	Population	33,969	40,503	6,534	$1.41
		Nonresidential	20%	Vehicle Trips	20,185	24,057	3,872	$0.59
Street	$11,960	Residential	100%	VMT	216,030	257,566	41,536	$0.29
		Nonresidential						
Water	$11,500	Residential	100%	Gallons	4,837,095	5,767,509	930,414	$0.01
		Nonresidential						
Wastewater	$11,500	Residential	100%	Gallons	1,777,266	2,119,122	341,856	$0.03
		Nonresidential						
Total	$69,460							

APPENDIX C: LAND USE ASSUMPTIONS

The estimates and projections of residential and nonresidential development in this *Land Use Assumptions* document are for areas within the boundaries of the City of San Luis. The map below illustrates the area within the City of San Luis Service Area boundaries.



Arizona's Development Fee Act requires the preparation of Land Use Assumptions, which are defined in Arizona Revised Statutes § 9-463.05(T)(6) as:

> *"projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the General Plan of the municipality."*

The City of San Luis, Arizona retained TischlerBise to analyze the impacts of development on its capital facilities and to calculate development fees based on that analysis. TischlerBise prepared current demographic estimates and future development projections for both residential and nonresidential development that will be used in the Infrastructure Improvements Plan (IIP) and calculation of the development fees. Current demographic data estimates for 2018 are used in calculating levels of service (LOS) provided to existing development in the City of San Luis. Although long-range projections are necessary for planning infrastructure systems, a shorter time frame of five to ten years is critical for the development fee analysis.

Arizona's Development Fee Act requires fees to be updated at least every five years and limits the IIP to a maximum of 10 years. Therefore, the use of a very long-range "build-out" analysis is no longer acceptable for deriving development fees in Arizona municipalities.

SUMMARY OF GROWTH INDICATORS

Key land use assumptions for the City of San Luis development fee study are population, housing units, and employment projections. Based on discussions with staff, TischlerBise projects population using Arizona Department of Administration compound annual growth rates for 2015-2030. TischlerBise derives housing unit estimates by converting annual population increases to housing units using persons per housing unit factors. For nonresidential development, the base year employment estimate is calculated based on 2015 estimates from the U.S. Census Bureau's OnTheMap web application. The 2015 jobs per housing unit ratio is applied to the housing unit projections to project future employment. The employment projections are converted into floor area based on average square feet per job multipliers. The projections contained in this document provide the foundation for the Development Fee Report. These metrics are the service units and demand indicators used in the Development Fee Report.

Development projections and growth rates are summarized in Figure C11. These projections will be used to estimate development fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development fees methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, San Luis will receive an increase in fee revenue, but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

RESIDENTIAL DEVELOPMENT

Current estimates and future projections of residential development are detailed in this section including population and housing units by type.

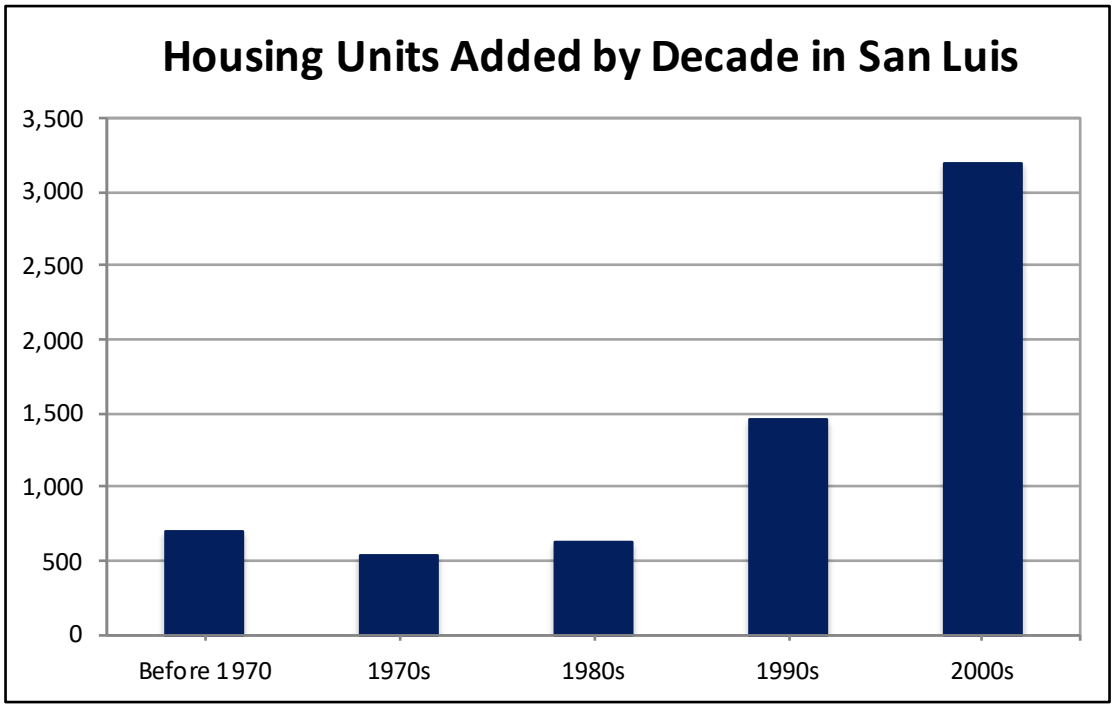
Recent Residential Construction

Development fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. Shown below, Figure C2 indicates the estimated number of housing units added by decade according to data obtained from the U.S. Census Bureau. San Luis experienced strong growth in the 1990s and 2000s. From 2000 to 2010, San Luis' housing inventory increased by an average of 320 units per year.

Figure C2: Housing Units by Decade

Census 2010 Housing Units	6,525
Census 2000 Housing Units	3,325
New Housing Units 2000 to 2010	3,200

San Luis added an average of 320 housing units per year from 2000 to 2010.



Source: U.S. Census Bureau, Census 2010 Summary File 1, Census 2000 Summary File 1, 2012-2016 5-Year American Community Survey (for 1990s and earlier, adjusted to yield total units in 2000).

Household Size

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Development fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the development fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that development fees for residential development in San Luis be imposed according to the number of year-round residents per housing unit. This methodology assumes some portion of the housing stock will be vacant during the course of a year. According to the U.S. Census Bureau American Community Survey, San Luis' vacancy rate was 6.3 percent in 2015.

PPHU calculations require data on population and the types of units by structure. The 2010 census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For development fees in San Luis, detached stick-built units and attached units (commonly known as townhouses, which share a common sidewall, but are constructed on an individual parcel of land) are included in the "Single-Family Unit" category. The second residential category includes duplexes and all other structures with two or more units on an individual parcel of land. This category is referred to as "Multi-Family Unit." (Note: housing unit estimates from ACS will not equal decennial census counts of units. These data are used only to derive the custom PPHU factors for each type of unit).

Figure C3 below shows the 2011-2015 five-year ACS estimates for San Luis. Single-family units averaged 3.45 persons per housing unit (26,381 persons / 7,657 housing units) and multi-family units averaged 2.23 persons per housing unit (2,522 persons / 1,133 housing units). In 2015, San Luis' housing stock averaged 3.29 persons per housing unit. Including persons in group quarters, the citywide average is 3.54 persons per housing unit.

Figure C3: Persons per Housing Unit

Units in Structure	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single-Family Units[1]	26,381	7,193	3.67	7,657	**3.45**	87.1%	6.10%
Multi-Family Units[2]	2,522	1,040	2.43	1,133	**2.23**	12.9%	8.20%
Subtotal	28,903	8,233	3.51	8,790	**3.29**	100.0%	6.30%
Group Quarters	2,215						
Total	31,118			8,790	**3.54**		

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates, Tables B25024, B25032, B25033, B26001

1. Includes detached, attached (i.e. townhouses), and mobile home units.

2. Includes dwellings in structures with two or more units.

Population and Housing Unit Estimates

To accurately determine current and future population in San Luis, TischlerBise compared population estimates and growth rates from ACS data, Arizona Department of Administration (ADOA) data, and the San Luis General Plan. ADOA released population projections through 2050 for jurisdictions in 2016, along with annual updates of population estimates. TischlerBise uses ADOA's 2017 population estimate of 35,289 and the 2015 to 2030 compound annual growth rate of 3.58 percent to project population to the 2018 base year. For this analysis, the base year total population estimate is 36,552 (including group quarters) and the household population is 33,969.

TischlerBise converts estimated population to housing units using persons per housing unit factors detailed in Figure C3 – 3.54 persons per housing unit. The base year total population of 36,552 divided by 3.54 persons per housing unit results in an estimate of 10,325 housing units.

Population and Housing Unit Projections

This analysis projects population growth using ADOA's 2015 to 2030 compound annual growth rate of 3.58 percent, and this results in a 2028 total population of 51,961 persons. Converting the total population projections to housing unit projections using 3.54 persons per housing unit results in a 2028 housing unit estimate of 14,678. To estimate household population, this analysis multiplies the housing unit projections by 3.29 persons per housing unit – this excludes group quarters. The 10-year increase in household population results in 14,322 additional persons.

The housing units are distributed by type based on the housing mix detailed in Figure C3. Therefore, 87.1 percent of projected new units are single-family and 12.9 percent are multi-family. For this study, it is assumed that the persons per housing unit ratio will remain constant. TischlerBise projects a 10-year increase of 14,322 persons, or an average of 1,432 persons annually, and a corresponding 10-year increase of 4,353 housing units, or an average of 435 units annually.

Population and housing unit projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than is projected, the demand for infrastructure will also decrease.

Figure C4: Residential Development Projections

	2018	2019	2020	2021	2022	2023	2028	10-Year
	Base Yr	1	2	3	4	5	10	Increase
Population								
Household	33,969	35,187	36,447	37,753	39,102	40,503	48,291	**14,322**
Group Quarters	2,583	2,674	2,769	2,867	2,972	3,078	3,670	**1,087**
Total Population	36,552	37,861	39,216	40,620	42,074	43,581	51,961	**15,409**
Housing Units								
Single-Family	8,994	9,316	9,650	9,996	10,353	10,724	12,786	**3,792**
Multi-Family	1,331	1,379	1,428	1,479	1,532	1,587	1,892	**561**
Total Housing Units	10,325	10,695	11,078	11,475	11,885	12,311	14,678	**4,353**

NONRESIDENTIAL DEVELOPMENT

Current estimates and future projections of nonresidential development are detailed in this section including jobs and nonresidential floor area.

Employment Estimates

In addition to data on residential development, the calculation of development fees requires data on employment (number of jobs) and nonresidential square footage in San Luis. TischlerBise uses the term "jobs" to refer to employment by place of work. TischlerBise analyzed recent employment trends, the U.S. Census Bureau, and had discussions with City staff.

TischlerBise uses a four step process to calculate base year job and nonresidential footage estimates, and projections for 10 years past the base year. First, 2018 employment estimates are derived using 2015 OnTheMap employment estimates. Second, job estimates are organized by type: Industrial, Commercial, Institutional, and Office & Other Service. Third, the 2015 jobs per housing unit ratio of 0.504 is applied to housing unit projections in Figure C4 to project citywide jobs. The last step allocates jobs by type based on the 2015 share of total jobs. This process is detailed below in Figure C5.

Figure C5: Estimated Employment and Distribution by Industry Type

Nonresidential Category	2018 Jobs[1]	Percent of Total Jobs	Square Feet per Job[2]	2018 Estimated Floor Area[3]	Jobs per 1,000 Sq. Ft.[2]
Industrial[4]	634	12%	615	389,910	1.63
Commercial[5]	1,226	24%	427	523,502	2.34
Institutional[6]	1,362	26%	1,076	1,465,266	0.93
Office & Other Service[7]	1,982	38%	337	667,934	2.97
Total	5,204	100%		3,046,612	1.71

1. TischlerBise calculation based on 2015 OnTheMap employment estimates.
2. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).
3. TischlerBise calculation (2018 jobs X square feet per job).
4. Major sectors are Agriculture and Warehousing.
5. Major sectors are Retail, Accommodation, and Food Services.
6. Major sectors are Educational Services and Public Administration.
7. Major sectors are Administration & Support, and Health Care.

Nonresidential Square Footage Estimates

TischlerBise uses 2017 Institute of Transportation Engineers (ITE) data as a proxy for future nonresidential floor area (Figure C6). The prototype for industrial development is light industrial (110) with an average of 615 square feet per employee, institutional development uses an elementary school (ITE 520) with an average of 1,076 square feet per job, office development uses general office (710) that averages 337 square feet per job, and commercial development uses shopping center (820) and averages 427 square feet per job. TischlerBise estimates San Luis has approximately 3.05 million square feet of nonresidential space.

Figure C6: The Institute of Transportation Engineers, Employee and Building Area Ratios

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Sq Ft Per Emp
110	**Light Industrial**	**1,000 Sq Ft**	**4.96**	**3.05**	**1.63**	**615**
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq Ft	1.74	5.05	0.34	2,902
310	Hotel	room	8.36	14.34	0.58	na
520	**Elementary School**	**1,000 Sq Ft**	**19.52**	**21.00**	**0.93**	**1,076**
540	Community College	student	1.15	14.61	0.08	na
610	Hospital	1,000 Sq Ft	10.72	3.79	2.83	354
620	Nursing Home	bed	3.06	2.91	1.05	na
710	**General Office (average size)**	**1,000 Sq Ft**	**9.74**	**3.28**	**2.97**	**337**
720	Medical-Dental Office	1,000 Sq Ft	34.80	8.70	4.00	250
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
820	**Shopping Center (average size)**	**1,000 Sq Ft**	**37.75**	**16.11**	**2.34**	**427**

1. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Employment and Nonresidential Floor Area Projections

Future employment growth and nonresidential development in San Luis are based on housing unit growth. To project employment, TischlerBise uses the 2015 jobs per housing unit ratio, 0.504, and applies that ratio to the housing unit projections shown in Figure C4. Based on the 2028 housing unit projection of 14,678 units and a jobs per housing unit ratio of 0.504, the 2028 employment projection equals 7,398 jobs.

To project growth in nonresidential square footage, TischlerBise applies the previously discussed square feet per employee factors to the projected increase in employment. The results of these calculations are shown in Figure C7. Over the next 10 years, San Luis is projected to gain 2,194 jobs and add an estimated 1.284 million square feet of nonresidential development.

Figure C7: Nonresidential Development Projections

	2018	2019	2020	2021	2022	2023	2028	10-Year
	Base Yr	1	2	3	4	5	10	Increase
Employment								
Industrial	634	657	680	704	730	756	901	**267**
Commercial	1,226	1,270	1,315	1,362	1,411	1,462	1,743	**517**
Institutional	1,362	1,411	1,461	1,514	1,568	1,624	1,937	**575**
Office & Other Service	1,982	2,052	2,127	2,203	2,281	2,363	2,817	**835**
Total Employment	5,204	5,390	5,583	5,783	5,990	6,205	7,398	**2,194**
Nonresidential Floor Area (x1,000)								
Industrial	390	404	418	433	449	465	554	**164**
Commercial	524	542	562	582	602	624	744	**220**
Institutional	1,465	1,518	1,572	1,629	1,687	1,747	2,084	**619**
Office & Other Service	668	692	717	742	769	796	949	**281**
Total Nonres. Floor Area	3,047	3,156	3,269	3,386	3,507	3,632	4,331	**1,284**

AVERAGE WEEKDAY VEHICLE TRIPS

Average Weekday Vehicle Trips are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends from the reference book, *Trip Generation, 10th Edition*, published by the ITE in 2017. A vehicle trip end represents a vehicle entering or exiting a development (as if a traffic counter were placed across a driveway).

Trip Rate Adjustments

To calculate road development fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50 percent. As discussed further below, the development impact fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Commuter Trip Adjustment

Residential development has a larger trip adjustment factor of 62 percent to account for commuters leaving San Luis for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure C8, the U.S. Census Bureau's OnTheMap web application indicates that 76 percent of resident workers traveled outside of San Luis for work in 2015. In combination, these factors (0.31 x 0.50 x 0.76 = 0.118) support the additional 12 percent allocation of trips to residential development.

Figure C8: Commuter Trip Adjustment

Trip Adjustment Factor for Commuters[1]	
Employed Residents	9,211
Residents Living and Working in San Luis	2,189
Residents Commuting Outside San Luis for Work	7,022
Percent Commuting out of San Luis	**76%**
Additional Production Trips[2]	**12%**
Residential Trip Adjustment Factor	**62%**

1. U.S. Census Bureau, OnTheMap Application (version 6.1.1) and LEHD Origin-Destination Employment Statistics, 2015.

2. According to the National Household Travel Survey (2009)*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of "production" trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2015 indicate that 76 percent of San Luis' workers travel outside the city for work. In combination, these factors (0.3099 x 0.50 x 0.76 = 0.12) account for 12 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (12 percent of production trips) for a total of 62 percent.
*http://nhts.ornl.gov/publications.shtml ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

Adjustment for Pass-By Trips

For commercial development, the trip adjustment factor is less than 50 percent because retail development attracts vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

Estimated Residential Vehicle Trip Rates

As an alternative to simply using the national average trip generation rate for residential development, the ITE publishes regression curve formulas that may be used to derive custom trip generation rates, using local demographic data. Key independent variables needed for the analysis (i.e. vehicles available, housing units, households, and persons) are available from American Community Survey data. Shown in Figure C9, custom trip generation rates for San Luis vary slightly from the national averages. For example, single-family residential development is expected to generate 10.90 average weekday vehicle trip ends per dwelling – compared to the national average of 9.44 (ITE 210). Multi-family residential development is expected to generate 5.10 average weekday vehicle trip ends per dwelling, which is lower than the national average of 5.44 (ITE 221).

Figure C9: Average Weekday Vehicle Trip Ends by Housing Type

		Households by Structure Type[2]			
Tenure by Units in Structure	Vehicles Available[1]	Single-Family	Multi-Family	Total	Vehicles per HH by
Owner-Occupied	12,533	5,873	27	5,900	2.12
Renter-Occupied	3,163	1,320	1,013	2,333	1.36
Total	15,696	7,193	1,040	8,233	1.91

Units in Structure	Persons in Households[3]	Trip Ends[4]	Vehicles by Type of Unit	Trip Ends[5]	Average Trip Ends	Housing Units[6]	Trip Ends per Unit	
							San Luis	ITE[7]
Single-Family	26,381	73,429	14,265	92,967	83,198	7,657	10.90	9.44
Multi-Family	2,522	5,694	1,431	5,931	5,813	1,133	5.10	5.44
Total	28,903	79,123	15,696	98,898	89,010	8,790	10.10	

1. Vehicles available by tenure from Table B25046, American Community Survey, 2012-2016 5-Year Estimates.
2. Households by tenure and units in structure from Table B25032, American Community Survey, 2012-2016 5-Year Estimates.
3. Total population in households from Table B25033, American Community Survey, 2012-2016 5-Year Estimates.
4. Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2017). For single-family housing (ITE 210), the fitted curve equation is EXP(0.89*LN(persons)+1.72). To approximate the average population of the ITE studies, persons were divided by 47 and the equation result multiplied by 47. For multi-family housing (ITE 221), the fitted curve equation is (2.29*persons)-81.02.
5. Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2017). For single-family housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.93). To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 55 and the equation result multiplied by 55. For multi-family housing (ITE 221), the fitted curve equation is (3.94*vehicles)+293.58.
6. Housing units from Table B25024, American Community Survey, 2012-2016 5-Year Estimates.
7. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Functional Population

TischlerBise recommends functional population to allocate the cost of certain facilities to residential and nonresidential development. As shown in Figure C10, functional population accounts for people living and working in a jurisdiction. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. It describes geographic patterns of jobs by their employment locations and residential locations as well as the connections between the two locations. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states.

Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in San Luis are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside San Luis are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data for San Luis, the cost allocation for residential development is 80 percent while nonresidential development accounts for 20 percent of the demand for municipal facilities.

Figure C10: Functional Population

Demand Units in 2015					
Residential				Demand Hours/Day	Person Hours
	Population	29,550			
	Residents Not Working		20,339	20	406,780
	Employed Residents		9,211		
	Employed in San Luis			2,189	14	30,646
	Employed outside San Luis			7,022	14	98,308
				Residential Subtotal		535,734
				Residential Share		**80%**
Nonresidential					
	Non-working Residents		20,339	4	81,356
	Jobs Located in San Luis		4,844		
	Residents Employed in San Luis			2,189	10	21,890
	Non-Resident Workers (inflow commuters)			2,655	10	26,550
				Nonresidential Subtotal		129,796
				Nonresidential Share		**20%**
				Total		665,530

Source: U.S. Census Bureau, OnTheMap 6.5 Application and LEHD Origin-Destination Employment Statistics.

DEVELOPMENT PROJECTIONS

Provided below is a summary of cumulative development projections used in the development fee study. Base year estimates for 2018 are used in the development impact fee calculations. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

Figure C11: Development Projections Summary

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	10-Year
	Base Yr	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Household	33,969	35,187	36,447	37,753	39,102	40,503	41,954	43,454	45,010	46,623	48,291	**14,322**
Group Quarters	2,583	2,674	2,769	2,867	2,972	3,078	3,187	3,303	3,421	3,542	3,670	**1,087**
Total Population	36,552	37,861	39,216	40,620	42,074	43,581	45,141	46,757	48,431	50,165	51,961	**15,409**
Housing Units												
Single-Family	8,994	9,316	9,650	9,996	10,353	10,724	11,108	11,505	11,918	12,344	12,786	**3,792**
Multi-Family	1,331	1,379	1,428	1,479	1,532	1,587	1,644	1,703	1,763	1,827	1,892	**561**
Total Housing Units	10,325	10,695	11,078	11,475	11,885	12,311	12,752	13,208	13,681	14,171	14,678	**4,353**

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	10-Year
	Base Yr	1	2	3	4	5	6	7	8	9	10	Increase
Employment												
Industrial	634	657	680	704	730	756	783	811	840	870	901	**267**
Commercial	1,226	1,270	1,315	1,362	1,411	1,462	1,514	1,568	1,624	1,682	1,743	**517**
Institutional	1,362	1,411	1,461	1,514	1,568	1,624	1,682	1,743	1,805	1,870	1,937	**575**
Office & Other Service	1,982	2,052	2,127	2,203	2,281	2,363	2,448	2,535	2,626	2,720	2,817	**835**
Total Employment	5,204	5,390	5,583	5,783	5,990	6,205	6,427	6,657	6,895	7,142	7,398	**2,194**
Nonresidential Floor Area (x1,000)												
Industrial	390	404	418	433	449	465	482	499	517	535	554	**164**
Commercial	524	542	562	582	602	624	646	670	693	718	744	**220**
Institutional	1,465	1,518	1,572	1,629	1,687	1,747	1,810	1,875	1,942	2,012	2,084	**619**
Office & Other Service	668	692	717	742	769	796	825	854	885	917	949	**281**
Total Nonres. Floor Area	3,047	3,156	3,269	3,386	3,507	3,632	3,763	3,898	4,037	4,182	4,331	**1,284**

APPENDIX D: LAND USE DEFINITIONS

RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. San Luis will collect development fees from all new residential units. One-time development fees are determined by site capacity (i.e. number of residential units).

Single-Unit:

1. **Single-family detached** is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides.
2. **Single-family attached (townhouse)** is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.
3. **Mobile home** includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

2+ Units:

1. **2+ units (duplexes and apartments)** are units in structures containing two or more housing units, further categorized as units in structures with "2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments."
2. **Boat, RV, Van, Etc.** includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

NONRESIDENTIAL DEVELOPMENT

The proposed general nonresidential development categories (defined below) can be used for all new construction within San Luis. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

Commercial: Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Commercial / Retail* includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, and movie theaters, hotels, and motels.

Industrial: Establishments primarily engaged in the production, transportation, or storage of goods. By way of example, *Industrial* includes manufacturing plants, distribution warehouses, trucking companies, utility substations, power generation facilities, and telecommunications buildings.

Institutional: Establishments including public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, universities, churches, daycare facilities, government buildings, and prisons.

Office & Other Service: Establishments providing management, administrative, professional, or business services; personal and health care services. By way of example, *Office and Other Services* includes banks, business offices, assisted living facilities, nursing homes, hospitals, medical offices, and veterinarian clinics.