Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report

Prepared for:

Peoria, Arizona

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EXECUTIVE SUMMARY

The City of Peoria, Arizona, contracted with TischlerBise to document land use assumptions, prepare the Infrastructure Improvements Plan (hereinafter referred to as the "IIP"), and update development fees pursuant to Arizona Revised Statutes ("ARS") § 9-463.05 (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 maximum supportable 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 Peoria's Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

1. Parks and Recreation Facilities
2. Fire Facilities
3. Police Facilities
4. Streets Facilities
5. Water Resource 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 parks and recreation. 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 Infrastructure Improvements Plan (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 amenities.

Evaluation of Credits/Offsets

Regardless of the methodology, 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.

INTRODUCTION TO DEVELOPMENT FEES

Development fees are one-time payments used to fund capital improvements necessitated by future development. Development fees have been utilized by local governments in various forms for at least fifty years. Development fees do have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current levels of service in a community. Any community considering facility fees should note the following limitations:

1) Fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and / or maintenance and rehabilitation costs.
2) Fees cannot be deposited in the General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.
3) Fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.

REQUIRED FINDINGS

There are three reasonable relationship requirements for development fees that are closely related to "rational nexus" or "reasonable relationship" requirements enunciated by a number of state courts. Although the term "dual rational nexus" is often used to characterize the standard by which courts evaluate the validity of development fees under the U. S. Constitution, we prefer a more rigorous formulation that recognizes three elements: "impact or need," "benefit," and "proportionality." The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Individual elements of the nexus standard are discussed further in the following paragraphs.

Demonstrating an Impact. All future development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Development fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to development fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

Demonstrating a Benefit. A sufficient benefit relationship requires that development fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the State enabling Act authorizing development fees requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, existing development may benefit from these improvements as well.

Procedures for the earmarking and expenditure of fee revenues are typically mandated by the State Enabling Legislation, as are procedures to ensure that the fees are expended expeditiously or refunded. All requirements are intended to ensure that developments benefit from the fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

Demonstrating Proportionality. The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case (although the relevance of that decision to development fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate development fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development.

DEVELOPMENT FEE REPORT

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 methodology 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 methodologies for calculating development fees and how those methodologies 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 methodology 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 methodology 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).

Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using two, three, and four decimal places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

DEVELOPMENT FEE COMPONENTS

Shown below, Figure 1 summarizes service areas, methodologies, and infrastructure cost components for the maximum supportable fees.

Figure 1. Maximum Supportable Development Fee Service Areas, Methodologies, and Cost Components

Fee Category	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Parks & Recreation	Zone 4	-	Park Land & Amenities	Development Fee Report	Equivalent Dwelling Unit (EDU)
	Zone 3	-	Park Land & Amenities	Development Fee Report	
	Zone 2	-	Park Land & Amenities	Development Fee Report	
	Zone 1	-	Park Amenities	Development Fee Report	
	Zone 0	-	Park Amenities	Development Fee Report	
Police	Citywide	-	Police Facilities, Towers, Land, Vehicles, Equipment	Development Fee Report	EDU
Fire	Citywide	-	Fire Facilities, Land, Apparatus Equipment	Development Fee Report	EDU
Streets	North	-	Street Improvements	Development Fee Report	Vehicle Miles of Travel (VMT)
	Central	-	Street Improvements	Development Fee Report	
Water Resource	On Project	-	-	Dam Expansion, Water Rights, Development Fee Report	Gallons
Water	West	-	-	Wells, Water Distribution, Water Plant, Development Fee Report	Gallons
	North	-	-	Wells, Water Distribution, Water Plant, Development Fee Report	
	South	-	-	Wells, Water Distribution, Water Plant, Development Fee Report	
Wastewater	West	-	-	Wastewater Collection, Wastewater Plant, Development Fee Report	Gallons
	East	-	-	Wastewater Collection, Wastewater Plant, Development Fee Report	

CURRENT DEVELOPMENT FEES

Current development fees are assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Current development fees for water resource, water, and wastewater are assessed by meter size and type.

Figure 2. Current Parks and Recreation Development Fees by Zone

Development Type	Park Zone 1	Park Zone 2	Park Zone 3
Residential (per housing unit)			
Single Family	$1,296	$1,515	$1,412
Multifamily	$881	$1,030	$960
Mobile Home	$1,089	$1,273	$1,186

Development Type	Park Zone 1	Park Zone 2	Park Zone 3
Nonresidential (per 1,000 square feet)			
Retail/Commercial	$117	$136	$127
Office	$194	$227	$212
Industrial	$13	$15	$14
Warehouse	$13	$15	$14
Public/Institutional	$13	$15	$14
Hotel/Motel (per room)	$91	$106	$99

Figure 3. Current Police and Fire Development Fees Citywide

Development Type	Police Citywide	Fire Citywide
Residential (per housing unit)		
Single Family	$677	$1,047
Multifamily	$462	$715
Mobile Home	$569	$881

Development Type	Police Citywide	Fire Citywide
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$741	$1,147
Office	$455	$704
Industrial	$72	$111
Warehouse	$47	$72
Public/Institutional	$129	$199
Hotel/Motel (per room)	$376	$582

Figure 4. Current Streets Development Fees by Zone

Development Type	Central Zone	North Zone
Residential (per housing unit)		
Single Family	$6,306	$7,559
Mobile Home	$2,957	$3,545

Development Type	Central Zone	North Zone
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$7,997	$9,587
Office	$3,416	$4,095
Industrial	$3,020	$3,621
Warehouse	$1,161	$1,392
Public/Institutional	$2,950	$3,536
Hotel/Motel (per room)	$4,521	$5,420

Figure 5. Current Water Resource Development Fees by Zone

Single Family

Meter Size	Meter Type	Off Project Zone
3/4"	Displacement	$730
1"	Displacement	$730

Multifamily & Nonresidential

Meter Size	Meter Type	Off Project Zone
3/4"	Displacement	$730
1"	Displacement	$1,217
1.5"	Displacement	$2,433
1.5"	Ultrasonic Mach 10	$2,433
2"	Displacement	$3,893
2"	Ultrasonic Mach 10	$3,893
3"	Compound	$7,300
3"	Ultrasonic Mach 10	$7,300
4"	Compound	$12,167
4"	Ultrasonic Mach 10	$12,167
6"	Compound	$24,333
6"	Ultrasonic Mach 10	$24,333
8"	Compound	$48,667
8"	Ultrasonic Mach 10	$48,667

Figure 6. Current Water Development Fees by Zone

Single Family

Meter Size	Meter Type	West Zone	North Zone	South Zone
3/4"	Displacement	$4,725	$3,745	$3,358
1"	Displacement	$4,725	$3,745	$3,358

Multifamily & Nonresidential

Meter Size	Meter Type	West Zone	North Zone	South Zone
3/4"	Displacement	$4,725	$3,745	$3,358
1"	Displacement	$7,796	$6,163	$5,518
1.5"	Displacement	$15,475	$12,208	$10,918
1.5"	Ultrasonic Mach 10	$15,475	$12,208	$10,918
2"	Displacement	$24,689	$19,462	$17,398
2"	Ultrasonic Mach 10	$24,689	$19,462	$17,398
3"	Compound	$46,188	$36,388	$32,518
3"	Ultrasonic Mach 10	$46,188	$36,388	$32,518
4"	Compound	$76,901	$60,568	$54,118
4"	Ultrasonic Mach 10	$76,901	$60,568	$54,118
6"	Compound	$153,685	$121,018	$108,118
6"	Ultrasonic Mach 10	$153,685	$121,018	$108,118
8"	Compound	$307,251	$241,918	$216,118
8"	Ultrasonic Mach 10	$307,251	$241,918	$216,118

Figure 7. Current Wastewater Development Fees by Zone

Single Family

Meter Size	Meter Type	West Zone	East Zone
3/4"	Displacement	$3,157	$1,913
1"	Displacement	$3,157	$1,913

Multifamily & Nonresidential

Meter Size	Meter Type	West Zone	East Zone
3/4"	Displacement	$3,157	$1,913
1"	Displacement	$5,197	$3,124
1.5"	Displacement	$10,297	$6,150
1.5"	Ultrasonic Mach 10	$10,297	$6,150
2"	Displacement	$16,417	$9,782
2"	Ultrasonic Mach 10	$16,417	$9,782
3"	Compound	$30,697	$18,257
3"	Ultrasonic Mach 10	$30,697	$18,257
4"	Compound	$51,097	$30,364
4"	Ultrasonic Mach 10	$51,097	$30,364
6"	Compound	$102,097	$60,630
6"	Ultrasonic Mach 10	$102,097	$60,630
8"	Compound	$204,097	$121,164
8"	Ultrasonic Mach 10	$204,097	$121,164

MAXIMUM SUPPORTABLE DEVELOPMENT FEES

Maximum supportable development fees will be assessed per dwelling unit for residential development and per 1,000 square feet of floor area for nonresidential development. Maximum supportable development fees for water and wastewater will be assessed by meter size and type.

The maximum supportable fees represent the maximum allowable amount under this study. Peoria 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 level-of-service standards. All costs in the Development Fee Report represent current dollars with no assumed inflation over time. If costs change significantly over time, development fees should be recalculated.

Figure 8. Maximum Supportable Parks and Recreation Development Fees by Zone

Development Type	Park Zone 0	Park Zone 1	Park Zone 2	Park Zone 3	Park Zone 4
Residential (per housing unit)					
Single Family	$295	$295	$3,379	$2,514	$4,673
Multifamily	$177	$177	$2,027	$1,508	$2,804
Mobile Home	$212	$212	$2,433	$1,810	$3,365
Nonresidential (per 1,000 square feet)					
Retail/Commercial	$9	$9	$101	$75	$140
Office	$15	$15	$169	$126	$234
Industrial	$5	$5	$61	$45	$84
Warehouse	$1	$1	$17	$13	$23
Public/Institutional	$9	$9	$105	$78	$145
Hotel/Motel (per room)	$3	$3	$30	$23	$42

Figure 9. Maximum Supportable Police and Fire Development Fees Citywide

Development Type	Police Citywide	Fire Citywide
Residential (per housing unit)		
Single Family	$1,059	$1,418
Multifamily	$636	$851
Mobile Home	$752	$1,007
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$1,144	$1,531
Office	$826	$1,106
Industrial	$286	$383
Warehouse	$95	$128
Public/Institutional	$561	$752
Hotel/Motel (per room)	$318	$425

Figure 10. Maximum Supportable Streets Development Fees by Zone

Development Type	Central Zone	North Zone
Residential (per housing unit)		
Single Family	$8,213	$7,331
Multifamily	$3,325	$2,968
Mobile Home	$5,249	$4,685
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$13,214	$11,794
Office	$4,626	$4,129
Industrial	$2,543	$2,270
Warehouse	$1,292	$1,153
Public/Institutional	$2,927	$2,613
Hotel/Motel (per room)	$4,603	$4,109

Figure 11. Maximum Supportable Water Resource Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	Off Project Zone
3/4"	Displacement	$1,232
1"	Displacement	$2,057

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Off Project Zone
3/4"	Displacement	$1,232
1"	Displacement	$2,057
1.5"	Displacement	$4,103
1.5"	Ultrasonic Mach 10	$4,928
2"	Displacement	$6,567
2"	Ultrasonic Mach 10	$7,799
3"	Compound	$12,320
3"	Ultrasonic Mach 10	$17,864
4"	Compound	$20,537
4"	Ultrasonic Mach 10	$30,800
6"	Compound	$41,063
6"	Ultrasonic Mach 10	$65,703
8"	Compound	$82,137
8"	Ultrasonic Mach 10	$114,983

Figure 12. Maximum Supportable Water Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	West Zone	North Zone	South Zone
3/4"	Displacement	$6,914	$3,231	$1,555
1"	Displacement	$11,546	$5,396	$2,597

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	West Zone	North Zone	South Zone
3/4"	Displacement	$6,914	$3,231	$1,555
1"	Displacement	$11,546	$5,396	$2,597
1.5"	Displacement	$23,024	$10,759	$5,178
1.5"	Ultrasonic Mach 10	$27,656	$12,924	$6,220
2"	Displacement	$36,852	$17,221	$8,288
2"	Ultrasonic Mach 10	$43,766	$20,452	$9,843
3"	Compound	$69,140	$32,310	$15,550
3"	Ultrasonic Mach 10	$100,253	$46,850	$22,548
4"	Compound	$115,256	$53,861	$25,922
4"	Ultrasonic Mach 10	$172,850	$80,775	$38,875
6"	Compound	$230,444	$107,689	$51,828
6"	Ultrasonic Mach 10	$368,724	$172,309	$82,928
8"	Compound	$460,956	$215,411	$103,672
8"	Ultrasonic Mach 10	$645,284	$301,549	$145,128

Figure 13. Maximum Supportable Wastewater Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	West Zone	East Zone
3/4"	Displacement	$7,346	$8,968
1"	Displacement	$12,268	$14,977

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	West Zone	East Zone
3/4"	Displacement	$7,346	$8,968
1"	Displacement	$12,268	$14,977
1.5"	Displacement	$24,462	$29,863
1.5"	Ultrasonic Mach 10	$29,384	$35,872
2"	Displacement	$39,154	$47,799
2"	Ultrasonic Mach 10	$46,500	$56,767
3"	Compound	$73,460	$89,680
3"	Ultrasonic Mach 10	$106,517	$130,036
4"	Compound	$122,458	$149,497
4"	Ultrasonic Mach 10	$183,650	$224,200
6"	Compound	$244,842	$298,903
6"	Ultrasonic Mach 10	$391,762	$478,263
8"	Compound	$489,758	$597,897
8"	Ultrasonic Mach 10	$685,602	$836,983

CHANGE IN MAXIMUM SUPPORTABLE DEVELOPMENT FEES

The following figures list the change in development fees from the 2019 study to this report.

Figure 14. Change in Maximum Supportable Parks and Recreation Development Fees by Zone

Development Type	Park Zone 0 Change	Park Zone 1 Change	Park Zone 2 Change	Park Zone 3 Change	Park Zone 4 Change
Residential (per housing unit)					
Single Family	$295	($1,001)	$1,864	$1,102	$3,261
Multifamily	$177	($704)	$997	$548	$1,844
Mobile Home	$212	($877)	$1,160	$624	$2,179
Nonresidential (per 1,000 square feet)					
Retail/Commercial	$9	($108)	($35)	($52)	$13
Office	$15	($179)	($58)	($86)	$22
Industrial	$5	($8)	$46	$31	$70
Warehouse	$1	($12)	$2	($1)	$9
Public/Institutional	$9	($4)	$90	$64	$131
Hotel/Motel (per room)	$3	($88)	($76)	($76)	($57)

Figure 15. Change in Maximum Supportable Police and Fire Development Fees Citywide

Development Type	Police Citywide Change	Fire Citywide Change
Residential (per housing unit)		
Single Family	$382	$371
Multifamily	$174	$136
Mobile Home	$183	$126
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$403	$384
Office	$371	$402
Industrial	$214	$272
Warehouse	$48	$56
Public/Institutional	$432	$553
Hotel/Motel (per room)	($58)	($157)

Figure 16. Change in Maximum Supportable Streets Development Fees by Zone

Development Type	Central Zone Change	North Zone Change
Residential (per housing unit)		
Single Family	$1,907	($228)
Multifamily	($450)	($1,537)
Mobile Home	$2,292	$1,140
Nonresidential (per 1,000 square feet)		
Retail/Commercial	$5,217	$2,207
Office	$1,210	$34
Industrial	($477)	($1,351)
Warehouse	$131	($239)
Public/Institutional	($23)	($923)
Hotel/Motel (per room)	$82	($1,311)

Figure 17. Change in Maximum Supportable Water Resource Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	Off Project Zone Change
3/4"	Displacement	$502
1"	Displacement	$1,327

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Off Project Zone Change
3/4"	Displacement	$502
1"	Displacement	$840
1.5"	Displacement	$1,670
1.5"	Ultrasonic Mach 10	$2,495
2"	Displacement	$2,674
2"	Ultrasonic Mach 10	$3,906
3"	Compound	$5,020
3"	Ultrasonic Mach 10	$10,564
4"	Compound	$8,370
4"	Ultrasonic Mach 10	$18,633
6"	Compound	$16,730
6"	Ultrasonic Mach 10	$41,370
8"	Compound	$33,470
8"	Ultrasonic Mach 10	$66,316

Figure 18. Change in Maximum Supportable Water Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	West Zone Change	North Zone Change	South Zone Change
3/4"	Displacement	$2,189	($514)	($1,803)
1"	Displacement	$6,821	$1,651	($761)

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	West Zone Change	North Zone Change	South Zone Change
3/4"	Displacement	$2,189	($514)	($1,803)
1"	Displacement	$3,750	($767)	($2,921)
1.5"	Displacement	$7,549	($1,449)	($5,740)
1.5"	Ultrasonic Mach 10	$12,181	$716	($4,698)
2"	Displacement	$12,163	($2,241)	($9,110)
2"	Ultrasonic Mach 10	$19,077	$990	($7,555)
3"	Compound	$22,952	($4,078)	($16,968)
3"	Ultrasonic Mach 10	$54,065	$10,462	($9,970)
4"	Compound	$38,355	($6,707)	($28,196)
4"	Ultrasonic Mach 10	$95,949	$20,207	($15,243)
6"	Compound	$76,759	($13,329)	($56,290)
6"	Ultrasonic Mach 10	$215,039	$51,291	($25,190)
8"	Compound	$153,705	($26,507)	($112,446)
8"	Ultrasonic Mach 10	$338,033	$59,631	($70,990)

Figure 19. Change in Maximum Supportable Wastewater Development Fees by Zone

Single Family

Meter Size (inches)	Meter Type	West Zone Change	East Zone Change
3/4"	Displacement	$5,811	$5,433
1"	Displacement	$11,820	$10,355

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	West Zone Change	East Zone Change
3/4"	Displacement	$5,811	$5,433
1"	Displacement	$9,780	$9,144
1.5"	Displacement	$19,566	$18,312
1.5"	Ultrasonic Mach 10	$25,575	$23,234
2"	Displacement	$31,382	$29,372
2"	Ultrasonic Mach 10	$40,350	$36,718
3"	Compound	$58,983	$55,203
3"	Ultrasonic Mach 10	$99,339	$88,260
4"	Compound	$98,400	$92,094
4"	Ultrasonic Mach 10	$173,103	$153,286
6"	Compound	$196,806	$184,212
6"	Ultrasonic Mach 10	$376,166	$331,132
8"	Compound	$393,800	$368,594
8"	Ultrasonic Mach 10	$632,886	$564,438

LAND USE ASSUMPTIONS

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 estimates and projections of residential and nonresidential development in this *Land Use Assumptions* document are for all areas within Peoria's city limits. The current demographic estimates and future development projections will be used in the Infrastructure Improvements Plan (IIP) and in the calculation of development fees. Current demographic data estimates for 2023 are used in calculating levels of service (LOS) provided to existing development in the City of Peoria. Arizona's Enabling Legislation requires fees to be updated at least every five years and limits the IIP to a maximum of 10 years.

Note. Calculations throughout this technical memo are based on an analysis conducted using Excel software. Results are discussed in the report using one-and two-digit places (in most cases), which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

SUMMARY OF GROWTH INDICATORS

Key land use assumptions for the City of Peoria Development Fee Report are population, housing units, employment, and nonresidential floor area projections. TischlerBise projects housing units in the next five years based on the housing development pipeline database provided by City staff. Development pipelines provide insight into the realities of current market trends, especially in the near-term. Housing projections for the latter five years use growth rates published by the Maricopa Association of Governments (MAG).

Nonresidential development projections are based on employment estimates for 2020 - 2035 published by MAG. Multiplying employment projections by employment density factors published by the Institute of Streets Engineers (ITE) provides nonresidential floor area. These metrics are the service units and demand indicators used in the Development Fee Report.

Development fee 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, fee revenue will increase, but Peoria will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

During the next 10 years, citywide residential development projections indicate a resident population increase of 40,450 persons in an additional 17,613 housing units. Citywide nonresidential development projections indicate an employment increase of 7,202 jobs in approximately 3,338,000 square feet of floor area. Growth projections are further detailed by service areas further in the document.

SERVICE AREAS

ARS § 9-463.05 defines "service area" as follows.

> *"Any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan."*

The City of Peoria's current development impact fee program has varied service areas for several infrastructure categories. Shown below are maps of the services areas provided by the Peoria GIS Department. Development projections are listed for each area to ensure specific demand is understood.

The Parks and Recreation service areas have been adjusted in this update. Zone 0 has been included in the fee analysis along with a new area, Zone 4, which represents the Saddleback Heights master plan community.

Figure 20. Parks and Recreation Development Impact Fee Service Areas

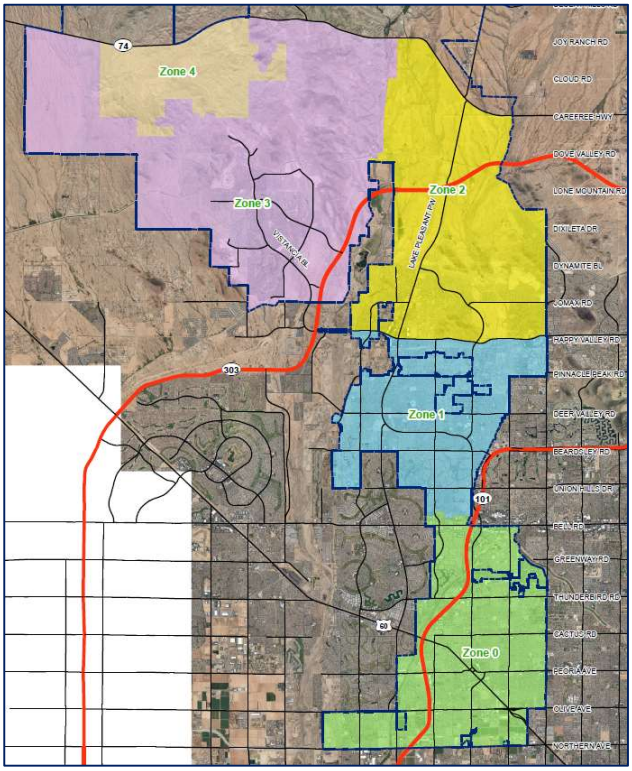


Figure 21. Streets Development Impact Fee Service Areas

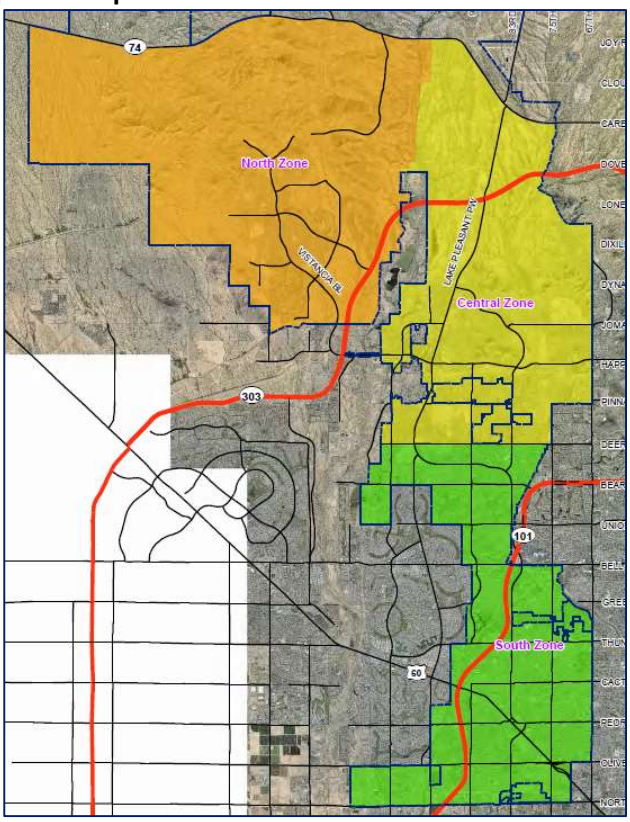


Figure 22. Water Resource Development Impact Fee Service Areas

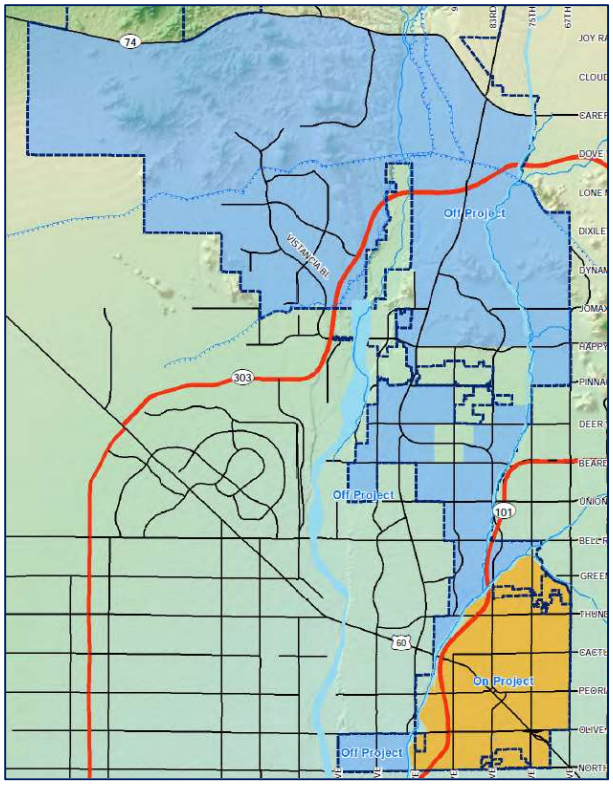


Figure 23. Water Development Impact Fee Service Areas

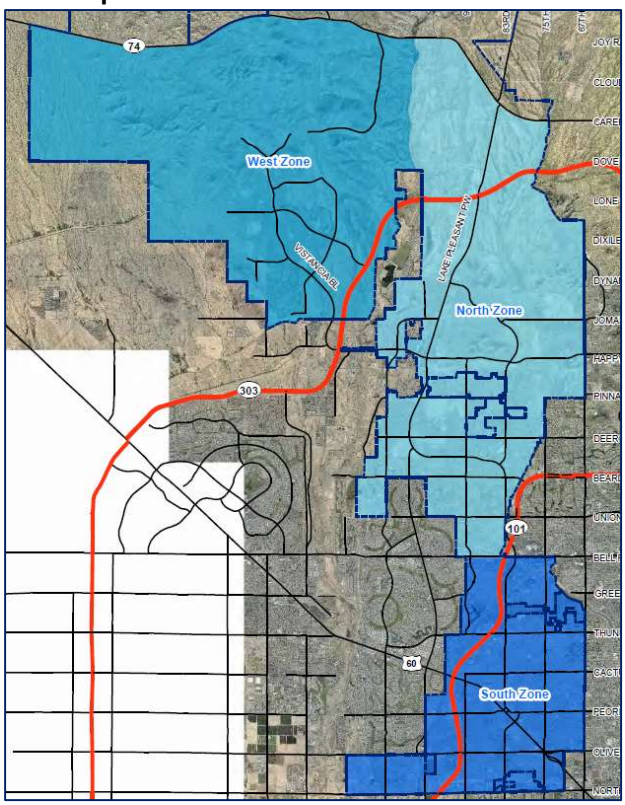
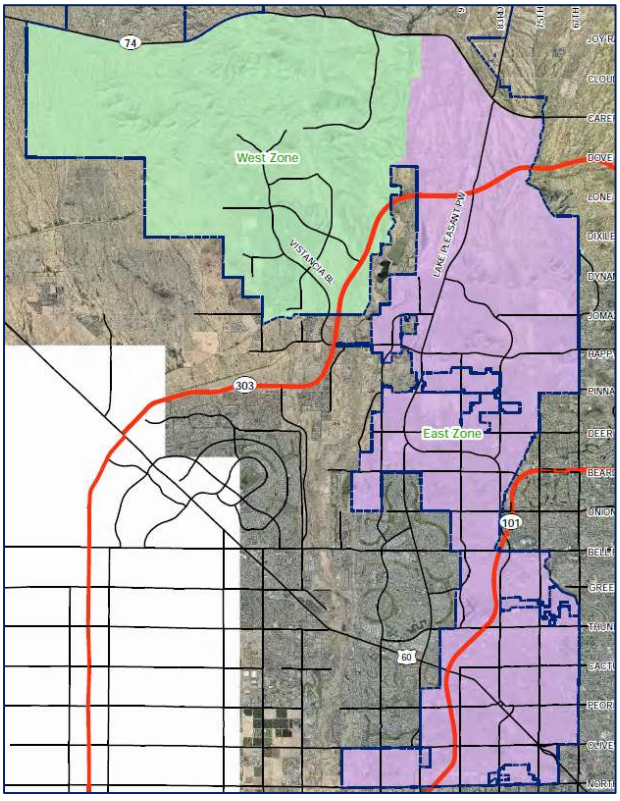


Figure 24. Wastewater Development Impact Fee Service Areas



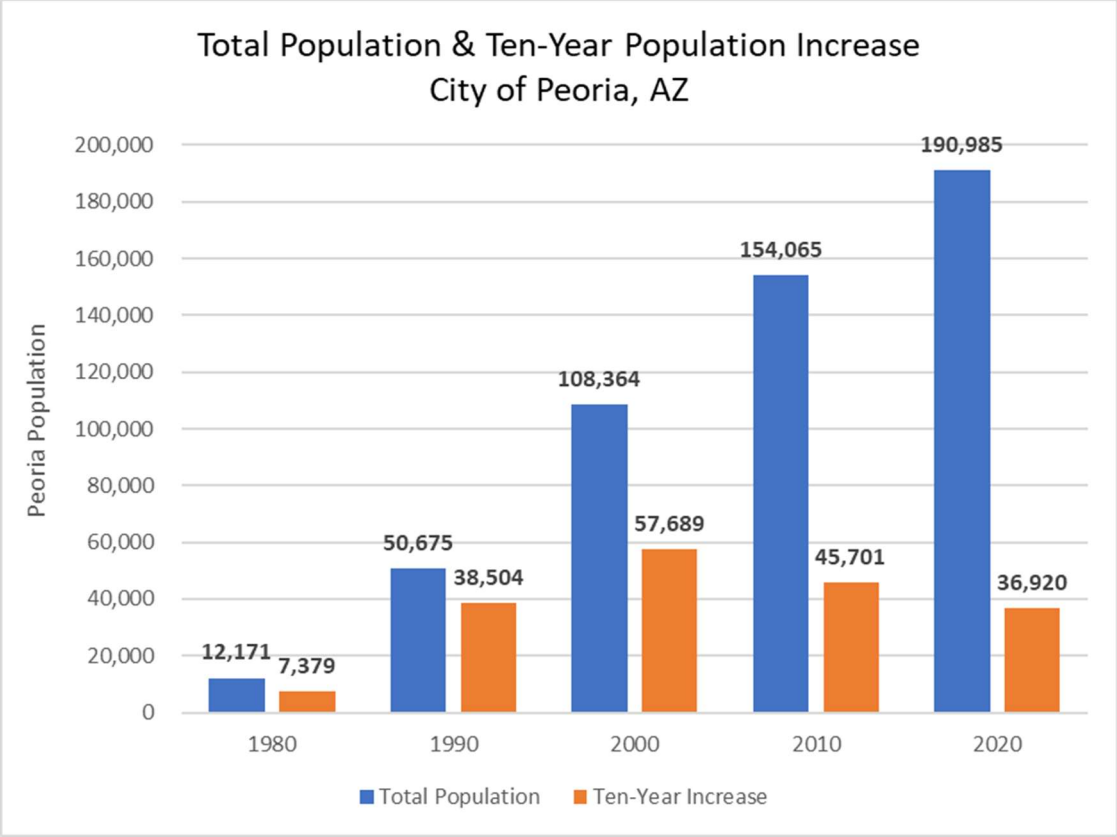
RESIDENTIAL DEVELOPMENT

This section details current estimates and future projections of residential development.

Historical Population Growth

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 25 illustrates the estimated population and ten-year population growth by decade according to data obtained from the U.S. Census Bureau.

Figure 25. Historical Population Growth



Source. U.S. Census decennial results

Persons per Housing Unit

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 (PPHH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPHH 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 Peoria be imposed according to the number of persons per housing unit.

Occupancy calculations require data on population and the types of units by structure. The U.S. Census Bureau conducts 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, which share a common sidewall, but are constructed on an individual parcel of land). For development fees in Peoria, detached units, attached units, and mobile home units are included in the "Single Family" category. The "Multifamily" category includes duplexes and all other structures with two or more units on an individual parcel of land.

Figure 26 below shows the occupancy estimates for Peoria based on 2016-2020 American Community Survey 5-Year Estimates. Single family units averaged 2.66 persons per housing unit and multifamily units averaged 1.64 persons per housing unit. The average occupancy for all housing units in Peoria was 2.51 persons per housing unit.

Figure 26. Persons per Housing Unit

Housing Type	Persons	Housing Units	Persons per Housing Unit	Households	Persons per Household	Housing Unit Mix	Vacancy Rate
Single Family [1]	153,668	57,668	**2.66**	53,442	2.88	85%	7.9%
Multifamily [2]	16,750	10,225	**1.64**	8,482	1.97	15%	20.5%
Total	170,418	67,893	**2.51**	61,924	2.75		9.6%

[1] Includes attached and detached single family homes and mobile homes
[2] Includes all other types
Source: U.S. Census Bureau, 2020 American Community Survey 5-Year Estimates

Residential Estimates

Base year (2023) residential estimated are prepared with 2022 estimates plus growth in the year. Based on the Arizona Office of Economic Opportunity, the 2022 population estimate was 199,424. By comparing the population estimate and average persons per housing unit (PPHU) a housing unit total is calculated (81,067 units). Single family and multifamily estimates are found with the housing unit mix from the US Census ACS data.

In 2022, 483 single family and 182 multifamily units were constructed. Those new units are estimated to generate 1,557 new residents based on the PPHU factors by housing type. As a result, in the base year (2023) there is an estimated 200,981 residents and 81,732 housing units citywide.

Figure 27. Citywide Base Year Population and Housing Units

Peoria, AZ	2022 Population [1]	2022 Growth	Base Year 2023
Population	199,424	1,557	200,981
Housing Type			
Single Family	68,606	483	69,089
Multifamily	12,461	182	12,643
Total	**81,067**		**81,732**

[1] Source: Arizona Office of Economic Opportunity; U.S. Census Bureau, 2020 American Community Survey 5-Year Estimates
[2] Source: City of Peoria Housing Development Pipeline Database

Residential Projections

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 projected, the demand for infrastructure will also decrease.

In the following section, projections are provided citywide and for each infrastructure category service area.

Citywide

TischlerBise projects housing units in the next five years based on the housing development pipeline database provided by City staff. Development pipelines provide insight into the realities of current market trends, especially in the near-term. In the next five years, 10,500 housing units are assumed including 6,250 single family units and 4,250 multifamily units. The resulting population growth is based on the housing development and average PPHU factors.

Housing and population projections for the latter five years use growth rates published by the Maricopa Association of Governments (MAG). As found in Figure 28, the annual growth rates range from 1.4 percent to 1.6 percent.

In total, over the next ten years there is a projected growth of 20.1 percent, a growth of 40,450 residents. Also, 17,613 housing units are projected with 70 percent being single family units and 30 percent being multifamily units.

Figure 28. Residential Development Projections – Citywide

Peoria, AZ	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population [1]	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Percent Increase		*1.0%*	*2.7%*	*2.9%*	*2.1%*	*2.4%*	*1.4%*	*1.5%*	*1.6%*	*1.4%*	*1.5%*	***20.1%***
Housing Units [2]												
Single Family	69,089	69,745	70,585	71,943	73,503	75,339	76,442	77,621	78,913	80,092	81,347	**12,258**
Multifamily	12,643	12,829	14,884	16,400	16,648	16,907	17,107	17,321	17,556	17,770	17,998	**5,355**
Total Housing Units	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

[1] Population growth is calculated based on housing projections and person per housing unit factors.
[2] The first five years of housing projections is based on the residential pipeline provided by City of Peoria. The second five years in the projections are based on the Maricopa Association of Governments (MAG) annual population growth rate.

Parks and Recreation Service Areas

Residential projections by Parks and Recreation service areas are detailed in Figure 29. A newly created Zone 4 represents the Saddleback Heights master plan community. This area was originally in Zone 3. Additionally, Zone 0 represents Peoria south of Bell Road. Currently, the City is not assessing Park and Recreation impact fees in this area, however, this report is exploring the nexus between development in Zone 0 and park infrastructure.

Furthermore, the first five years of housing development is projected based on the residential pipeline provided by the City of Peoria. In the following five years, Zones 0-3 are based on MAG annual population growth rate. Growth in Years 6-10 for Zone 4 is based on the specific development anticipated in the Saddleback Heights community.

Population projections are estimated based on housing development and PPHU factors. For the sake of simplicity, Figure 29 lists the sum of single family and multifamily growth. However, in the first five years of projections, the analysis applies the specific PPHU factors to single family and multifamily development. In the latter years, the average housing mix is assumed.

Figure 29. Residential Development Projections – Parks and Recreation Service Areas

Parks Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population [1]												
Zone 0	97,721	98,103	99,402	100,971	101,454	102,229	103,021	103,953	105,053	105,880	106,826	**9,105**
Zone 1	51,547	51,726	52,324	53,088	53,258	53,535	53,957	54,454	55,042	55,482	55,986	**4,439**
Zone 2	27,501	27,907	29,461	30,745	32,049	34,059	34,541	35,055	35,619	36,133	36,681	**9,180**
Zone 3	24,212	25,131	27,037	29,010	30,883	32,259	32,944	33,469	34,012	34,569	35,127	**10,914**
Zone 4	0	131	262	655	1,310	2,096	2,882	3,799	4,716	5,764	6,812	**6,812**
Grand Total	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Housing Units [2]												
Zone 0	40,488	40,660	41,399	42,286	42,473	42,771	43,132	43,550	44,038	44,416	44,844	**4,356**
Zone 1	21,354	21,436	21,779	22,226	22,291	22,397	22,580	22,794	23,045	23,237	23,454	**2,100**
Zone 2	10,615	10,784	11,626	12,145	12,660	13,447	13,637	13,840	14,063	14,266	14,482	**3,867**
Zone 3	9,274	9,644	10,565	11,435	12,227	12,830	13,099	13,307	13,523	13,743	13,965	**4,690**
Zone 4 [3]	0	50	100	250	500	800	1,100	1,450	1,800	2,200	2,600	**2,600**
Grand Total	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

[1] Population growth is calculated based on housing projections and person per housing unit factors.
[2] The first five years of housing projections is based on the residential pipeline provided by City of Peoria. The second five years in the projections are based on the Maricopa Association of Governments (MAG) annual population growth rate.
[3] Housing development in Zone 4 is based on development plan for Saddleback Heights

Streets Service Areas

Residential projections are prepared for the streets service areas based on a five-year housing development pipeline and MAG TAZ estimates for the Years 6-10. Shown in Figure 30, over 40 percent of the ten-year growth is projected in the North service area.

Figure 30. Residential Development Projections – Streets Service Areas

Streets Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population												
North	24,212	25,262	27,299	29,665	32,193	34,355	35,826	37,268	38,728	40,333	41,939	**17,726**
Central	31,726	32,184	33,990	35,215	36,660	38,885	39,408	39,967	40,579	41,138	41,733	**10,007**
South	145,043	145,552	147,197	149,590	150,100	150,938	152,111	153,496	155,135	156,357	157,759	**12,717**
Grand Total	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Housing Units												
North	9,274	9,694	10,665	11,685	12,727	13,630	14,199	14,757	15,323	15,943	16,565	**7,290**
Central	12,021	12,212	13,165	13,753	14,336	15,228	15,443	15,673	15,925	16,155	16,400	**4,379**
South	60,436	60,667	61,638	62,904	63,087	63,387	63,907	64,511	65,221	65,764	66,380	**5,944**
Grand Total	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

Note: Population and housing unit estimates are based on a five-year housing pipeline for Peoria and Maricopa Associations of Governments TAZ estimates for Years 6-10.

Water Resource Service Areas

Residential projections are prepared for the water resource service areas based on a five-year housing development pipeline and MAG TAZ estimates for the Years 6-10. Shown in Figure 31, 63 percent of the ten-year growth is projected in the Off Project service area.

Figure 31. Residential Development Projections – Water Resource Service Areas

Water Resource Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population												
Off Project	127,761	129,491	134,006	138,814	142,936	147,581	150,154	152,840	155,729	158,494	161,389	**33,628**
On Project	73,220	73,506	74,480	75,656	76,017	76,598	77,191	77,890	78,714	79,334	80,042	**6,822**
Grand Total	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Housing Units												
Off Project	51,395	52,109	54,450	56,659	58,327	60,198	61,231	62,311	63,473	64,582	65,745	**14,350**
On Project	30,337	30,465	31,019	31,684	31,824	32,048	32,318	32,631	32,997	33,280	33,600	**3,264**
Grand Total	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

Note: Population and housing unit estimates are based on a five-year housing pipeline for Peoria and Maricopa Associations of Governments TAZ estimates for Years 6-10.

Water Service Areas

Residential projections are prepared for the water resource service areas based on a five-year housing development pipeline and MAG TAZ estimates for the Years 6-10. Shown in Figure 32, over 40 percent of the ten-year growth is projected in the West service area.

Figure 32. Residential Development Projections – Water Service Areas

Water Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population												
North	79,048	79,633	81,785	83,833	85,306	87,595	88,498	89,509	90,661	91,615	92,666	**13,619**
South	97,721	98,103	99,402	100,971	101,454	102,229	103,021	103,953	105,053	105,880	106,826	**9,105**
West	24,212	25,262	27,299	29,665	32,193	34,355	35,826	37,268	38,728	40,333	41,939	**17,726**
Grand Total	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Housing Units												
North	31,970	32,220	33,405	34,371	34,951	35,844	36,218	36,635	37,108	37,503	37,937	**5,967**
South	40,488	40,660	41,399	42,286	42,473	42,771	43,132	43,550	44,038	44,416	44,844	**4,356**
West	9,274	9,694	10,665	11,685	12,727	13,630	14,199	14,757	15,323	15,943	16,565	**7,290**
Grand Total	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

Note: Population and housing unit estimates are based on a five-year housing pipeline for Peoria and Maricopa Associations of Governments TAZ estimates for Years 6-10.

Wastewater Service Areas

Residential projections are prepared for the water resource service areas based on a five-year housing development pipeline and MAG TAZ estimates for the Years 6-10. Shown in Figure 33, near 60 percent of the ten-year growth is projected in the East service area.

Figure 33. Residential Development Projections – Wastewater Service Areas

Wastewater Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Population												
East	176,769	177,736	181,187	184,804	186,760	189,823	191,519	193,462	195,714	197,495	199,493	**22,724**
West	24,212	25,262	27,299	29,665	32,193	34,355	35,826	37,268	38,728	40,333	41,939	**17,726**
Grand Total	200,981	202,997	208,486	214,470	218,954	224,178	227,345	230,730	234,443	237,828	241,431	**40,450**
Housing Units												
East	72,458	72,880	74,804	76,658	77,424	78,616	79,350	80,185	81,146	81,919	82,781	**10,323**
West	9,274	9,694	10,665	11,685	12,727	13,630	14,199	14,757	15,323	15,943	16,565	**7,290**
Grand Total	81,732	82,574	85,469	88,343	90,151	92,246	93,549	94,942	96,470	97,863	99,345	**17,613**

Note: Population and housing unit estimates are based on a five-year housing pipeline for Peoria and Maricopa Associations of Governments TAZ estimates for Years 6-10.

NONRESIDENTIAL DEVELOPMENT

This section details current estimates and future projections of nonresidential development including jobs and nonresidential floor area.

Nonresidential Square Footage Estimates

TischlerBise uses the term jobs to refer to employment by place of work. Figure 34 lists the nonresidential development prototypes used by TischlerBise to derive employment densities. For nonresidential development, TischlerBise uses data published in Trip Generation, Institute of Streets Engineers, 11th Edition (2021). The prototype for retail development is Shopping Center (ITE 820), which has 471 square feet of floor area per employee. The prototype for office development is General Office (ITE 710), which has 307 square feet of floor area per employee. The prototype for industrial development, Industrial Park (ITE 140), has 864 square feet of floor area per employee. Institutional development uses Nursing Home (ITE 620) and has 490 square feet of floor area per employee. These land uses are consistent with the previous impact fee study for Peoria.

Figure 34. Nonresidential Demand Units

Employment Industry	ITE Code	Land Use	Demand Unit	Emp Per Dmd Unit	Sq Ft Per Emp
Retail/Commercial	820	Shopping Center	1,000 Sq Ft	2.12	471
Office	710	General Office	1,000 Sq Ft	3.26	307
Industrial	140	Industrial Park	1,000 Sq Ft	1.16	864
Public/Institutional	620	Nursing Home	1,000 Sq Ft	2.04	490

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

Nonresidential Estimates

Based on MAG employment projections between 2020 and 2025, base year (2023) employment estimates are 21,454 retail jobs, 15,280 office jobs, 6,850 industrial jobs, and 4,449 institutional jobs. Nonresidential floor area is found by comparing the estimate jobs and the employee density factors from ITE. As a result, there are 22.9 million square feet of nonresidential floor area in Peoria. Retail is the highest share of the total at 10.1 million square feet (44 percent).

Figure 35. Citywide Base Year Nonresidential Estimates

Employment Industries	Base Year Jobs [1]	Percent of Total Jobs	Sq. Ft. per job [2]	Floor Area (sq. ft.)	Percent of Total Area
Retail	21,454	45%	471	10,104,834	44%
Office	15,280	32%	307	4,690,837	20%
Industrial	6,850	14%	864	5,918,573	26%
Institutional	4,449	9%	490	2,180,108	10%
Total	**48,033**			**22,894,352**	**100%**

[1] Source: Estimate from Maricopa Association of Governments (MAG) 2020-2025 employment projections

[2] Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

Nonresidential Projections

Employment and floor area 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 projected, the demand for infrastructure will also decrease.

In the following section, projections are provided citywide and for each infrastructure category service area.

Citywide

To project nonresidential development in Peoria, TischlerBise uses compound annual growth rates calculated from MAG employment projections for 2020 to 2025, 2025 to 2030, and 2030 to 2035. Separate growth rates are available for retail, office, industrial, and institutional development. Over the next ten years, retail employment is estimated to grow by 9 percent, office 22 percent, industrial 18 percent, and institutional 18 percent.

To convert employment to floor area the ITE employee density factors are applied. For example, the 10-year increase of 1,874 retail jobs is multiplied by 471 square feet per job to estimate 883,000 square feet of new floor area. Based on these assumptions, the 10-year projections for Peoria include an additional 3,338,000 square feet of nonresidential floor area.

Figure 36. Nonresidential Development Projections – Citywide

Industry	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs [1]												
Retail	21,454	21,675	21,899	22,091	22,284	22,479	22,676	22,874	23,024	23,176	23,328	**1,874**
Office	15,280	15,742	16,219	16,461	16,708	16,958	17,212	17,469	17,838	18,215	18,600	**3,321**
Industrial	6,850	6,977	7,106	7,226	7,348	7,472	7,598	7,726	7,836	7,948	8,061	**1,211**
Institutional	4,449	4,514	4,579	4,651	4,725	4,800	4,876	4,953	5,049	5,146	5,246	**797**
Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Percent Increase		*1.8%*	*1.8%*	*1.3%*	*1.3%*	*1.3%*	*1.3%*	*1.3%*	*1.4%*	*1.4%*	*1.4%*	***15.0%***
Nonresidential Floor Area (1,000 sq. ft.) [2]												
Retail	10,105	10,209	10,314	10,405	10,496	10,588	10,680	10,774	10,845	10,916	10,987	**883**
Office	4,691	4,833	4,979	5,054	5,129	5,206	5,284	5,363	5,476	5,592	5,710	**1,020**
Industrial	5,919	6,028	6,140	6,243	6,348	6,456	6,564	6,675	6,770	6,867	6,965	**1,046**
Institutional	2,180	2,212	2,244	2,279	2,315	2,352	2,389	2,427	2,474	2,522	2,570	**390**
Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

[1] Source: Estimate from Maricopa Association of Governments (MAG) 2020-2035 employment projections
[2] Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

Parks and Recreation Service Areas

Nonresidential projections are prepared for the Parks and Recreation Zones 0-3 based on the proportionate share of citywide growth found in the MAG TAZ model. In Zone 4, representing the Saddleback Heights development, the commercial buildout is assumed to occur over 30 years and is evenly distributed annually. Shown in Figure 37, 65 percent of the ten-year growth is projected in Zone 0.

Figure 37. Nonresidential Development Projections – Parks and Recreation Service Areas

Parks Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs												
Zone 0	34,499	35,097	35,702	36,097	36,498	36,906	37,321	37,734	38,196	38,667	39,148	**4,648**
Zone 1	9,810	9,970	10,135	10,255	10,376	10,500	10,625	10,751	10,888	11,028	11,169	**1,359**
Zone 2	2,945	2,986	3,035	3,072	3,109	3,146	3,184	3,223	3,265	3,308	3,351	**406**
Zone 3	779	789	801	810	820	831	841	858	877	896	915	**136**
Zone 4 [1]	0	65	130	196	261	326	391	456	522	587	652	**652**
Grand Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Nonresidential Floor Area (1,000 sq. ft.)												
Zone 0	16,776	17,044	17,314	17,513	17,715	17,920	18,129	18,337	18,548	18,763	18,982	**2,206**
Zone 1	4,404	4,470	4,539	4,593	4,647	4,703	4,759	4,816	4,874	4,933	4,994	**590**
Zone 2	1,343	1,361	1,381	1,397	1,413	1,429	1,446	1,463	1,480	1,498	1,515	**172**
Zone 3	371	376	381	386	391	395	400	408	417	426	435	**64**
Zone 4 [1]	0	31	61	92	123	154	184	215	246	276	307	**307**
Grand Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

Note: Job and floor area estimates are based on the service area share of the Maricopa Associations of Governments TAZ estimates.
[1] Saddleback Heights community commercial buildout is assumed over 30 years and is evenly distributed annually

Streets Service Areas

Nonresidential projections are prepared for the streets service areas based on the proportionate share of citywide growth found in the MAG TAZ model. Shown in Figure 38, 79 percent of the ten-year growth is projected in the South service area.

Figure 38. Nonresidential Development Projections – Streets Service Areas

Streets Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs												
North	779	854	931	1,006	1,081	1,156	1,232	1,314	1,398	1,482	1,567	**788**
Central	5,224	5,296	5,376	5,439	5,503	5,568	5,634	5,701	5,771	5,843	5,916	**693**
South	42,030	42,758	43,496	43,984	44,480	44,984	45,495	46,007	46,578	47,159	47,751	**5,721**
Grand Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Nonresidential Floor Area (1,000 sq. ft.)												
North	371	407	442	478	513	549	584	623	663	702	742	**371**
Central	2,427	2,459	2,493	2,522	2,551	2,580	2,609	2,639	2,669	2,700	2,731	**304**
South	20,096	20,416	20,741	20,981	21,225	21,472	21,724	21,976	22,233	22,494	22,760	**2,663**
Grand Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

Note: Job and floor area estimates are based on the service area share of the Maricopa Associations of Governments TAZ estimates.

Water Resource Service Areas

Nonresidential projections are prepared for the water resource service areas based on the proportionate share of citywide growth found in the MAG TAZ model. Shown in Figure 39, nonresidential growth is nearly evenly split between the two service areas.

Figure 39. Nonresidential Development Projections – Water Resource Service Areas

Water Resource Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs												
Off Project	23,128	23,558	24,008	24,312	24,621	24,935	25,252	25,577	25,946	26,322	26,703	**3,576**
On Project	24,905	25,350	25,795	26,117	26,443	26,774	27,109	27,445	27,801	28,163	28,532	**3,626**
Grand Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Nonresidential Floor Area (1,000 sq. ft.)												
Off Project	10,399	10,577	10,761	10,898	11,037	11,178	11,320	11,467	11,623	11,781	11,941	**1,542**
On Project	12,495	12,705	12,915	13,082	13,252	13,423	13,597	13,771	13,942	14,115	14,291	**1,796**
Grand Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

Job and floor area estimates are based on the service area share of the Maricopa Associations of Governments TAZ estimates.

Water Service Areas

Nonresidential projections are prepared for the water service areas based on the proportionate share of citywide growth found in the MAG TAZ model. Shown in Figure 40, 74 percent of the ten-year growth is projected in the South service area.

Figure 40. Nonresidential Development Projections – Water Service Areas

Water Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs												
North	12,755	12,956	13,170	13,326	13,485	13,646	13,808	13,974	14,153	14,335	14,520	**1,765**
South	34,499	35,163	35,832	36,292	36,759	37,232	37,712	38,190	38,718	39,254	39,800	**5,300**
West	779	789	801	810	820	831	841	858	877	896	915	**136**
Grand Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Nonresidential Floor Area (1,000 sq. ft.)												
North	5,747	5,832	5,920	5,990	6,061	6,132	6,205	6,278	6,354	6,431	6,509	**762**
South	16,776	17,074	17,375	17,605	17,838	18,074	18,313	18,552	18,794	19,040	19,289	**2,513**
West	371	376	381	386	391	395	400	408	417	426	435	**64**
Grand Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

Job and floor area estimates are based on the service area share of the Maricopa Associations of Governments TAZ estimates.

Wastewater Service Areas

Nonresidential projections are prepared for the wastewater service areas based on the proportionate share of citywide growth found in the MAG TAZ model. Shown in Figure 41, 98 percent of the ten-year growth is projected in the East service area.

Figure 41. Nonresidential Development Projections – Wastewater Service Areas

Wastewater Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Jobs												
East	47,254	48,119	49,002	49,619	50,244	50,878	51,520	52,164	52,871	53,589	54,320	**7,066**
West	779	789	801	810	820	831	841	858	877	896	915	**136**
Grand Total	48,033	48,908	49,803	50,429	51,064	51,708	52,361	53,022	53,747	54,485	55,235	**7,202**
Nonresidential Floor Area (1,000 sq. ft.)												
East	22,523	22,906	23,296	23,595	23,898	24,206	24,518	24,831	25,148	25,471	25,798	**3,275**
West	371	376	381	386	391	395	400	408	417	426	435	**64**
Grand Total	22,894	23,282	23,677	23,981	24,289	24,601	24,918	25,239	25,565	25,896	26,233	**3,338**

Job and floor area estimates are based on the service area share of the Maricopa Associations of Governments TAZ estimates.

VEHICLE TRIPS

Residential Vehicle Trips by Housing Type

A customized trip rate is calculated for the single family and multifamily units in Peoria. In Figure 42, the most recent data from the U.S. Census American Community Survey is inputted into equations provided by the ITE to calculate the trip ends per housing unit factor. A single family unit is estimated to generate 9.83 trip ends and a multifamily unit is estimated to generate 4.51 trip ends on an average weekday.

Figure 42. Customized Residential Trip End Rates by Housing Type

		Households by Structure Type[2]			
Tenure by Units in Structure	Vehicles Available[1]	Single Family	Multifamily	Total	Vehicles per HH by Tenure
Owner-Occupied	110,935	51,795	834	52,629	2.11
Renter-Occupied	27,170	8,530	9,072	17,602	1.54
Total	138,105	60,325	9,906	70,231	1.97
Housing Units[3]		64,038	11,631	75,669	

Housing Type	Persons in Households[4]	Trip Ends[5]	Vehicles by Type of Unit	Trip Ends[6]	Average Trip Ends	Local Trip Ends per Unit	National Trip Ends per Unit[7]
Single Family	167,633	462,558	122,424	796,831	629,694	**9.83**	9.43
Multifamily	18,618	42,554	15,731	62,272	52,413	**4.51**	4.54
Total	186,251	505,113	138,154	859,103	682,108	**9.01**	

1. Vehicles available by tenure from Table B25046, American Community Survey, 2021 5-Year Estimates.
2. Households by tenure and units in structure from Table B25032, American Community Survey, 2021 5-Year Estimates.
3. Housing units from Table B25024, American Community Survey, 2021 5-Year Estimates.
4. Total population in households from Table B25033, American Community Survey, 2021 5-Year Estimates.
5. Vehicle trips ends based on persons using formulas from ITE *Trip Generation*. For single-family housing (ITE 210), the fitted curve equation is EXP(0.89*LN(persons)+1.72) [ITE 2017]. To approximate the average population of the ITE studies, persons were divided by 276 and the equation result multiplied by 276. For multi-family housing (ITE 221), the fitted curve equation is (2.29*persons)-81.02 [ITE 2017].
6. Vehicle trip ends based on vehicles available using formulas from ITE *Trip Generation*. For single-family housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.93) [ITE 2017]. To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 416 and the equation result multiplied by 416. For multifamily housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58 [ITE 2012].
7. *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021).

Residential Vehicle Trips Adjustment Factors

A vehicle trip end is the out-bound or in-bound leg of a vehicle trip. As a result, so as not double count trips, a standard 50 percent adjustment is applied to trip ends to calculate a vehicle trip. For example, the out-bound trip from a person's home to work is attributed to the housing unit and the trip from work back home is attributed to the employer.

However, an additional adjustment is necessary to capture City residents' work bound trips that are outside of the city. The trip adjustment factor includes two components. According to the National Household Travel Survey, home-based work trips are typically 31 percent of out-bound trips (which are 50 percent of all trip ends). Also, utilizing the most recent data from the Census Bureau's web application "OnTheMap", 92 percent of Peoria workers travel outside the city for work. In combination, these factors account for 14 percent of additional production trips (0.31 x 0.50 x 0.92 = 0.14). Shown in Figure 43, the total adjustment factor for residential housing units includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

Figure 43. Residential Trip Adjustment Factor for Commuters

Trip Adjustment Factor for Commuters

Employed Peoria Residents (2020)	83,911
Residents Working in Peoria (2020)	6,816
Residents Commuting Outside of Peoria for Work	77,095
Percent Commuting Out of Peoria	92%
Additional Production Trips	**14%**

Standard Trip Adjustment Factor	**50%**
Residential Trip Adjustment Factor	**64%**

Source: U.S. Census, OnTheMap Application, 2020

Nonresidential Vehicle Trips

Vehicle trip generation for nonresidential land uses are calculated by using ITE's average daily trip end rates and adjustment factors found in their recently published 11th edition of Trip Generation. To estimate the trip generation in Peoria, the weekday trip end per 1,000 square feet factors listed in Figure 44 are used.

Figure 44. Institute of Streets Engineers Nonresidential Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Wkdy Trip Ends Per Dmd Unit	Wkdy Trip Ends Per Employee
Retail/Commercial	820	Shopping Center	1,000 Sq Ft	37.01	17.42
Office	710	General Office	1,000 Sq Ft	10.84	3.33
Industrial	140	Industrial Park	1,000 Sq Ft	3.37	2.91
Public/Institutional	620	Nursing Home	1,000 Sq Ft	6.75	3.31

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

For nonresidential land uses, the standard 50 percent adjustment is applied to office, industrial, and institutional development. A lower vehicle trip adjustment factor is used for retail because this type of development attracts vehicles as they pass-by on arterial and collector roads. For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

In Figure 45, the Institute for Streets Engineers' land use code, daily vehicle trip end rate, and trip adjustment factor is listed for each land use.

Figure 45. Daily Vehicle Trip Factors

Land Use	ITE Codes	Daily Vehicle Trip Ends	Trip Adj. Factor	Daily Vehicle Trips
Residential (per housing unit)				
Single Family	210	9.83	64%	6.29
Multifamily	220	4.51	64%	2.89
Nonresidential (per 1,000 square feet)				
Retail	820	37.01	38%	14.06
Office	710	10.84	50%	5.42
Industrial	140	3.37	50%	1.69
Institutional	620	6.75	50%	3.38

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021); National Household Travel Survey, 2009

Vehicle Trip Projections

Vehicle trip 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 projected, the demand for infrastructure will also decrease.

Citywide

The base year vehicle trip totals and vehicle trip projections are calculated by combining the vehicle trip end factors, the trip adjustment factors, and the residential and nonresidential assumptions for housing stock and floor area. Citywide, residential land uses account for 471,145 vehicle trips and nonresidential land uses account for 184,867 vehicle trips in the base year (Figure 46).

Through 2033, it is projected that daily vehicle trips will increase by 113,594 trips with the majority of the growth being generated by single family (68 percent) and multifamily (14 percent) development.

Figure 46. Vehicle Trip Projections

Development Type	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Residential Trips												
Single Family	434,653	438,780	444,064	452,608	462,422	473,973	480,910	488,326	496,460	503,876	511,771	**77,118**
Multifamily	36,493	37,030	42,961	47,337	48,053	48,800	49,378	49,996	50,674	51,292	51,950	**15,457**
Subtotal	471,145	475,809	487,026	499,945	510,475	522,773	530,289	538,323	547,134	555,168	563,721	**92,575**
Nonresidential Trips												
Retail	142,112	143,578	145,059	146,329	147,610	148,902	150,205	151,520	152,515	153,517	154,526	**12,413**
Office	25,424	26,194	26,987	27,391	27,801	28,217	28,639	29,067	29,682	30,309	30,950	**5,526**
Industrial	9,973	10,157	10,345	10,520	10,697	10,878	11,061	11,247	11,408	11,570	11,735	**1,763**
Institutional	7,358	7,464	7,572	7,692	7,814	7,938	8,063	8,191	8,349	8,511	8,675	**1,317**
Subtotal	184,867	187,394	189,964	191,932	193,922	195,934	197,968	200,026	201,954	203,907	205,886	**21,019**
Vehicle Trips												
Grand Total	656,013	663,203	676,990	691,877	704,397	718,707	728,257	738,349	749,089	759,076	769,607	**113,594**

Source: Institute of Transportation Engineers, *Trip Generation* , 11th Edition (2021)

Streets Service Areas

Vehicle trip projections are prepared for the streets service areas based on the estimated residential and nonresidential growth. Shown in Figure 47, both the North and South service areas account for about 40 percent of the vehicle trip increase.

Figure 47. Vehicle Trip Projections – Streets Service Areas

Streets Service Areas	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Vehicle Trips												
North	60,503	62,998	67,769	73,189	79,133	84,231	87,722	92,266	95,750	99,568	103,394	**42,891**
Central	100,135	101,492	105,691	108,631	112,271	117,737	119,240	120,609	122,298	123,860	125,511	**25,376**
South	495,375	498,714	503,529	510,056	512,993	516,739	521,295	525,473	531,041	535,648	540,702	**45,327**
Grand Total	656,013	663,203	676,990	691,877	704,397	718,707	728,257	738,349	749,089	759,076	769,607	**113,594**

Note: Vehicle trip estimates are based on the projection residential and nonresidential growth in the service area.

Note. Vehicle trips only pertain to the streets analysis. To avoid confusion, vehicle trip projections for other infrastructure service areas is not included in this report. However, such information can be provided if needed.

PARKS AND RECREATION IIP

ARS § 9-463.05 (T)(7)(g) defines the facilities and assets that can be included in the Parks and Recreation 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 and Recreation IIP includes components for community improvements, neighborhood park land and improvements, and the cost of preparing the Parks and Recreation IIP and future Master Plan efforts. The incremental expansion methodology is used for citywide community park improvements, Zone 2 and 3 neighborhood park land and park improvements. The plan-based methodology is used for the Zone 4 neighborhood park land and park improvements, IIP report, and Master Plan components.

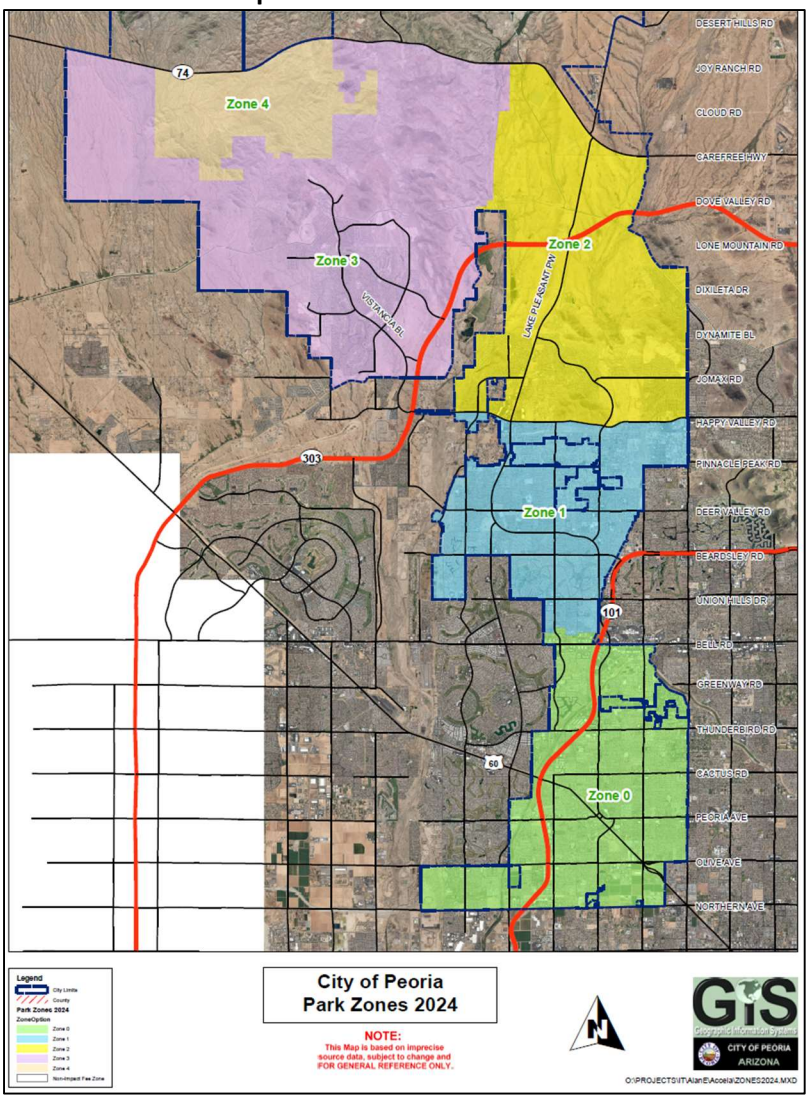
The park land component represents the cost for future land purchases and the park improvement component represents the cost for all the efforts needed to improve the raw land such as design, site improvements, utilities, and amenities.

This report revised the level of service calculations for community and neighborhood park facilities. It has been determined that community parks provide citywide benefit. While neighborhood park amenities provide a benefit to a smaller zone. In this case, the community park facilities are attributed to citywide demand and neighborhood park facilities are attributed to the service area where it is located. Importantly, following ARS § 9-463.05 (T)(7)(g), only 30 acres of the community parks are included in the level of service analysis.

SERVICE AREA

Peoria's Parks and Recreation Development Fee is currently assessed in three service areas. In this update, two additional service areas are established. Illustrated below, new Zone 0 is south of Bell Road and Zone 4 represents the Saddleback Heights master plan community.

Figure 48. Parks and Recreation Development Fee Service Areas



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 service unit for the Parks and Recreation Development Fees is an equivalent dwelling unit, or EDU. The functional population is based factors by residential and nonresidential land use type for parks and recreational services are converted into EDUs. For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors. The functional population methodology for nonresidential land uses is based on employee density, occupancy, and employment inflow data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. The description of the functional population methodology, the calculation of the EDU factors, and the determination of existing and projected EDUs in each service area are presented below.

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."*

A service unit is a standardized measure of demand. The service unit for the parks and recreation impact fees is an Equivalent Dwelling Unit (EDU). An EDU represents the average demand from a single family detached dwelling unit determined with functional population. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the ratio between the functional population from a single family compared to the development.

Functional Population

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the persons per housing unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors. Additionally, the occupancy for a housing unit is set to 1.00 since the persons per housing unit factors have already accounted for vacant units. Shown in Figure 49 is the functional population for single family, multifamily, and mobile homes in Peoria.

The functional population methodology for nonresidential land uses is based on employee density, occupancy, and employment inflow data. The nonresidential occupancy factor is based on 40 hours per week compared to 168 hours in a week. Additionally, 17 percent of the jobs in Peoria are filled by non-Peoria residents. Since the demand from Peoria residents is captured from the residential functional population, a 17 percent inflow employment factor is included. By combining these factors, the nonresidential functional population per 1,000 square feet of floor area is calculated in Figure 49.

Figure 49. Parks and Recreational Functional Population Factors

Development Type	Unit	Pop./Emp. per Unit [1]	Occupancy Factor [2]	Inflow Emp. Factor [3]	Functional Pop/Unit [4]
Single Family	dwelling	2.67	1.00	-	2.67
Multifamily	dwelling	1.60	1.00	-	1.60
Mobile Home	dwelling	1.91	1.00	-	1.91
Retail/Commercial	1,000 sq. ft.	2.12	0.24	0.17	0.09
Office	1,000 sq. ft.	3.26	0.24	0.17	0.13
Industrial	1,000 sq. ft.	1.16	0.24	0.17	0.05
Warehouse	1,000 sq. ft.	0.34	0.24	0.17	0.01
Public/Institutional	1,000 sq. ft.	2.04	0.24	0.17	0.08
Hotel/Motel	per room	0.56	0.24	0.17	0.02

[1] Source: U.S. Census Bureau, 2020 American Community Survey 5-Year Estimates; *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)
[2] Source: Nonresidential occupancy factor is based on 40 hours per week compared to 168 hours in a week.
[3] Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.
[4] Functional population is found by multiplying the pop./emp. per unit, occupancy, and inflow emp. factors.

Equivalent Dwelling Unit Factors

An equivalent dwelling unit (EDU) is set to the functional population of a single family unit. Thus, an EDU is set to a functional population of 2.67. This is compared to the functional population factors for the other development types to calculate its equivalent EDU. For example, a multifamily unit in Peoria has a functional population of 1.60, which results in 0.60 EDUs (1.60 functional population / 2.67 functional population per EDU = 0.60 EDUs).

Figure 50. EDU Factors by Development Type

Development Type	Unit	Functional Pop/Unit	EDUs/Unit
Single Family	dwelling	2.67	1.000
Multifamily	dwelling	1.60	0.600
Mobile Home	dwelling	1.91	0.720
Retail/Commercial	1,000 sq. ft.	0.09	0.030
Office	1,000 sq. ft.	0.13	0.050
Industrial	1,000 sq. ft.	0.05	0.018
Warehouse	1,000 sq. ft.	0.01	0.005
Public/Institutional	1,000 sq. ft.	0.08	0.031
Hotel/Motel	per room	0.02	0.009

Service Area Base Year EDUs

To calculate the current level of service of parks and recreational facilities, it is necessary to determine the base year EDUs in each service area. This is done by applying the EDU factors to the base year housing and nonresidential floor area estimates. Shown at the bottom of Figure 51, there are a total of 77,386 park and recreation EDUs in Peoria. In 2023, nearly half of the EDUs are in Zone 0.

Figure 51. Base Year Park and Recreation EDUs by Service Area

Peoria, AZ	Base Year 2023	Percent of Total
Equivalent Dwelling Units (EDUs)		
Zone 0	37,827	49%
Zone 1	19,772	26%
Zone 2	10,536	14%
Zone 3	9,251	12%
Zone 4	0	0%
Total EDUs	77,386	100%

Note: Total EDUs is the sum of residential and nonresidential development

EDU Growth Projections

Estimated growth in EDUs is based on the EDU factors by development type combined with housing and nonresidential floor area growth projections. Over the next ten years, Peoria is projected to grow by 15,580 park and recreation EDUs, 20 percent from the base year. Shown in Figure 52, the largest share of growth is in Zone 3 while Zone 0 and Zone 2 increase by over 3,500 EDUs over the ten years.

Figure 52. Citywide EDU Growth Projections

Peoria, AZ	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
Equivalent Dwelling Units (EDUs)												
Zone 0	37,827	37,982	38,481	39,077	39,269	39,571	39,896	40,273	40,719	41,059	41,445	3,618
Zone 1	19,772	19,842	20,071	20,359	20,426	20,533	20,696	20,886	21,111	21,281	21,476	1,704
Zone 2	10,536	10,692	11,278	11,767	12,266	13,034	13,218	13,414	13,629	13,827	14,036	3,500
Zone 3	9,251	9,601	10,323	11,073	11,786	12,310	12,571	12,771	12,979	13,193	13,405	4,154
Zone 4	0	50	101	251	502	802	1,103	1,453	1,803	2,204	2,604	2,604
Total EDUs	77,386	78,167	80,254	82,527	84,249	86,250	87,484	88,797	90,241	91,564	92,966	15,580

Note: Total EDUs is the sum of residential and nonresidential growth projections combined with EDU factors by development type

Note: the EDU factors for parks and recreation services and facilities are different than the EDU factors for public safety services and facilities. This results in different base year and EDU growth projections.

PARKS AND RECREATIONAL IIP

Figure 53 lists the Peoria Parks and Recreational IIP for FY24-FY34. The IIP satisfies the projected growth-related needs. Additionally, the cost estimates in the IIP inform the development fee calculations in the following section. Also, the impact fee collection will be consistent with the park expansion plans. For example, for community park plans there are only park improvement plans not land purchases. In this case, a land component for community parks is excluded from the analysis. Similarly, there are neighborhood park expansion plans in Zone 2, 3, and 4. Thus, the analysis excludes Zone 0 and 1 in the neighborhood park level of service analysis.

Figure 53. Parks and Recreational IIP

City of Peoria, AZ Park & Recreation FY24-34 Infrastructure Improvement Plan (IIP)							
Project	Zone	Percent Growth-Related	Land Cost	Park Impr. Cost	Total Cost	Timing	Useable Acres
Aloravita South Neighborhood Park	Zone 2	100%	$2,400,000	$7,400,000	$9,800,000	FY27/28	6.0
Sunrise Mountain Park*	Zone 2	100%	$0	$4,400,000	$4,400,000	FY30/31	4.0
Neighborhood Park at Mystic	Zone 3	100%	$2,080,000	$6,520,000	$8,600,000	FY25/26	5.2
Neighborhood Park at Northpoint (Vistancia)	Zone 3	100%	$3,200,000	$9,700,000	$12,900,000	FY27/28	8.0
Saddleback Heights Park	Zone 4	100%	$5,200,000	$15,200,000	$20,400,000	FY30/31	13.0
Community Park (Pioneer) Growth Amenities*	Citywide	100%	$0	$8,000,000	$8,000,000	FY30/31	9.5
North Area Community Park*	Citywide	100%	$0	$3,600,000	$3,600,000	FY25/26	15.0
Parks & Recreation Plan	Citywide	100%	-	-	$500,000	FY25 & FY34	-
Impact Fee Update Studies	Citywide	100%	-	-	$55,000	FY28 & FY32	-
				Total	**$68,255,000**		**60.7**

* City already has land

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."*

Citywide Community Parks – Incremental Expansion

The Peoria Parks and Recreational Department has 239.7 total community park acres. Importantly, only 30 acres at each park can be included in the development fee analysis. Furthermore, the recently acquired land for Northpointe Park has yet to be improved, thus, that is excluded from the analysis as well. As a result, there are 90 acres eligible for the citywide community park level of service calculation. The acreage is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service is 1.36 park land acres and 1.16 improved park acres per 1,000 EDUs.

As mentioned, the City of Peoria plans to improve existing community park land, but does not anticipate purchasing new community park acres. Thus, the park land component of the community park component is removed from the fee collection and set to zero in Figure 54.

Based on the construction estimates found in the Parks and Recreational IIP future community park improvement cost $473,000 per acre. As a result, the cost is $549 per EDU (1.16 improved park acres per 1,000 EDUs x $473,000 per acre = $549 per EDU, rounded).

Figure 54. Citywide Community Park Existing Level of Service

Community Parks	Total Acres	Eligible Park Acres	Improved Eligible Acre
Pioneer Park	85.0	30.0	30.0
Rio Vista Park	54.7	30.0	30.0
Paloma Park	85.0	30.0	30.0
Northpointe Park*	15.0	15.0	-
Total	**239.7**	**105.0**	**90.0**

Current LOS

Level-of-Service Standards	Park Land	Park Impr.
Total Eligible Acres	105.0	90.0
2023 Equivalent Dwelling Units (EDUs)	77,388	77,388
Acres per 1,000 EDUs	**1.36**	**1.16**

LOS with IIP Adustment

Level-of-Service Standards	Park Land	Park Impr.
Acres per 1,000 EDUs	**0.00**	**1.16**

Cost Analysis	Park Land	Park Impr.
Acres per 1,000 EDUs	0.00	1.16
Average Cost per Acre [1]	$0	$473,000
Capital Cost per EDU	**$0**	**$549**

[1] Cost per acre based on IIP cost estimates

* Park has not yet been improved

Zone 2 Neighborhood Parks – Incremental Expansion

There are 40.4 improved neighborhood park acres in Zone 2. The acreage is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service in Zone 2 is 3.83 park land acres and 3.83 improved park acres per 1,000 EDUs. However, the IIP only supports park land purchase of 1.71 park land per 1,000 EDUs and 2.86 improved park acres per 1,000 EDUs. The development fee cannot exceed the level of service in the IIP. Thus, the fee is set to the level of service in the IIP.

Based on the construction estimates found in the Parks and Recreational IIP, future neighborhood park costs in Zone 2 are $400,000 per acre for land purchase and $1,180,000 per acre to improve the park land. As a result, the cost is $684 per EDU for park land (1.71 park acres per 1,000 EDUs x $400,000 per acre = $684 per EDU, rounded) and $3,375 per EDU for park land improvement (2.86 park improvement acres per 1,000 EDUs x $1,180,000 per acre = $3,375 per EDU, rounded).

Figure 55. Zone 2 Neighborhood Park Existing Level of Service

Neighborhood Parks - Zone 2	Total Acres	Eligible Acres
Palo Verde Park	4.1	4.1
Sonoran Mountain Ranch Park	7.5	7.5
Terramar Park	9.4	9.4
West Wing Park	19.3	19.3
Total	**40.4**	**40.4**

Current LOS

Level-of-Service Standards	Park Land	Park Impr.
Total Eligible Acres	40.4	40.4
2023 Equivalent Dwelling Units (EDUs)	10,536	10,536
Acres per 1,000 EDUs	**3.83**	**3.83**

LOS with IIP Adustment

Level-of-Service Standards	Park Land	Park Impr.
Acres per 1,000 EDUs	**1.71**	**2.86**

Cost Analysis	Park Land	Park Impr.
Acres per 1,000 EDUs	1.71	2.86
Average Cost per Acre [1]	$400,000	$1,180,000
Capital Cost per EDU	**$684**	**$3,375**

[1] Cost per acre based on IIP cost estimates

Zone 3 Neighborhood Parks – Incremental Expansion

There are 15.6 improved neighborhood park acres in Zone 3. The acreage is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service in Zone 3 is 1.69 park land acres and 1.69 improved park acres per 1,000 EDUs. In this case, the existing level of service is supported by the expansions planned in the IIP, thus, the existing level of service can be included in the fee calculation.

Based on the construction estimates found in the Parks and Recreational IIP, future neighborhood park costs in Zone 3 are $400,000 per acre for land purchase and $1,229,000 per acre to improve the park land. As a result, the cost is $676 per EDU for park land (1.69 park acres per 1,000 EDUs x $400,000 per acre = $676 per EDU, rounded) and $2,077 per EDU for park land improvement (1.69 park improvement acres per 1,000 EDUs x $1,229,000 per acre = $2,077 per EDU, rounded).

Figure 56. Zone 3 Neighborhood Park Existing Level of Service

Neighborhood Parks - Zone 3	Total Acres	Eligible Acres
Sunset Park	11.1	11.1
Westland Park	4.5	4.5
Total	**15.6**	**15.6**

Current LOS

Level-of-Service Standards	Park Land	Park Impr.
Total Eligible Acres	15.6	15.6
2023 Equivalent Dwelling Units (EDUs)	9,251	9,251
Acres per 1,000 EDUs	**1.69**	**1.69**

Cost Analysis	Park Land	Park Impr.
Acres per 1,000 EDUs	1.69	1.69
Average Cost per Acre [1]	$400,000	$1,229,000
Capital Cost per EDU	**$676**	**$2,077**

[1] Cost per acre based on IIP cost estimates

Zone 4 Neighborhood Parks – Plan-Based

Currently, there are no park facilities in Zone 4 along with very little demand. However, the Saddleback Heights master plan community anticipates significant residential development. In this case, the City has decided to establish a new zone to directly attribute growth in the Saddleback Heights development to a new neighborhood park. Shown in Figure 57, the future neighborhood park is planned for 13 acres and is attributed to 20 years of growth which is projected to be 4,655 EDUs. The future level of service is found by comparing the park acres to the projected EDUs resulting in 2.79 acres per 1,000 EDUs (13 acres / 4,655 EDUs = 2.79 acres per 1,000 EDUs).

Based on the Parks and Recreation IIP, Saddleback Heights Park will cost $400,000 to purchase land and $1,169,000 per acre to improve the land resulting in a cost of $1,116 per EDU for land and $3,262 per EDU for park land improvement (2.79 park improvement acres x $1,169,000 per acre = $3,262 per EDU).

Figure 57. Zone 4 Neighborhood Park Planned Level of Service

Neighborhood Parks - Zone 4	Total Acres	Eligible Acres
Saddleback Heights Park - Future Park	13.0	13.0
Total	**13.0**	**13.0**

Level-of-Service Standards	Park Land	Park Impr.
20-Year Projected Buildout (EDUs)	4,655	4,655
Zone 4 Acres in IIP	13.0	13.0
Future Acres per 1,000 EDUs	**2.79**	**2.79**

Cost Analysis	Park Land	Park Impr.
Future Acres per 1,000 EDUs	2.79	2.79
Average Cost per Acre [1]	$400,000	$1,169,000
Capital Cost per EDU	**$1,116**	**$3,262**

[1] Cost per acre based on IIP cost estimates

Park Master Plans and Development Fee Report – Plan-Based

There is an anticipated cost of $550,000 for Park Master Plan efforts and Development Fee Reports over the next ten years. Based on this cost and ten-year projections of EDUs, the cost per EDU is $36.

Figure 58. Park Master Plan and Development Fee Report

Park Plan & IF Studies	Growth Share	Ten-Year EDU Increase	Capital Cost per EDU
$555,000	100%	15,580	$36

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."*

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."*

Citywide Community Parks

Over the next ten years, Peoria plans to maintain its existing level of service for community parks. Based on projected citywide growth (15,580 EDUs) there is a growth-related need for 18.0 improved park acres over the next ten years. At current costs, this equates to $8.5 million.

Figure 59. Citywide Community Parks Projected Demand

Infrastructure	Level of Service		Demand Unit	Cost/Unit
Community Park	1.16	Impr. Acres	per 1,000 EDUs	$473,000

Growth-Related Need for Community Park			
Year		EDUs	Park Acres Improved
Base	2023	77,386	89.8
Year 1	2024	78,167	90.7
Year 2	2025	80,254	93.1
Year 3	2026	82,527	95.7
Year 4	2027	84,249	97.7
Year 5	2028	86,250	100.1
Year 6	2029	87,484	101.5
Year 7	2030	88,797	103.0
Year 8	2031	90,241	104.7
Year 9	2032	91,564	106.2
10	2033	92,966	107.8
Ten-Year Increase		15,580	**18.0**
		Projected Expenditure	**$8,514,000**

Growth-Related Expenditures for Community Park	$8,514,000

Zone 2 Neighborhood Parks

Based on projected growth in Zone 2 (3,500 EDUs) and levels of service committed to in the IIP there is a growth-related need for 6.0 new park acres and 10.0 improved park acres over the next ten years. At current costs, this equates to $14.2 million.

Figure 60. Zone 2 Neighborhood Parks Projected Demand

Infrastructure	Level of Service		Demand Unit	Cost/Unit
Neighborhood Park	1.71	Acres	per 1,000 EDUs	$400,000
	2.86	Impr. Acres	per 1,000 EDUs	$1,180,000

Growth-Related Need for Neighborhood Park				
Year		EDUs	Park Acres	Park Acres Improved
Base	2023	10,536	40.4	40.4
Year 1	2024	10,692	40.7	40.8
Year 2	2025	11,278	41.7	42.5
Year 3	2026	11,767	42.5	43.9
Year 4	2027	12,266	43.4	45.3
Year 5	2028	13,034	44.7	47.5
Year 6	2029	13,218	45.0	48.0
Year 7	2030	13,414	45.3	48.6
Year 8	2031	13,629	45.7	49.2
Year 9	2032	13,827	46.0	49.8
Year 10	2033	14,036	46.4	50.4
Ten-Year Increase		3,500	**6.0**	**10.0**
	Projected Expenditure		**$2,400,000**	**$11,800,000**

Growth-Related Expenditures for Neighborhood Park	$14,200,000

Zone 3 Neighborhood Parks

Based on projected growth in Zone 3 (4,154 EDUs) and existing levels of service there is a growth-related need for 13.2 new park acres and 13.2 improved park acres over the next ten years. At current costs, this equates to $21.5 million.

Figure 61. Zone 3 Neighborhood Parks Projected Demand

Infrastructure	Level of Service		Demand Unit	Cost/Unit
Neighborhood Park	3.17	Acres	per 1,000 EDUs	$400,000
	3.17	Impr. Acres	per 1,000 EDUs	$1,229,000

Growth-Related Need for Neighborhood Park				
Year		EDUs	Park Acres	Park Acres Improved
Base	2023	9,251	45.6	30.6
Year 1	2024	9,601	46.7	31.7
Year 2	2025	10,323	49.0	34.0
Year 3	2026	11,073	51.4	36.4
Year 4	2027	11,786	53.7	38.7
Year 5	2028	12,310	55.4	40.4
Year 6	2029	12,571	56.2	41.2
Year 7	2030	12,771	56.8	41.8
Year 8	2031	12,979	57.5	42.5
Year 9	2032	13,193	58.2	43.2
Year 10	2033	13,405	58.8	43.8
Ten-Year Increase		4,154	**13.2**	**13.2**
		Projected Expenditure	**$5,280,000**	**$16,222,800**

Growth-Related Expenditures for Neighborhood Park	$21,502,800

Zone 4 Neighborhood Parks

Based on projected growth in Zone 4 (2,604 EDUs) and the planned levels of service there is a growth-related need for 7.3 new park acres and 7.3 improved park acres over the next ten years. At current costs, this equates to $11.5 million.

Figure 62. Zone 4 Neighborhood Parks Projected Demand

Infrastructure	Level of Service		Demand Unit	Cost/Unit
Neighborhood Park	2.79	Acres	per 1,000 EDUs	$400,000
	2.79	Impr. Acres	per 1,000 EDUs	$1,169,000

Growth-Related Need for Neighborhood Park				
Year		EDUs	Park Acres	Park Acres Improved
Base	2023	0	0.0	0.0
Year 1	2024	50	0.1	0.1
Year 2	2025	101	0.3	0.3
Year 3	2026	251	0.7	0.7
Year 4	2027	502	1.4	1.4
Year 5	2028	802	2.2	2.2
Year 6	2029	1,103	3.1	3.1
Year 7	2030	1,453	4.1	4.1
Year 8	2031	1,803	5.0	5.0
Year 9	2032	2,204	6.1	6.1
ar 10	2033	2,604	7.3	7.3
Ten-Year Increase		2,604	**7.3**	**7.3**
	Projected Expenditure		**$2,920,000**	**$8,533,700**

Growth-Related Expenditures for Neighborhood Park	$11,453,700

Revenue Credit/Offset

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded park infrastructure expansion. To avoid potential double payment for park expansion, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2041. Conservatively, all future payments are included in the analysis.

In Figure 63, future payments are compared to projected EDUs. To account for the time value of money, annual payments per EDU are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments per EDU is $290 per EDU. This amount is subtracted from the gross capital cost per person to derive a net capital cost.

Figure 63. Credit for Future Debt Payments

Fiscal Year	Payment	Projected EDUs	Payment/ EDU
2024	$2,366,412	77,386	$30.58
2025	$2,365,672	78,167	$30.26
2026	$2,359,892	80,254	$29.41
2027	$2,358,188	82,531	$28.57
2028	$2,359,370	84,249	$28.00
2029	$2,356,572	86,250	$27.32
2030	$2,357,289	87,483	$26.95
2031	$2,351,873	88,800	$26.49
2032	$2,346,378	90,245	$26.00
2033	$1,808,957	91,563	$19.76
2034	$1,810,071	92,966	$19.47
2035	$1,810,097	94,538	$19.15
2036	$1,552,757	96,110	$16.16
2037	$1,554,323	97,597	$15.93
2038	$1,554,666	99,211	$15.67
2039	$1,553,985	100,825	$15.41
2040	$146,076	102,439	$1.43
2041	$146,268	104,054	$1.41
Total	**$33,158,846**		**$377.97**
		Discount Rate	3.78%
		Total Credit	**$290**

Second, the City has an existing Parks and Recreation Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan. In Zone 2, the current fund balance represents 21 percent of the Zone 2 IIP.

Figure 64. Existing Fund Balance Credit in Zone 2

Zone 2 Park Fund Balance	$3,009,322
Ten-Year Zone 2 IIP Cost	$14,200,000
Existing Balance of Need	**21%**

In Zone 3, the current fund balance represents 16 percent of the Zone 3 IIP.

Figure 65. Existing Fund Balance Credit in Zone 3

Zone 3 Park Fund Balance	$3,404,331
Ten-Year Zone 3 IIP Cost	$21,500,000
Existing Balance of Need	**16%**

Parks and Recreation Development Fees

Infrastructure components and cost factors for parks and recreation facilities are summarized in the upper portion of the following figures by service area. The parks and recreation development fees are based on the EDUs per housing unit and 1,000 square feet of nonresidential floor area. For example, in Zone 0 the fee for a multifamily unit is $177 ($295 per EDU x 0.60 EDUs = $177 per multifamily unit, rounded).

Figure 66. Zone 0 Parks and Recreation Development Fees

Fee Component	Cost per EDU
Citywide Community Park	$549
Service Area Neighborhood Park	-
Impact Fee Study	$36
Gross Total	$585
Credit for Future Debt	($290)
Credit for Fund Balance (0%)	$0
Net Total	**$295**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee [1]	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$295**	$0	$295
Multifamily	0.60	**$177**	$0	$177
Mobile Home	0.72	**$212**	$0	$212

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee [1]	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	0.030	**$9**	$0	$9
Office	0.050	**$15**	$0	$15
Industrial	0.018	**$5**	$0	$5
Warehouse	0.005	**$1**	$0	$1
Public/Institutional	0.031	**$9**	$0	$9
Hotel/Motel (per room)	0.009	**$3**	$0	$3

[1] There is presently no parks impact fee in Zone 0

Figure 67. Zone 1 Parks and Recreation Development Fee

Fee Component	Cost per EDU
Citywide Community Park	$549
Service Area Neighborhood Park	-
Impact Fee Study	$36
Gross Total	$585
Credit for Future Debt	($290)
Credit for Fund Balance (0%)	$0
Net Total	**$295**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$295**	$1,296	($1,001)
Multifamily	0.60	**$177**	$881	($704)
Mobile Home	0.72	**$212**	$1,089	($877)

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	0.030	**$9**	$117	($108)
Office	0.050	**$15**	$194	($179)
Industrial	0.018	**$5**	$13	($8)
Warehouse	0.005	**$1**	$13	($12)
Public/Institutional	0.031	**$9**	$13	($4)
Hotel/Motel (per room)	0.009	**$3**	$91	($88)

Figure 68. Zone 2 Parks and Recreation Development Fee

Fee Component	Cost per EDU
Citywide Community Park	$549
Service Area Neighborhood Park	$4,059
Impact Fee Study	$36
Gross Total	$4,644
Credit for Future Debt	($290)
Credit for Fund Balance (21%)	($975)
Net Total	**$3,379**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$3,379**	$1,515	$1,864
Multifamily	0.60	**$2,027**	$1,030	$997
Mobile Home	0.72	**$2,433**	$1,273	$1,160

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	0.030	**$101**	$136	($35)
Office	0.050	**$169**	$227	($58)
Industrial	0.018	**$61**	$15	$46
Warehouse	0.005	**$17**	$15	$2
Public/Institutional	0.031	**$105**	$15	$90
Hotel/Motel (per room)	0.009	**$30**	$106	($76)

Figure 69. Zone 3 Parks and Recreation Development Fee

Fee Component	Cost per EDU
Citywide Community Park	$549
Service Area Neighborhood Park	$2,753
Impact Fee Study	$36
Gross Total	$3,338
Credit for Future Debt	($290)
Credit for Fund Balance (16%)	($534)
Net Total	**$2,514**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$2,514**	$1,412	$1,102
Multifamily	0.60	**$1,508**	$960	$548
Mobile Home	0.72	**$1,810**	$1,186	$624

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	0.030	**$75**	$127	($52)
Office	0.050	**$126**	$212	($86)
Industrial	0.018	**$45**	$14	$31
Warehouse	0.005	**$13**	$14	($1)
Public/Institutional	0.031	**$78**	$14	$64
Hotel/Motel (per room)	0.009	**$23**	$99	($76)

Figure 70. Zone 4 Parks and Recreation Development Fee

Fee Component	Cost per EDU
Citywide Community Park	$549
Service Area Neighborhood Park	$4,378
Impact Fee Study	$36
Gross Total	$4,963
Credit for Future Debt	($290)
Credit for Fund Balance (0%)	$0
Net Total	**$4,673**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee [1]	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$4,673**	$1,412	$3,261
Multifamily	0.60	**$2,804**	$960	$1,844
Mobile Home	0.72	**$3,365**	$1,186	$2,179

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee [1]	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	0.030	**$140**	$127	$13
Office	0.050	**$234**	$212	$22
Industrial	0.018	**$84**	$14	$70
Warehouse	0.005	**$23**	$14	$9
Public/Institutional	0.031	**$145**	$14	$131
Hotel/Motel (per room)	0.009	**$42**	$99	($57)

[1] Current fee is for the Zone 3 Service Area

PARKS AND RECREATION DEVELOPMENT FEE REVENUE

Appendix A contains revenue forecasts required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure 71 is based on the development projections in the *Land Use Assumptions* document and the updated parks and recreation 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. Revenues and costs are illustrated by service area in Figure 71. The funding gaps are a result of the credits included in the analysis.

Figure 71. Parks and Recreation Development Fee Revenue

Zone 0 10-Year Revenue	$1,067,000
10-Year Expansion Need	$1,977,000
Funding Gap from Credits	**$910,000**

Zone 1 10-Year Revenue	$503,000
10-Year Expansion Need	$931,000
Funding Gap from Credits	**$428,000**

Zone 2 10-Year Revenue	$11,826,000
10-Year Expansion Need	$16,113,000
Funding Gap from Credits	**$4,287,000**

Zone 3 10-Year Revenue	$10,441,000
10-Year Expansion Need	$13,836,000
Funding Gap from Credits	**$3,395,000**

Zone 4 10-Year Revenue	$12,170,000
Service Area IIP	$21,823,000
Funding Gap*	**$9,653,000**

*Funding gap will be recovered over the Years 11-20

POLICE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for 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 facilities, police towers, police land, police vehicles, police 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 for all the infrastructure types while a plan-based methodology is used for the Development Fee Report.

SERVICE AREA

Peoria's Police Department strives to provide a uniform response time within the city limits; therefore, there is a single citywide service area for the Police Facilities IIP

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 service unit for the Police Development Fees is an equivalent dwelling unit, or EDU. The functional population is based factors by residential and nonresidential land use type for police services are converted into EDUs. For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors. The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. The description of the functional population methodology, the calculation of the EDU factors, and the determination of existing and projected EDUs is presented below.

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."*

A service unit is a standardized measure of demand. The service unit for the police development fees is an Equivalent Dwelling Unit (EDU). An EDU represents the average demand from a single family detached dwelling unit determined with functional population. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the ratio between the functional population from a single family compared to the development.

Residential Functional Population

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors.

It is estimated that residents, on average, spend 14 hours, or 58 percent, of each 24-hour weekday at their place of residence. Shown in Figure 72 is the functional population for single family, multifamily, and mobile homes in Peoria.

Figure 72. Residential Functional Population per Housing Unit

Development Type	Unit	Persons per Housing	Percent of Day at Home	Functional Population/Unit
Single Family	dwelling	2.67	58%	1.56
Multifamily	dwelling	1.60	58%	0.93
Mobile Home	dwelling	1.91	58%	1.11

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Nonresidential Functional Population

The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. Employees are estimated to spend eight hours per day at their place of employment and visitors are estimated to spend one hour per visit.

Using this formula and information on trip generation rates, vehicle occupancy rates, and employee density, nonresidential functional population estimates per 1,000 square feet of floor area is calculated in Figure 73.

Figure 73. Nonresidential Functional Population per 1,000 Square Feet

Development Type	Unit	Vehicle Trips/ Unit [1]	Persons/ Trip [2]	Employee/ Unit [1]	Visitors/ Unit [3]	Functional Population/Unit
Retail/Commercial	1,000 sq. ft.	14.06	1.82	2.12	23.47	1.68
Office	1,000 sq. ft.	5.42	1.18	3.26	3.14	1.22
Industrial	1,000 sq. ft.	1.69	1.18	1.16	0.83	0.42
Warehouse	1,000 sq. ft.	0.86	1.18	0.34	0.67	0.14
Public/Institutional	1,000 sq. ft.	3.38	1.67	2.04	3.60	0.83
Hotel/Motel	per room	4.00	1.82	0.56	6.72	0.47

[1] Source: Trip Generation, Institute of Transportation Engineers, 11th Edition (2021)
[2] Source: Summary of Travel Trends 2017 National Household Travel Survey, US Department of Transportation Federal Highway Administration, 2017
[3] The visitors per unit factor is found by multiplying vehicles trips and persons per trip then subtracting employees per unit.
[4] Functional population is found by multiplying the employee per unit by 8 hours and visitors for unit by 1 hour and then dividing the total by 24 hours.

Equivalent Dwelling Unit Factors

An equivalent dwelling unit (EDU) is set to the functional population of a single family unit. Thus, an EDU is set to a functional population of 1.56. This is compared to the functional population factors for the other development types to calculate its equivalent EDU. For example, a multifamily unit in Peoria has a functional population of 0.93, which results in 0.60 EDUs (0.93 functional population / 1.56 functional population per EDU = 0.60 EDUs).

Figure 74. EDU Factors by Development Type

Development Type	Unit	Functional Population/Unit	EDUs/Unit
Single Family	dwelling	1.56	1.00
Multifamily	dwelling	0.93	0.60
Mobile Home	dwelling	1.11	0.71
Retail/Commercial	1,000 sq. ft.	1.68	1.08
Office	1,000 sq. ft.	1.22	0.78
Industrial	1,000 sq. ft.	0.42	0.27
Warehouse	1,000 sq. ft.	0.14	0.09
Public/Institutional	1,000 sq. ft.	0.83	0.53
Hotel/Motel	per room	0.47	0.30

Service Area Base Year EDUs

To calculate the current level of service of police facilities, it is necessary to determine the base year EDUs in each service area. This is done by applying the EDU factors to the base year housing and nonresidential floor area estimates. Shown at the bottom of Figure 75, there are a total of 94,000 EDUs in Peoria.

Figure 75. Base Year EDUs

Development Type	Base Year Housing	EDUs/Unit	Base Year EDUs
Single Family	69,089	1.00	**69,089**
Multifamily	12,643	0.60	**7,586**
Residential Subtotal	**81,732**		**76,675**

Development Type	Base Year 1,000 Sq. Ft.	EDUs/KSF	Base Year EDUs
Retail	10,105	1.08	**10,913**
Office	4,691	0.78	**3,659**
Industrial	5,919	0.27	**1,598**
Institutional	2,180	0.53	**1,155**
Nonresidential Subtotal	**22,894**		**17,325**

Development Type	Base Year EDUs	Percent of Total EDUs
Residential EDUs	76,675	82%
Nonresidential EDUs	17,325	18%
Total	**94,000**	**100%**

EDU Growth Projections

Estimated growth in EDUs is based on the EDU factors by development type combined with housing and nonresidential floor area growth projections. Over the next ten years, Peoria is projected to grow by 17,709 EDUs, 19 percent from the base year. Shown in Figure 76, the majority of the growth will be from single family and multifamily development.

Figure 76. Citywide EDU Growth Projections

	Peoria, AZ	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
EDU Factor	**Equivalent Dwelling Units (EDUs)**												
1.00	Single Family	69,089	69,745	70,585	71,943	73,503	75,339	76,442	77,621	78,913	80,092	81,347	12,258
0.60	Multifamily	7,586	7,697	8,930	9,840	9,989	10,144	10,264	10,393	10,534	10,662	10,799	3,213
1.08	Retail	10,913	11,026	11,140	11,237	11,335	11,435	11,535	11,636	11,712	11,789	11,866	953
0.78	Office	3,659	3,770	3,884	3,942	4,001	4,061	4,121	4,183	4,272	4,362	4,454	795
0.27	Industrial	1,598	1,628	1,658	1,686	1,714	1,743	1,772	1,802	1,828	1,854	1,880	282
0.53	Institutional	1,155	1,172	1,189	1,208	1,227	1,247	1,266	1,286	1,311	1,336	1,362	207
	Total EDUs	94,000	95,038	97,386	99,856	101,769	103,968	105,401	106,921	108,570	110,096	111,709	17,709

Note: the EDU factors for public safety services and facilities are different than the EDU factors for parks and recreation services and facilities. This results in different base year and EDU growth projections.

POLICE IIP

Figure 77 lists the Peoria Police IIP for FY24-FY34. The IIP satisfies the projected growth-related needs. Additionally, the cost estimates in the IIP inform the development fee calculations in the following section.

Figure 77. Police IIP

City of Peoria, AZ Police FY24-34 Infrastructure Improvement Plan (IIP)							
Project	Location	Timing	Sq. Ft.	Acres	Construction Cost	Land Cost	Total Cost
Public Safety Facility Phase 1 (Shared Facility with Fire)	Northern Peoria	FY25	5,850	2.50	$5,240,000	$760,000	$6,000,000
Police Department Evidence Facility	8351 W Cinnabar Ave	FY25/26	21,000	0.85	$18,105,300	*	$18,105,300
Police Impounded Vehicle Evidence Storage Yard	Central Peoria	FY26	-	1.63	$2,900,000	$860,000	$3,760,000
Radio Tower Costs	Northern Peoria	FY27	280	0.15	$2,000,000	$60,000	$2,060,000
Pinnacle Peak Public Safety Campus Phased Exp	23100 N Lake Pleasant Pkwy	FY27/28	9,000	-	$10,884,000	*	$10,884,000
Police Impound Vehicle Forensics Building	Central Peoria	FY28	4,300	0.50	$3,770,000	-	$3,770,000
Public Safety Facility Phase 2 (Shared Facility with Fire)	Northern Peoria	FY32	5,000	-	$5,000,000	*	$5,000,000
Vehicle Fleet Additions (49 units)	Citywide	FY24-34	-	-	-	-	$3,704,400
Equipment Additions (343 units)	Citywide	FY24-34	-	-	-	-	$1,097,600
Impact Fee Studies (2)	Citywide	FY24-34	-	-	-	-	$38,746
		Total	**45,430**	**5.63**	**$47,899,300**	**$1,680,000**	**$54,420,046**

* Note: City already has land

Average Cost per Square Foot	$991
Average Cost per Acre	$393,000

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 Facilities – Incremental Expansion

Peoria Police Department has a total of 84,977 square feet with a total value of $84,212,207, and Peoria plans to expand police facilities to serve future development. The floor area is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 904 square feet per 1,000 EDUs (84,977 square feet / 94,000 EDUs = 904 units per 1,000 EDUs).

Based on the construction estimates found in the Police IIP, future facility expansion will cost $991 per square foot. As a result, the cost is $896 per EDU (904 square feet per 1,000 EDUs x $991 per square foot = $896 per EDU, rounded).

Figure 78. Police Facility Existing Level of Service

Facility	Total Square Feet	Value [1]
Public Safety Admin Building [2]	56,900	$56,387,900
Shooting Range	2,552	$2,529,032
Pinnacle Peak Public Safety Facility [2]	22,942	$22,735,522
Technology Center (Servers)	2,583	$2,559,753
Total	**84,977**	**$84,212,207**

Level-of-Service Standards	Facility Sq Ft
Total Facility Square Feet	84,977
2023 Equivalent Dwelling Units (EDUs)	94,000
Sq. Ft. per 1,000 EDUs	**904**

Cost Analysis	Facility Sq Ft
Sq. Ft. per 1,000 EDUs	904
Average Cost per Sq. Ft. [1]	$991
Capital Cost per EDUs	**$896**

[1] Source: Police IIP Construction Cost Estimates
[2] Police share

Police Towers – Incremental Expansion

Peoria Police Department has two radio sites and five monopoles, and Peoria plans to expand police radio towers to serve future development. The seven towers are compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 0.074 units per 1,000 EDUs (7 towers / 94,000 EDUs = 0.074 units per 1,000 EDUs).

Based on the construction estimates found in the Police IIP the weighted average value of the existing towers is $714,000. As a result, the cost is $53 per EDU (0.074 towers per 1,000 EDUs x $714,000 per tower = $53 per EDU, rounded).

Figure 79. Police Towers Existing Level of Service

Radio Infrastructure	Value [1]
Agua Fria Radio Site	$2,000,000
Pyramid Peak Radio Site	$2,000,000
Monopoles (5)	$1,000,000
Total	**$5,000,000**

Level-of-Service Standards	**Radio Towers**
Total Radio Towers	7
2023 Equivalent Dwelling Units (EDUs)	94,000
Towers per 1,000 EDUs	**0.074**

Cost Analysis	**Radio Towers**
Towers per 1,000 EDUs	0.074
Average Cost per Tower	$714,000
Capital Cost per EDUs	**$53**

[1] Source: Police IIP Construction Cost Estimates

Police Acres – Incremental Expansion

Peoria Police Department has a total of 14.73 acres between all its locations, and Peoria plans to expand its acreage to serve future development. The acres are compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 0.157 acres per 1,000 EDUs (14.73 acres / 94,000 EDUs = 0.157 acres per 1,000 EDUs).

Based on the estimates found in the Police IIP the Police Departments anticipates paying $393,000 per acre. As a result, the cost is $62 per EDU (0.157 acres per 1,000 EDUs x $393,000 per acre = $62 per EDU, rounded).

Figure 80. Police Acres Existing Level of Service

Facility	Acres
Public Safety Admin Building [2]	5.13
Pinnacle Peak Public Safety Facility [2]	8.50
Evidence Impound Yard & Animal Control	0.87
Radio Sites	0.23
Total	**14.73**

Level-of-Service Standards	Facility Land
Total Facility Acres	14.73
2023 Equivalent Dwelling Units (EDUs)	94,000
Acres per 1,000 EDUs	**0.157**

Cost Analysis	Facility Land
Acres per 1,000 EDUs	0.157
Average Cost per Acre [1]	$393,000
Capital Cost per EDU	**$62**

[1] Source: Police IIP Land Cost Estimates
[2] Police share

Police Vehicles – Incremental Expansion

Peoria has 256 police vehicles with a total value of $19,581,000, and Peoria plans to acquire additional police vehicles to serve future development. The fleet is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 2.76 units per 1,000 EDUs (259 vehicles / 94,000 EDUs = 2.76 units per 1,000 EDUs).

Based on the current value of the fleet the weighted average cost for a new police vehicle is $75,600 per vehicle. Peoria may use development fees to expand its police vehicle fleet. For police vehicles, the cost is $209 per EDU (2.76 units per 1,000 EDUs x $75,600 = $209 per EDU, rounded).

Figure 81. Police Vehicle Existing Level of Service

Vehicles	Units	Cost per Unit	Total Value
Animal Control Truck	4	$104,000	$416,000
Mobile Command Vehicle	1	$1,553,000	$1,553,000
SWAT Support Vehicle	1	$1,000,000	$1,000,000
Swat Armored Vehicle (F550 Diesel)	1	$300,000	$300,000
Undercover Vehicles			
Box Truck (Surveillance)	1	$200,000	$200,000
Compact Sedan	2	$35,000	$70,000
Intermediate Sedan	4	$40,000	$160,000
Compact Pickup	1	$40,000	$40,000
SUV	1	$45,000	$45,000
Pickup	1	$45,000	$45,000
Unmarked Vehicles			
Sedan	14	$47,000	$658,000
SUV	30	$53,000	$1,590,000
SUV Hybrid	1	$55,000	$55,000
Truck	27	$55,000	$1,485,000
Truck - Diesel	1	$70,000	$70,000
Van	10	$50,000	$500,000
Traffic Enforcement			
BMW	13	$38,000	$494,000
Camaro/Mustang	2	$60,000	$120,000
Bobcat	1	$35,000	$35,000
Van			
Community Services	1	$65,000	$65,000
Transport Van	4	$85,000	$340,000
DUI Van	1	$80,000	$80,000
K9	5	$68,000	$340,000
Marked Vehicles			
SUV	95	$82,500	$7,837,500
Truck	21	$82,500	$1,732,500
Trailers			
Trailer - Lightsource	1	$25,000	$25,000
Trailer	9	$15,000	$135,000
Speed Trailer	2	$25,000	$50,000
All-Terrain Vehicle	4	$35,000	$140,000
Total	**259**		**$19,581,000**

Level-of-Service Standards	Vehicles
Total Inventory	259
2023 Equivalent Dwelling Units (EDUs)	94,000
Units per 1,000 EDUs	**2.76**

Cost Analysis	Vehicles
Units per 1,000 EDUs	2.76
Average Cost per Unit	$75,600
Capital Cost per EDU	**$209**

Police Equipment – Incremental Expansion

Peoria Police Department has 1,823 equipment units with a useful life of three years or more, qualifying for impact fee funding. Based on current costs the total value is $5,900,760. Peoria plans to expand police equipment to serve future development. The inventory is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 19.39 units per 1,000 EDUs (1,823 units / 94,000 EDUs = 19.39 units per 1,000 EDUs).

Based on the current value of the inventory the weighted average cost for a new police equipment unit is $3,200. Peoria may use development fees to expand its police equipment inventory. As a result, the cost is $62 per EDU (19.39 units per 1,000 EDUs x $3,200 = $62 per EDU, rounded).

Figure 82. Police Equipment Existing Level of Service

Equipment*	Units	Cost per Unit	Total Value
Handguns	275	$1,200	$330,000
Rifles	140	$2,200	$308,000
Tasers	285	$2,000	$570,000
Portable Radios	300	$6,780	$2,034,000
Mobile Radios (in vehicles)	270	$7,688	$2,075,760
Body Worn Cameras	285	$800	$228,000
Vests	260	$1,000	$260,000
Patrol dogs	5	$15,000	$75,000
Narcotic dog	1	$15,000	$15,000
Generator	2	$2,500	$5,000
Total	**1,823**		**$5,900,760**

Level-of-Service Standards	Units
Total Inventory	1,823
2023 Equivalent Dwelling Units (EDUs)	94,000
Units per 1,000 EDUs	**19.39**

Cost Analysis	Units
Units per 1,000 EDUs	19.39
Average Cost per Unit	$3,200
Capital Cost per EDU	**$62**

* Equipment with a useful life of three or more years, per AZ legislation

Development Fee Report – Plan-Based

The cost to prepare the Police Facilities IIP and related Development Fee Report is $19,373. Peoria plans to update its report every five years. Based on this cost and five-year projections of EDUs, the cost per EDU is $2.

Figure 83. IIP and Development Fee Report

Share of Study Cost	Growth Share	Five-Year EDU Increase	Capital Cost per EDU
$19,373	100%	9,968	**$2**

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."*

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 ten years, Peoria plans to maintain its existing level of service for the five infrastructure categories included in the analysis. Based on the current level of service and projected growth in EDUs projected facility expansion is estimated. For example, the City of Peoria is projected to grow by 17,709 EDUs and at the current level of service for police facilities (904 square feet per 1,000 EDUs) there is a growth-related expansion of 16,009 square feet over the next ten years. At the current construction cost ($991 per square foot) the police facility expansion totals $15,864,919. Between all the categories, there is a $22.7 million growth-related capital cost.

Figure 84. Projected Demand

Infrastructure	Level of Service			Cost/Unit
Police Facilities	904	square feet	per 1,000 EDUs	$991
Police Towers	0.074	units	per 1,000 EDUs	$714,000
Police Land	0.157	acres	per 1,000 EDUs	$393,000
Police Vehicle	2.76	units	per 1,000 EDUs	$75,600
Police Equipment	19.39	units	per 1,000 EDUs	$3,200

Growth-Related Need for Police Infrastructure							
Year		EDUS	Police Square Feet	Police Towers	Police Acres	Police Vehicles	Police Equipment
Base	2023	94,000	84,976	7.0	14.8	259	1,823
Year 1	2024	95,038	85,914	7.0	14.9	262	1,843
Year 2	2025	97,386	88,036	7.2	15.3	269	1,888
Year 3	2026	99,856	90,269	7.4	15.7	276	1,936
Year 4	2027	101,769	91,999	7.5	16.0	281	1,973
Year 5	2028	103,968	93,987	7.7	16.3	287	2,016
Year 6	2029	105,401	95,282	7.8	16.5	291	2,044
Year 7	2030	106,921	96,656	7.9	16.8	295	2,073
Year 8	2031	108,570	98,147	8.0	17.0	300	2,105
Year 9	2032	110,096	99,527	8.1	17.3	304	2,135
Year 10	2033	111,709	100,985	8.3	17.5	308	2,166
Ten-Year Increase		17,709	**16,009**	**1.3**	**2.7**	**49**	**343**
Projected Expenditure			**$15,864,919**	**$928,200**	**$1,061,100**	**$3,704,400**	**$1,097,600**

Growth-Related Expenditures for Police Facilities	$22,656,219

REVENUE CREDIT/OFFSET

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded police infrastructure expansion. To avoid potential double payment for the improvements, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2041. Conservatively, all future payments are included in the analysis.

In Figure 85, future payments are compared to projected EDUs. To account for the time value of money, annual payments per EDU are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments per EDU is $32 per EDU. This amount is subtracted from the gross capital cost per person to derive a net capital cost.

Figure 85. Credit for Future Debt Payments

Fiscal Year	Payment	Projected EDUs	Payment/ EDU
2024	$289,628	94,000	$3.08
2025	$289,770	95,038	$3.05
2026	$289,313	97,386	$2.97
2027	$289,319	99,856	$2.90
2028	$289,263	101,769	$2.84
2029	$289,146	103,968	$2.78
2030	$288,988	105,401	$2.74
2031	$288,904	106,921	$2.70
2032	$288,437	108,570	$2.66
2033	$254,544	110,096	$2.31
2034	$254,483	111,709	$2.28
2035	$254,347	113,495	$2.24
2036	$200,992	115,284	$1.74
2037	$200,998	116,970	$1.72
2038	$200,932	118,786	$1.69
2039	$201,069	120,605	$1.67
2040	$200,855	122,428	$1.64
2041	$201,119	124,255	$1.62
Total	**$4,572,106**		**$42.63**
		Discount Rate	3.78%
		Total Credit	**$32**

Second, the City has an existing Police Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan (15 percent).

Figure 86. Existing Fund Balance Credit

Police I.F. Fund Balance	$8,073,861
Ten-Year Police IIP Cost	$54,420,046
Existing Balance of IIP	**15%**

Police Facilities Development Fees

Infrastructure components and cost factors for police facilities are summarized in the upper portion of Figure 87. By reducing the gross total per EDU by the credits, the net cost per EDU for police facilities is $1,059.

The police facilities development fees are based on the EDUs per housing unit and 1,000 square feet of nonresidential floor area. For example, the fee for a multifamily unit is $636 ($1,059 per EDU x 0.60 EDUs = $636 per multifamily unit, rounded).

Figure 87. Police Facilities Development Fees

Fee Component	Cost per EDU
Police Facilities	$896
Police Towers	$53
Police Land	$62
Police Vehicles	$209
Police Equipment	$62
Impact Fee Study	$2
Gross Total	$1,284
Credit for Debt Payments	($32)
Credit for Existing Balance (15%)	($193)
Net Total	**$1,059**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$1,059**	$677	$382
Multifamily	0.60	**$636**	$462	$174
Mobile Home	0.71	**$752**	$569	$183

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	1.08	**$1,144**	$741	$403
Office	0.78	**$826**	$455	$371
Industrial	0.27	**$286**	$72	$214
Warehouse	0.09	**$95**	$47	$48
Public/Institutional	0.53	**$561**	$129	$432
Hotel/Motel (per room)	0.30	**$318**	$376	($58)

POLICE FACILITIES DEVELOPMENT FEE REVENUE

Appendix A contains revenue forecasts required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure 88 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. Projected development fee revenue equals $18.8 million, 83 percent of the ten-year growth-related police capital cost. The funding gap is a result of the credits included in the analysis.

Figure 88. Police Facilities Development Fee Revenue

Infrastructure Costs for Facilities

	Total Cost	Growth Cost
Police Facilities	$15,864,919	$15,864,919
Police Towers	$928,200	$928,200
Police Land	$1,061,100	$1,061,100
Police Vehicles	$3,704,400	$3,704,400
Police Equipment	$1,097,600	$1,097,600
Impact Fee Study	$38,746	$38,746
Total Expenditures	**$22,694,965**	**$22,694,965**

Projected Development Impact Fee Revenue

		Single Family $1,059 per unit	Multifamily $636 per unit	Retail $1,144 per KSF	Office $826 per KSF	Industrial $286 per KSF	Institutional $561 per KSF
Year		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2023	69,089	12,643	10,105	4,691	5,919	2,180
1	2024	69,745	12,829	10,209	4,833	6,028	2,212
2	2025	70,585	14,884	10,314	4,979	6,140	2,244
3	2026	71,943	16,400	10,405	5,054	6,243	2,279
4	2027	73,503	16,648	10,496	5,129	6,348	2,315
5	2028	75,339	16,907	10,588	5,206	6,456	2,352
6	2029	76,442	17,107	10,680	5,284	6,564	2,389
7	2030	77,621	17,321	10,774	5,363	6,675	2,427
8	2031	78,913	17,556	10,845	5,476	6,770	2,474
9	2032	80,092	17,770	10,916	5,592	6,867	2,522
10	2033	81,347	17,998	10,987	5,710	6,965	2,570
Ten-Year Increase		12,258	5,355	883	1,020	1,046	390
Projected Revenue		$12,981,303	$3,405,924	$1,009,730	$842,108	$299,159	$218,951

Projected Revenue	**$18,757,000**
Total Expenditures	**$22,695,000**
Non-Impact Fee Funding	**$3,938,000**

FIRE FACILITIES IIP

ARS § 9-463.05 (T)(7)(f) defines the eligible facilities and assets for 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 Fire Facilities IIP includes components for fire facilities, fire land, fire apparatus, fire 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 for all the infrastructure types while a plan-based methodology is used for the Development Fee Report.

SERVICE AREA

Peoria's Fire Department strives to provide a uniform response time within the city limits; therefore, there is a single citywide service area for the Fire Facilities IIP

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 service unit for the Fire Development Fees is an equivalent dwelling unit, or EDU. The functional population is based factors by residential and nonresidential land use type for fire services are converted into EDUs. For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors. The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. The description of the functional population methodology, the calculation of the EDU factors, and the determination of existing and projected EDUs is presented below.

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."*

A service unit is a standardized measure of demand. The service unit for the fire development fees is an Equivalent Dwelling Unit (EDU). An EDU represents the average demand from a single family detached dwelling unit determined with functional population. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the ratio between the functional population from a single family compared to the development.

Residential Functional Population

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types and in this analysis, average household size is used to develop the functional population factors.

It is estimated that residents, on average, spend 14 hours, or 58 percent, of each 24-hour weekday at their place of residence. Shown in Figure 89 is the functional population for single family, multifamily, and mobile homes in Peoria.

Figure 89. Residential Functional Population per Housing Unit

Development Type	Unit	Persons per Housing	Percent of Day at Home	Functional Population/Unit
Single Family	dwelling	2.67	58%	1.56
Multifamily	dwelling	1.60	58%	0.93
Mobile Home	dwelling	1.91	58%	1.11

Source: U.S. Census Bureau, 2021 American Community Survey 5-Year Estimates

Nonresidential Functional Population

The functional population methodology for nonresidential land uses is based on trip generation and employee density data. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a weekday by 24 hours. Employees are estimated to spend eight hours per day at their place of employment and visitors are estimated to spend one hour per visit.

Using this formula and information on trip generation rates, vehicle occupancy rates, and employee density, nonresidential functional population estimates per 1,000 square feet of floor area is calculated in Figure 90.

Figure 90. Nonresidential Functional Population per 1,000 Square Feet

Development Type	Unit	Vehicle Trips/ Unit [1]	Persons/ Trip [2]	Employee/ Unit [1]	Visitors/ Unit [3]	Functional Population/Unit
Retail/Commercial	1,000 sq. ft.	14.06	1.82	2.12	23.47	1.68
Office	1,000 sq. ft.	5.42	1.18	3.26	3.14	1.22
Industrial	1,000 sq. ft.	1.69	1.18	1.16	0.83	0.42
Warehouse	1,000 sq. ft.	0.86	1.18	0.34	0.67	0.14
Public/Institutional	1,000 sq. ft.	3.38	1.67	2.04	3.60	0.83
Hotel/Motel	per room	4.00	1.82	0.56	6.72	0.47

[1] Source: Trip Generation, Institute of Transportation Engineers, 11th Edition (2021)
[2] Source: Summary of Travel Trends 2017 National Household Travel Survey, US Department of Transportation Federal Highway Administration, 2017
[3] The visitors per unit factor is found by multiplying vehicles trips and persons per trip then subtracting employees per unit.
[4] Functional population is found by multiplying the employee per unit by 8 hours and visitors for unit by 1 hour and then dividing the total by 24 hours.

Equivalent Dwelling Unit Factors

An equivalent dwelling unit (EDU) is set to the functional population of a single family unit. Thus, an EDU is set to a functional population of 1.56. This is compared to the functional population factors for the other development types to calculate its equivalent EDU. For example, a multifamily unit in Peoria has a functional population of 0.93, which results in 0.60 EDUs (0.93 functional population / 1.56 functional population per EDU = 0.60 EDUs).

Figure 91. EDU Factors by Development Type

Development Type	Unit	Functional Population/Unit	EDUs/Unit
Single Family	dwelling	1.56	1.00
Multifamily	dwelling	0.93	0.60
Mobile Home	dwelling	1.11	0.71
Retail/Commercial	1,000 sq. ft.	1.68	1.08
Office	1,000 sq. ft.	1.22	0.78
Industrial	1,000 sq. ft.	0.42	0.27
Warehouse	1,000 sq. ft.	0.14	0.09
Public/Institutional	1,000 sq. ft.	0.83	0.53
Hotel/Motel	per room	0.47	0.30

Service Area Base Year EDUs

To calculate the current level of service of fire facilities, it is necessary to determine the base year EDUs in each service area. This is done by applying the EDU factors to the base year housing and nonresidential floor area estimates. Shown at the bottom of Figure 92, there are a total of 94,000 EDUs in Peoria.

Figure 92. Base Year EDUs

Development Type	Base Year Housing	EDUs/Unit	Base Year EDUs
Single Family	69,089	1.00	**69,089**
Multifamily	12,643	0.60	**7,586**
Residential Subtotal	**81,732**		**76,675**

Development Type	Base Year 1,000 Sq. Ft.	EDUs/KSF	Base Year EDUs
Retail	10,105	1.08	**10,913**
Office	4,691	0.78	**3,659**
Industrial	5,919	0.27	**1,598**
Institutional	2,180	0.53	**1,155**
Nonresidential Subtotal	**22,894**		**17,325**

Development Type	Base Year EDUs	Percent of Total EDUs
Residential EDUs	76,675	82%
Nonresidential EDUs	17,325	18%
Total	**94,000**	**100%**

EDU Growth Projections

Estimated growth in EDUs is based on the EDU factors by development type combined with housing and nonresidential floor area growth projections. Over the next ten years, Peoria is projected to grow by 17,709 EDUs, 19 percent from the base year. Shown in Figure 93, the majority of the growth will be from single family and multifamily development.

Figure 93. Citywide EDU Growth Projections

	Peoria, AZ	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total Increase
EDU Factor	**Equivalent Dwelling Units (EDUs)**												
1.00	Single Family	69,089	69,745	70,585	71,943	73,503	75,339	76,442	77,621	78,913	80,092	81,347	12,258
0.60	Multifamily	7,586	7,697	8,930	9,840	9,989	10,144	10,264	10,393	10,534	10,662	10,799	3,213
1.08	Retail	10,913	11,026	11,140	11,237	11,335	11,435	11,535	11,636	11,712	11,789	11,866	953
0.78	Office	3,659	3,770	3,884	3,942	4,001	4,061	4,121	4,183	4,272	4,362	4,454	795
0.27	Industrial	1,598	1,628	1,658	1,686	1,714	1,743	1,772	1,802	1,828	1,854	1,880	282
0.53	Institutional	1,155	1,172	1,189	1,208	1,227	1,247	1,266	1,286	1,311	1,336	1,362	207
	Total EDUs	94,000	95,038	97,386	99,856	101,769	103,968	105,401	106,921	108,570	110,096	111,709	17,709

Note: the EDU factors for public safety services and facilities are different than the EDU factors for parks and recreation services and facilities. This results in different base year and EDU growth projections.

FIRE IIP

Figure 94 lists the Peoria Fire IIP for FY24-FY34. The IIP satisfies the projected growth-related needs. Additionally, the cost estimates in the IIP inform the development fee calculations in the following section.

Figure 94. Fire IIP

City of Peoria, AZ Fire FY24-34 Infrastructure Improvement Plan (IIP)							
Project	Location	Timing	Sq. Ft.	Acres	Construction Cost	Land Cost	Total Cost
Public Safety Facility (Shared Facility with PD)	Northern Peoria	FY24/25	14,150	2.50	$13,540,000	$760,000	$14,300,000
Engine, Brush Truck, Rescue Units	Northern Peoria	FY24/25	-	-	-	-	$2,085,000
Station 9 (LP Marina) - Replacing 2,800 sq. ft. station	Lake Pleasant	FY27/28	15,000	*	$10,700,000	*	$10,700,000
Engine, Brush Truck, Tanker Units	Lake Pleasant	FY27/28	-	-	-	-	$2,420,000
Station 10	Northern Area of Peoria	FY31/32	14,150	5.00	$14,480,000	$1,220,000	$15,700,000
Ladder, Engine, Rescue Units	Northern Area of Peoria	FY31/32	-	-	-	-	$3,085,000
Fire Equipment (68 units)	Citywide	FY24-FY34	-	-	-	-	$748,000
Impact Fee Studies (2)	Citywide	FY24-FY34	-	-	-	-	$38,746
		Total	**43,300**	**7.50**	**$38,720,000**	**$1,980,000**	**$49,076,746**

* Note: City already has land

Average Cost per Square Foot	$894
Average Cost per Acre	$264,000

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 Facilities – Incremental Expansion

Peoria Fire Department has a total of 142,297 square feet of station and admin space, and Peoria plans to expand fire facilities to serve future development. The floor area is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 1,514 square feet per 1,000 EDUs (142,297 square feet / 94,000 EDUs = 1,514 square feet per 1,000 EDUs).

Based on the construction estimates found in the Fire IIP, future facility expansion will cost $894 per square foot. As a result, the cost is $1,354 per EDU (1,514 square feet per 1,000 EDUs x $894 per square foot = $1,354 per EDU, rounded).

Figure 95. Fire Facility Existing Level of Service

Facility	Total Square Feet	Value [1]
Public Safety Admin Building [2]	15,750	$14,080,500
Station 191	14,460	$12,927,240
Station 192	11,040	$9,869,760
Station 193	10,440	$9,333,360
Station 194	8,385	$7,496,190
Station 195	23,197	$20,738,118
Station 196	10,226	$9,142,044
Station 197	10,759	$9,618,546
Station 199	2,880	$2,574,720
Support Services	8,915	$7,970,010
Support Services Storage	26,245	$23,463,030
Total	**142,297**	**$127,213,518**

Level-of-Service Standards	**Sq Ft**
Total Floor Area (sq. ft.)	142,297
2023 Equivalent Dwelling Units (EDUs)	94,000
Sq. Ft. per 1,000 EDUs	**1,514**

Cost Analysis	**Sq Ft**
Sq. Ft. per 1,000 EDUs	1,514
Average Cost per Sq. Ft. [1]	$894
Capital Cost per EDU	**$1,354**

[1] Source: Fire IIP Construction Cost Estimates
[2] Fire share

Fire Acres – Incremental Expansion

Peoria Fire Department has a total of 24.8 acres between all its locations, and Peoria plans to expand its acreage to serve future development. The acres are compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 0.263 acres per 1,000 EDUs (24.8 acres / 94,000 EDUs = 0.263 acres per 1,000 EDUs).

Based on the estimates found in the Fire IIP the Fire Departments anticipates paying $264,000 per acre. As a result, the cost is $69 per EDU (0.263 acres per 1,000 EDUs x $264,000 per acre = $69 per EDU, rounded).

Figure 96. Fire Acres Existing Level of Service

Facility	Acres	Value [1]
Public Safety Admin Building [2]	3.3	$860,640
Station 191	3.4	$884,400
Station 192	1.5	$398,640
Station 193	1.4	$369,600
Station 194	1.2	$322,080
Station 195	6.9	$1,829,520
Station 196	2.2	$567,600
Station 197	2.0	$530,640
Station 199	0.0	$0
Support Services	1.2	$319,440
Support Services Storage	1.7	$454,080
Total	**24.8**	**$6,536,640**

Level-of-Service Standards	Station Land
Total Acres	24.8
2023 Equivalent Dwelling Units (EDUs)	94,000
Acres per 1,000 EDUs	**0.263**

Cost Analysis	Station Land
Acres per 1,000 EDUs	0.263
Average Cost per Acre [1]	$264,000
Capital Cost per EDU	**$69**

[1] Source: Fire IIP Land Cost Estimates

Fire Apparatus – Incremental Expansion

Peoria has 78 units in its fire fleet with a total value of $28,185,000, and Peoria plans to acquire additional fire vehicles to serve future development. The fleet is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 0.83 units per 1,000 EDUs (78 units / 94,000 EDUs = 0.83 units per 1,000 EDUs).

Based on the current value of the fleet the weighted average cost for a new fire unit is $361,000 per vehicle. Peoria may use development fees to expand its fire fleet. As a result, the cost is $300 per EDU (0.83 units per 1,000 EDUs x $361,000 = $300 per EDU, rounded).

Figure 97. Fire Apparatus Existing Level of Service

Apparatus & Vehicles	Units	Cost per Unit [1]	Total Value
Fire Engine	12	$985,000	$11,820,000
Ladder Truck	3	$1,725,000	$5,175,000
Ladder Tender	3	$475,000	$1,425,000
Rescue	8	$375,000	$3,000,000
LA Unit	1	$125,000	$125,000
Water Tanker	1	$710,000	$710,000
HazMat Truck	1	$750,000	$750,000
Brush Truck	2	$725,000	$1,450,000
Fire Boat	1	$475,000	$475,000
TRT Support Truck	1	$325,000	$325,000
Cargo Truck	2	$275,000	$550,000
Cargo Trailer	5	$12,000	$60,000
.arge Van	1	$55,000	$55,000
BC Excursion	3	$110,000	$330,000
Tahoe/Explorer	5	$60,000	$300,000
Cub Cadet/Polaris UTV Vehicle	2	$35,000	$70,000
Automobile	7	$40,000	$280,000
Pick-up Truck 1/2 Ton	12	$50,000	$600,000
?ick-up Truck 3/4 Ton	6	$75,000	$450,000
Pick-up Truck 1 Ton - Mobile Maint.	1	$175,000	$175,000
Medical Mass Casualty Trailer	1	$60,000	$60,000
Total	**78**		**$28,185,000**

Level-of-Service Standards	Units
Total Units	78
2023 Equivalent Dwelling Units (EDUs)	94,000
Units per 1,000 EDUs	**0.83**

Cost Analysis	Units
Units per 1,000 EDUs	0.83
Average Cost per Unit	$361,000
Capital Cost per EDU	**$300**

[1] Source: Fire Department IIP Cost Estimates

Fire Equipment – Incremental Expansion

Peoria Fire Department has 265 equipment units with a useful life of three years or more, qualifying for impact fee funding. Based on current costs the total value is $3,842,000. Peoria plans to expand fire equipment to serve future development. The inventory is compared to the existing EDUs to find the current level of service. As a result, Peoria's existing level of service for is 3.88 units per 1,000 EDUs (365 units / 94,000 EDUs = 3.88 units per 1,000 EDUs).

Based on the current value of the inventory the weighted average cost for a new fire equipment unit is $11,000. Peoria may use development fees to expand its fire equipment inventory. As a result, the cost is $43 per EDU (3.88 units per 1,000 EDUs x $11,000 = $43 per EDU, rounded).

Figure 98. Fire Equipment Existing Level of Service

Equipment*	Units	Cost per Unit	Total Value
Heart Monitors	20	$32,000	$640,000
Thermal Camera	20	$7,500	$150,000
Extrication Equipment	6	$50,000	$300,000
Mobile Fire & Life Safety House	1	$90,000	$90,000
Electronic Patient Records (ePRCs)	42	$1,000	$42,000
Self Contained Breathing Apparatus	136	$10,000	$1,360,000
800 Mhz Radios	140	$9,000	$1,260,000
Total	**365**		**$3,842,000**

Level-of-Service Standards	Units
Total Units	365
2023 Equivalent Dwelling Units (EDUs)	94,000
Jnits per 1,000 EDUs	**3.88**

Cost Analysis	Units
Units per 1,000 EDUs	3.88
Average Cost per Unit	$11,000
Capital Cost per EDU	**$43**

[k] Equipment with a useful life of three or more years, per AZ legislation

Development Fee Report – Plan-Based

The cost to prepare the Fire Facilities IIP and related Development Fee Report is $19,373. Peoria plans to update its report every five years. Based on this cost and five-year projections of EDUs, the cost per EDU is $2.

Figure 99. IIP and Development Fee Report

Share of Study Cost	Growth Share	Five-Year EDU Increase	Capital Cost per EDU
$19,373	100%	9,968	**$2**

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."*

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 ten years, Peoria plans to maintain its existing level of service for the four infrastructure categories included in the analysis. Based on the current level of service and projected growth in EDUs projected facility expansion is estimated. For example, the City of Peoria is projected to grow by 17,709 EDUs and at the current level of service for fire facilities (1,514 square feet per 1,000 EDUs) there is a growth-related expansion of 26,811 square feet over the next ten years. At the current construction cost ($894 per square foot) the fire facility expansion totals $23,969,034. Between all the categories, there is a $31.4 million growth-related capital cost.

Figure 100. Projected Demand

Infrastructure	Level of Service			Cost/Unit
Fire Facility	1,514	square feet	per 1,000 EDUs	$894
Fire Land	0.263	acres	per 1,000 EDUs	$264,000
Fire Apparatus	0.83	units	per 1,000 EDUs	$361,000
Fire Equipment	3.88	units	per 1,000 EDUs	$11,000

Growth-Related Need for Fire Infrastructure						
Year		EDUS	Station Square Feet	Station Acres	Fire Apparatus	Fire Equipment
Base	2023	94,000	142,317	24.7	78	365
Year 1	2024	95,038	143,887	25.0	79	369
Year 2	2025	97,386	147,442	25.6	81	378
Year 3	2026	99,856	151,181	26.3	83	387
Year 4	2027	101,769	154,079	26.8	84	395
Year 5	2028	103,968	157,408	27.3	86	403
Year 6	2029	105,401	159,577	27.7	87	409
Year 7	2030	106,921	161,878	28.1	89	415
Year 8	2031	108,570	164,375	28.6	90	421
Year 9	2032	110,096	166,685	29.0	91	427
Year 10	2033	111,709	169,128	29.4	93	433
Ten-Year Increase		17,709	**26,811**	**4.7**	**15**	**68**
	Projected Expenditure		**$23,969,034**	**$1,240,800**	**$5,415,000**	**$748,000**

Growth-Related Expenditures for Fire Infrastructure	**$31,372,834**

Revenue Credit/Offset

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded fire infrastructure expansion. To avoid potential double payment for the improvements, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2041. Conservatively, all future payments are included in the analysis.

In Figure 101, future payments are compared to projected EDUs. To account for the time value of money, annual payments per EDU are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments per EDU is $32 per EDU. This amount is subtracted from the gross capital cost per person to derive a net capital cost.

Figure 101. Credit for Future Debt Payments

Fiscal Year	Payment	Projected EDUs	Payment/ EDU
2024	$289,628	94,000	$3.08
2025	$289,770	95,038	$3.05
2026	$289,313	97,386	$2.97
2027	$289,319	99,856	$2.90
2028	$289,263	101,769	$2.84
2029	$289,146	103,968	$2.78
2030	$288,988	105,401	$2.74
2031	$288,904	106,921	$2.70
2032	$288,437	108,570	$2.66
2033	$254,544	110,096	$2.31
2034	$254,483	111,709	$2.28
2035	$254,347	113,495	$2.24
2036	$200,992	115,284	$1.74
2037	$200,998	116,970	$1.72
2038	$200,932	118,786	$1.69
2039	$201,069	120,605	$1.67
2040	$200,855	122,428	$1.64
2041	$201,119	124,255	$1.62
Total	**$4,572,106**		**$42.63**
		Discount Rate	3.78%
		Total Credit	**$32**

Second, the City has an existing Fire Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan (18 percent).

Figure 102. Existing Fund Balance Credit

Fire I.F. Fund Balance	$8,887,047
Ten-Year IIP Cost	$49,076,746
Existing Balance of IIP	**18%**

Fire Facilities Development Fees

Infrastructure components and cost factors for fire facilities are summarized in the upper portion of Figure 103. By reducing the gross total per EDU by the credits, the net cost per EDU for fire facilities is $1,418.

The fire facilities development fees are based on the EDUs per housing unit and 1,000 square feet of nonresidential floor area. For example, the fee for a multifamily unit is $851 ($1,418 per EDU x 0.60 EDUs = $851 per multifamily unit, rounded).

Figure 103. Fire Facilities Development Fees

Fee Component	Cost per EDU
Fire Facilities	$1,354
Fire Land	$69
Fire Apparatus	$300
Fire Equipment	$43
Impact Fee Study	$2
Gross Total	$1,768
Credit for Debt Payments	($32)
Credit for Existing Balance (18%)	($318)
Net Total	**$1,418**

Development Type	EDUs per Housing Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	1.00	**$1,418**	$1,047	$371
Multifamily	0.60	**$851**	$715	$136
Mobile Home	0.71	**$1,007**	$881	$126

Development Type	EDUs per 1,000 Sq. Ft.	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	1.08	**$1,531**	$1,147	$384
Office	0.78	**$1,106**	$704	$402
Industrial	0.27	**$383**	$111	$272
Warehouse	0.09	**$128**	$72	$56
Public/Institutional	0.53	**$752**	$199	$553
Hotel/Motel (per room)	0.30	**$425**	$582	($157)

Fire Facilities Development Fee Revenue

Appendix A contains revenue forecasts required by Arizona's Enabling Legislation (ARS § 9-463.05(E)(7)). Projected fee revenue shown in Figure 104 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. Projected development fee revenue equals $25.1 million, 80 percent of the ten-year growth-related fire capital cost. The funding gap is a result of the credits included in the analysis.

Figure 104. Fire Facilities Development Fee Revenue

Infrastructure Costs for Facilities

	Total Cost	Growth Cost
Fire Facilities	$23,969,034	$23,969,034
Fire Land	$1,240,800	$1,240,800
Fire Apparatus	$5,415,000	$5,415,000
Fire Equipment	$748,000	$748,000
Impact Fee Study	$38,746	$38,746
Total Expenditures	**$31,411,580**	**$31,411,580**

Projected Development Impact Fee Revenue

Year		Single Family $1,418 per unit	Multifamily $851 per unit	Retail $1,531 per KSF	Office $1,106 per KSF	Industrial $383 per KSF	Institutional $752 per KSF
		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2023	69,089	12,643	10,105	4,691	5,919	2,180
1	2024	69,745	12,829	10,209	4,833	6,028	2,212
2	2025	70,585	14,884	10,314	4,979	6,140	2,244
3	2026	71,943	16,400	10,405	5,054	6,243	2,279
4	2027	73,503	16,648	10,496	5,129	6,348	2,315
5	2028	75,339	16,907	10,588	5,206	6,456	2,352
6	2029	76,442	17,107	10,680	5,284	6,564	2,389
7	2030	77,621	17,321	10,774	5,363	6,675	2,427
8	2031	78,913	17,556	10,845	5,476	6,770	2,474
9	2032	80,092	17,770	10,916	5,592	6,867	2,522
10	2033	81,347	17,998	10,987	5,710	6,965	2,570
Ten-Year Increase		12,258	5,355	883	1,020	1,046	390
Projected Revenue		$17,381,952	$4,557,297	$1,351,308	$1,127,568	$400,622	$293,496

Projected Revenue	**$25,112,000**
Total Expenditures	**$31,412,000**
Non-Impact Fee Funding	**$6,300,000**

STREETS IIP

ARS § 9-463.05 (T)(7)(e) defines the eligible facilities and assets for the Street 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 Streets IIP includes components for street improvements and the cost of preparing the Streets IIP and related Development Fee Report. The incremental expansion methodology is used for street improvements and plan-based approach for the Development Fee Report.

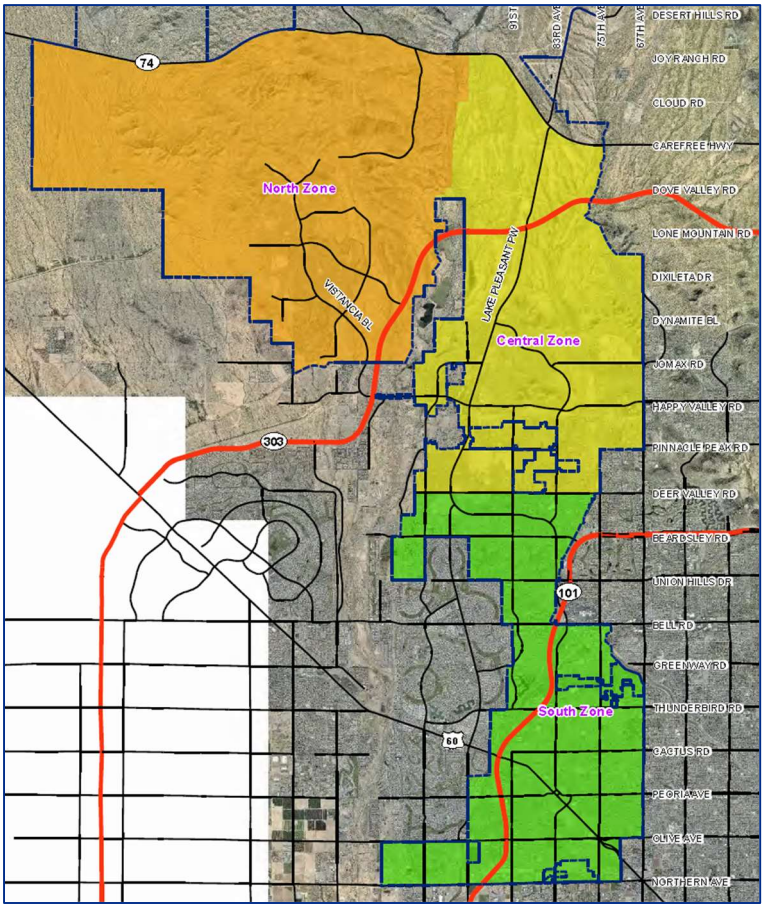
PROPORTIONATE SHARE

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 Streets IIP and development fees will allocate the cost of necessary public services between residential and nonresidential based on trip generation rates, trip adjustment factors, and trip lengths.

SERVICE AREA

Figure 105 illustrates the streets service areas. Importantly, the map identifies three service areas, however, only the North and Central Service Areas are included in the development fee analysis.

Figure 105. Streets Development Impact Fee Service Area



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."*

Peoria will use vehicle miles of travel (VMT) as the demand units for streets development fees. Components used to determine VMT include average weekday vehicle trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

Residential Vehicle Trips by Housing Type

A customized trip rate is calculated for the single family and multifamily units in Peoria. In Figure 106, the most recent data from the U.S. Census American Community Survey is inputted into equations provided by the ITE to calculate the trip ends per housing unit factor. A single family unit is estimated to generate 9.83 trip ends and a multifamily unit is estimated to generate 4.51 trip ends on an average weekday.

Figure 106. Customized Residential Trip End Rates by Housing Type

		Households by Structure Type[2]			
Tenure by Units in Structure	Vehicles Available[1]	Single Family	Multifamily	Total	Vehicles per HH by Tenure
Owner-Occupied	110,935	51,795	834	52,629	2.11
Renter-Occupied	27,170	8,530	9,072	17,602	1.54
Total	138,105	60,325	9,906	70,231	1.97
Housing Units[3]		64,038	11,631	75,669	

Housing Type	Persons in Households[4]	Trip Ends[5]	Vehicles by Type of Unit	Trip Ends[6]	Average Trip Ends	Local Trip Ends per Unit	National Trip Ends per Unit[7]
Single Family	167,633	462,558	122,424	796,831	629,694	**9.83**	9.43
Multifamily	18,618	42,554	15,731	62,272	52,413	**4.51**	4.54
Total	186,251	505,113	138,154	859,103	682,108	**9.01**	

1. Vehicles available by tenure from Table B25046, American Community Survey, 2021 5-Year Estimates.
2. Households by tenure and units in structure from Table B25032, American Community Survey, 2021 5-Year Estimates.
3. Housing units from Table B25024, American Community Survey, 2021 5-Year Estimates.
4. Total population in households from Table B25033, American Community Survey, 2021 5-Year Estimates.
5. Vehicle trips ends based on persons using formulas from ITE *Trip Generation*. For single-family housing (ITE 210), the fitted curve equation is EXP(0.89*LN(persons)+1.72) [ITE 2017]. To approximate the average population of the ITE studies, persons were divided by 276 and the equation result multiplied by 276. For multi-family housing (ITE 221), the fitted curve equation is (2.29*persons)-81.02 [ITE 2017].
6. Vehicle trip ends based on vehicles available using formulas from ITE *Trip Generation*. For single-family housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.93) [ITE 2017]. To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 416 and the equation result multiplied by 416. For multifamily housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58 [ITE 2012].
7. *Trip Generation*, Institute of Transportation Engineers, 11th Edition (2021).

Residential Vehicle Trips Adjustment Factors

A vehicle trip end is the out-bound or in-bound leg of a vehicle trip. As a result, so as not double count trips, a standard 50 percent adjustment is applied to trip ends to calculate a vehicle trip. For example, the out-bound trip from a person's home to work is attributed to the housing unit and the trip from work back home is attributed to the employer.

However, an additional adjustment is necessary to capture City residents' work bound trips that are outside of the city. The trip adjustment factor includes two components. According to the National Household Travel Survey, home-based work trips are typically 31 percent of out-bound trips (which are 50 percent of all trip ends). Also, utilizing the most recent data from the Census Bureau's web application "OnTheMap", 92 percent of Peoria workers travel outside the city for work. In combination, these factors account for 14 percent of additional production trips (0.31 x 0.50 x 0.92 = 0.14). Shown in Figure 107, the total adjustment factor for residential housing units includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (14 percent of production trips) for a total of 64 percent.

Figure 107. Residential Trip Adjustment Factor for Commuters

Trip Adjustment Factor for Commuters

Employed Peoria Residents (2020)	83,911
Residents Working in Peoria (2020)	6,816
Residents Commuting Outside of Peoria for Work	77,095
Percent Commuting Out of Peoria	92%
Additional Production Trips	**14%**

Standard Trip Adjustment Factor	**50%**
Residential Trip Adjustment Factor	**64%**

Source: U.S. Census, OnTheMap Application, 2020

Nonresidential Vehicle Trips

Vehicle trip generation for nonresidential land uses are calculated by using ITE's average daily trip end rates and adjustment factors found in their recently published 11th edition of Trip Generation. To estimate the trip generation in Peoria, the weekday trip end per 1,000 square feet factors listed in Figure 108 are used.

Figure 108. Institute of Streets Engineers Nonresidential Factors

Employment Industry	ITE Code	Land Use	Demand Unit	Wkdy Trip Ends Per Dmd Unit	Wkdy Trip Ends Per Employee
Retail/Commercial	820	Shopping Center	1,000 Sq Ft	37.01	17.42
Office	710	General Office	1,000 Sq Ft	10.84	3.33
Industrial	140	Industrial Park	1,000 Sq Ft	3.37	2.91
Public/Institutional	620	Nursing Home	1,000 Sq Ft	6.75	3.31

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021)

For nonresidential land uses, the standard 50 percent adjustment is applied to office, industrial, and institutional development. A lower vehicle trip adjustment factor is used for retail because this type of development attracts vehicles as they pass-by on arterial and collector roads. For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

In Figure 109, the Institute for Streets Engineers' land use code, daily vehicle trip end rate, and trip adjustment factor is listed for each land use.

Figure 109. Daily Vehicle Trip Factors

Land Use	ITE Codes	Daily Vehicle Trip Ends	Trip Adj. Factor	Daily Vehicle Trips
Residential (per housing unit)				
Single Family	210	9.83	64%	6.29
Multifamily	220	4.51	64%	2.89
Nonresidential (per 1,000 square feet)				
Retail	820	37.01	38%	14.06
Office	710	10.84	50%	5.42
Industrial	140	3.37	50%	1.69
Institutional	620	6.75	50%	3.38

Source: *Trip Generation* , Institute of Transportation Engineers, 11th Edition (2021); National Household Travel Survey, 2009

Local Trip Lengths

Local trip lengths are determined through a few calculations. First, Figure 110 lists the national average trip length based on the purpose of the trip.

Figure 110. National Average Trip Length

Land Use	National Average Trip Length (miles)
Single Family	9.75
Multifamily	8.62
Industrial	11.28
Commercial/Retail	7.03
Institutional	6.48
Office and Other	6.39

Source: U.S. DOT FHA *2017 National Household Transportation Survey*

Based on the estimated vehicle trips in Peoria and the national average trip length the expected VMT is calculated. Citywide there are 656,013 vehicle trips and an expected VMT of 5,874,115.

Figure 111. Expected Vehicle Miles of Travel

Land Use	Ave Weekday Vehicle Trips [1]	National Average Trip Length (miles) [2]	Expected VMT
Single Family	434,653	9.75	**4,237,864**
Multifamily	36,493	8.62	**314,568**
Retail	142,112	7.03	**999,050**
Office	25,424	6.39	**162,462**
Industrial	9,973	11.28	**112,493**
Institutional	7,358	6.48	**47,679**
Total	**656,013**		**5,874,115**

[1] TischlerBise analysis

[2] Source: U.S. DOT FHA *2017 National Household Transportation Survey*

However, the City of Peoria monitors its arterial roadway network and the actual VMT is 1,737,440. As a result, a local adjustment factor is found (0.296). This factor is included in the VMT calculation for development in Peoria.

Figure 112. Actual vs Expected VMT

Local Adjustment Factor	
Actual VMT on Arterials	1,737,440
Expected VMT on Arterials	5,874,115
Actual to Expected VMT	**0.296**

These factors are summarized in Figure 113 and combined to find the local trip length (miles) by land use.

Figure 113. Local Trip Length

Land Use	National Average Trip Length (miles) [1]	Local Adj Factor [2]	Local Trip Length
Single Family	9.75	0.296	**2.89**
Multifamily	8.62	0.296	**2.55**
Retail	7.03	0.296	**2.08**
Office	6.39	0.296	**1.89**
Industrial	11.28	0.296	**3.34**
Institutional	6.48	0.296	**1.92**

[1] Source: U.S. DOT FHA *2017 National Household Transportation Survey*
[2] TischlerBise analysis

Local Vehicle Miles Traveled

Shown below are the demand indicators for residential and nonresidential land uses related to vehicle miles traveled (VMT). For residential development, the table displays VMT per housing unit. For nonresidential development, the table displays VMT generated per 1,000 square feet of floor area (per room for lodging).

Figure 114. Ratio of Service Unit to Development Unit

Development Type	AWVTE per Unit	Trip Adj.	Ave. Trip Length (miles)	VMT per Unit
Single Family	9.83	64%	2.89	**18.18**
Multifamily	4.51	64%	2.55	**7.36**
Mobile Home	7.12	64%	2.55	**11.62**

Development Type	AWVTE per KSF	Trip Adj.	Ave. Trip Length (miles)	VMT per KSF
Retail/Commercial	37.01	38%	2.08	**29.25**
Office	10.84	50%	1.89	**10.24**
Industrial	3.37	50%	3.34	**5.63**
Warehouse	1.71	50%	3.34	**2.86**
Public/Institutional	6.75	50%	1.92	**6.48**
Hotel/Motel (per room)	7.99	50%	2.55	**10.19**

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."*

Arterial Existing Level of Service

The existing level of service is determined by comparing the vehicle miles of capacity (VMC) to the vehicle miles of travel (VMT). Figure 115 lists the number of arterial lane miles, the existing daily volume, the VMC, and the VMT in each service area and citywide. The VMC is calculated based on roadway length and capacity of the specific roadway segment based on the Maricopa County Department of Streets Roadway Design Manual level of service of D. The VMT is calculated based on the daily volume and roadway segment length. As a result, the VMC/VMT level of service citywide is 1.96 (Note: a higher VMC/VMT ratio represents more available capacity in the system and a higher level of service. A VMC/VMT ratio of 1 represents complete gridlock in the network). The existing level of service in the North and Central Service Areas is higher than the citywide ratio. However, TischlerBise recommends applying the citywide ratio in the development fee calculation.

Figure 115. VMC/VMT

Service Area	Arterial Miles	Arterial Lane Miles	Daily Volume	VMC	VMT	VMC/VMT
North	18.01	63.35	93,309	509,026	155,456	3.27
Central	37.70	141.95	674,322	1,140,385	568,251	2.01
South	52.62	215.66	1,339,165	1,760,764	1,013,733	1.74
Citywide Total	**108.33**	**420.97**	**2,106,796**	**3,410,175**	**1,737,440**	**1.96**

Central Service Area

Peoria plans to construct 25.7 lane miles of street improvements in the Central Service Area to serve future development over the next 10 years. Shown below, the total cost of planned street improvements is $86.7 million while the growth-related cost is $52.7 million. The total cost includes construction costs for roadways, bridges, culverts, traffic signals, soft costs, and contingency. Based on the capacities at the level of service D, the Central Streets IIP adds a VMC of 330,065.

Figure 116. Central Service Area Streets IIP

City of Peoria, AZ Streets Central Service Area FY24-34 Infrastructure Improvement Plan (IIP)										
Street Name	From	To	Number of Lanes	Segment Length (miles)	Added Lanes	Length of New Lanes (miles)	Total Project Cost	% Growth-Related	Growth-Related Cost	Added Vehicle Miles of Capacity (VMC)
Lake Pleasant Pkwy	St Rte 74	Loop 303	0 to 4	2.3	4	9.2	$35,508,188	50%	$17,754,094	113,259
96th Av	Loop 303	Dixileta Dr	0 to 2	1.0	2	2.0	$9,014,935	100%	$9,014,935	32,242
Dixileta Dr	96th Av	Lake Pleasant Pkwy	0 to 2	0.8	2	1.6	$6,826,510	100%	$6,826,510	26,940
96th Av	Dixileta Dr	Lone Mountain Pkwy	0 to 2	0.7	2	1.5	$5,782,190	100%	$5,782,190	24,463
Lone Mountain Pkwy	96th Ave	Lake Pleasant Pkwy	0 to 2	0.6	2	1.2	$8,333,135	10%	$833,314	30,784
Lone Mountain Pkwy	96th Ave	Lake Pleasant Pkwy	2 to 4	0.6	2	1.2	$1,619,714	10%	$161,971	21,855
Jomax Rd	75th Ave	83rd Ln	2 to 4	1.1	2	2.1	$4,709,279	100%	$4,709,279	19,445
83rd Ave (Westwing Pkwy)	Jomax Rd	Happy Valley Rd	2 to 4	1.2	2	2.4	$1,844,155	100%	$1,844,155	22,428
67th Ave	Happy Valley Rd	Pinnacle Peak Rd	4 to 6	0.8	2	1.6	$4,739,950	5%	$236,997	13,050
Pinnacle Peak Rd	Lake Pleasant Pkwy	99th Ave	2 to 4	0.2	2	0.3	$904,230	100%	$904,230	2,788
107th Ave	Hatfield Rd	Williams Rd	2 to 4	1.2	2	2.5	$3,225,388	10%	$322,539	22,808
Traffic Signal	Jomax Rd	Aloravita Blvd	-	-	-	-	$1,955,000	100%	$1,955,000	0
Traffic Signal	Happy Valley Rd	79th Av	-	-	-	-	$1,200,000	100%	$1,200,000	0
Traffic Signal	Happy Valley Rd	77th Av	-	-	-	-	$1,200,000	100%	$1,200,000	0
			Total	**10.6**	**24**	**25.7**	**$86,862,674**		**$52,745,214**	**330,065**

By comparing the total IIP cost to the added VMC a capital cost per VMC is calculated in Figure 117 ($86,862,674 / 330,065 VMC = $263.17 per VMC). The cost per VMC represents the average cost in the Central Service Area to incrementally expand the arterial roadway network. The cost per VMC is multiplied by the citywide VMC/VMT ratio to find the capital cost per VMT of $515.81 ($263.17 per VMC x 1.96 VMC/VMT ratio = $515.81). The cost per VMT represents the cost to service new growth at the recommended level of service.

Figure 117. Central Service Area Cost per VMT

10-Year Road IIP Cost	$86,862,674
VMC Added by IIP	330,065
Capital Cost per VMC	$263.17

Capital Cost per VMC	$263.17
Citywide Current VMC/VMT Ratio	1.96
Capital Cost per VMT	**$515.81**

North Service Area

Peoria plans to construct 62.4 lane miles of streets improvements in the North Service Area to serve future development over the next 10 years. Shown below, the total cost of planned streets improvements is $193.9 million while the growth-related cost is $192.4 million. The total cost includes construction costs for roadways, bridges, culverts, traffic signals, soft costs, and contingency. Based on the capacities at the level of service D, the North Streets IIP adds a VMC of 890,461.

Figure 118. North Service Area Streets IIP

City of Peoria, AZ Streets North Service Area FY24-34 Infrastructure Improvement Plan (IIP)										
Street Name	From	To	Number of Lanes	Segment Length (miles)	Added Lanes	Length of New Lanes (miles)	Total Project Cost	% Growth-Related	Growth-Related Cost	Added Vehicle Miles of Capacity (VMC)
Vistancia Blvd	SR74	Galvin Blvd	0 to 2	2.4	2	4.8	$20,417,361	100%	$20,417,361	78,153
Vistancia Blvd	SR74	Galvin Blvd	2 to 4	2.4	2	4.8	$4,130,674	100%	$4,130,674	43,976
Galvin Blvd	Vistancia Blvd	El Mirage Rd	0 to 2	1.8	2	3.5	$14,079,744	100%	$14,079,744	57,225
Galvin Blvd	Vistancia Blvd	El Mirage Rd	2 to 4	1.8	2	3.5	$3,162,407	100%	$3,162,407	32,200
Vistancia Blvd	Galvin Blvd	Sonoran View Dr	0 to 2	1.7	2	3.5	$13,934,344	100%	$13,934,344	56,571
Vistancia Blvd	Galvin Blvd	Sonoran View Dr	2 to 4	1.7	2	3.5	$3,132,148	100%	$3,132,148	31,832
El Mirage Rd	Galvin Blvd	Westland Rd	0 to 2	2.1	2	4.3	$25,654,954	100%	$25,654,954	105,502
El Mirage Rd	Galvin Blvd	Westland Rd	2 to 4	2.1	2	4.3	$3,752,445	100%	$3,752,445	74,900
Canyon Ranch Blvd	147th Av	Vistancia Blvd	0 to 4	0.9	4	3.5	$9,009,007	100%	$9,009,007	28,489
Westland Rd	Vistancia Blvd	127th Dr	2 to 4	0.4	2	0.8	$3,037,309	100%	$3,037,309	6,992
Westland Rd	127th Dr	El Mirage Rd	2 to 4	0.9	2	1.9	$1,429,249	100%	$1,429,249	17,382
El Mirage Rd	Westland Rd	Lone Mountain Pkwy	2 to 4	1.8	2	3.5	$4,332,407	100%	$4,332,407	61,250
Forrest Pleasant Place	El Mirage Rd	Loop 303	0 to 2	1.6	2	3.3	$13,470,141	100%	$13,470,141	53,301
135th Av	Lone Mountain Pkwy	Blackstone Ln	0 to 2	1.1	2	2.3	$12,751,129	100%	$12,751,129	36,951
135th Av	Lone Mountain Pkwy	Blackstone Ln	2 to 4	1.1	2	2.3	$1,709,597	100%	$1,709,597	20,792
El Mirage Rd	28251 N El Mirage Rd (FS196 Entrance)	Jomax Rd	2 to 4	0.8	2	1.6	$1,225,464	100%	$1,225,464	14,904
Dysart Rd	Dynamite Blvd	Jomax Rd	0 to 2	1.0	2	2.1	$8,751,726	100%	$8,751,726	33,681
Dysart Rd	Dynamite Blvd	Jomax Rd	2 to 4	1.0	2	2.1	$3,583,306	100%	$3,583,306	33,681
Jomax Rd	El Mirage Rd	126th Dr	2 to 4	0.4	2	0.8	$1,249,909	100%	$1,249,909	12,426
Jomax Rd	Vistancia Blvd	El Mirage Rd	0 to 2	0.8	2	1.6	$9,355,085	100%	$9,355,085	25,392
Jomax Rd	Vistancia Blvd	El Mirage Rd	2 to 4	0.8	2	1.6	$1,174,804	100%	$1,174,804	25,392
Jomax Rd	126th Dr	Dysart Rd	0 to 2	0.7	2	1.3	$6,134,517	100%	$6,134,517	21,909
Jomax Rd	126th Dr	Dysart Rd	2 to 4	0.7	2	1.3	$1,013,655	100%	$1,013,655	12,328
El Mirage Rd	Jomax Rd	Desert Sun Lane	0 to 4	0.2	4	0.6	$7,237,271	80%	$5,789,817	5,232
Intersection Re-Alignment	Vistancia Blvd	Happy Valley Rd	-	-	-	-	$14,130,233	100%	$14,130,233	0
Traffic Signals	El Mirage Rd	Westward Skies Dr	-	-	-	-	$1,200,000	100%	$1,200,000	0
Traffic Signals	Vistancia Blvd	Lone Mountain Pkwy	-	-	-	-	$1,200,000	100%	$1,200,000	0
Traffic Signals	El Mirage Rd	Ridgeline Rd	-	-	-	-	$1,200,000	100%	$1,200,000	0
Traffic Signals	Lone Mountain Pkwy	Revel	-	-	-	-	$1,200,000	100%	$1,200,000	0
Traffic Signals	Vistancia Blvd	Whispering Ridge	-	-	-	-	$1,200,000	100%	$1,200,000	0
			Total	**30.2**	**52**	**62.4**	**$193,858,884**		**$192,411,429**	**890,461**

By comparing the total IIP cost to the added VMC a capital cost per VMC is calculated in Figure 119 ($193,858,884 / 890,461 VMC = $217.71 per VMC). The cost per VMC represents the average cost in the North Service Area to incrementally expand the arterial roadway network. The cost per VMC is multiplied by the citywide VMC/VMT ratio to find the capital cost per VMT of $426.71 ($217.71 per VMC x 1.96 VMC/VMT ratio = $426.71). The cost per VMT represents the cost to service new growth at the recommended level of service.

Figure 119. North Service Area Cost per VMT

10-Year Road IIP Cost	$193,858,884
VMC Added by IIP	890,461
Capital Cost per VMC	$217.71

Capital Cost per VMC	$217.71
Citywide Current VMC/VMT Ratio	1.96
Capital Cost per VMT	**$426.71**

Development Fee Report – Plan-Based

The cost to prepare the Streets IIP and related Development Fee Report totals $19,373. Peoria 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 $0.19 per VMT.

Figure 120. IIP and Development Fee Report

Share of Study Cost	Growth Share	Five-Year VMT Increase	Capital Cost per VMT
$19,373	100%	101,289	**$0.19**

Revenue Credit/Offset

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded street infrastructure expansion. To avoid potential double payment for the improvements, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2039. Conservatively, all future payments are included in the analysis.

In Figure 121, future payments are compared to projected VMT. To account for the time value of money, annual payments per VMT are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments is $2.33 per VMT.

Figure 121. Credit for Future Debt Payments

Fiscal Year	Payment	Projected VMT	Payment/ VMT
2024	$436,278	1,758,759	$0.25
2025	$436,150	1,794,569	$0.24
2026	$436,166	1,834,632	$0.24
2027	$436,050	1,869,082	$0.23
2028	$436,432	1,908,680	$0.23
2029	$436,417	1,934,565	$0.23
2030	$436,721	1,961,984	$0.22
2031	$436,481	1,991,287	$0.22
2032	$436,301	2,018,415	$0.22
2033	$436,369	2,047,081	$0.21
2034	$436,443	2,078,768	$0.21
2035	$436,438	2,110,509	$0.21
2036	$158,488	2,140,142	$0.07
2037	$158,664	2,172,052	$0.07
2038	$158,708	2,204,013	$0.07
2039	$158,620	2,236,026	$0.07
Total	**$5,870,722**		**$2.99**
		Discount Rate	3.78%
		Total Credit	**$2.33**

Second, the City has an existing Streets Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan. In the Central Service Area (Figure 122) the existing fund balance accounts for 12 percent of the growth-related IIP.

Figure 122. Central Service Area Existing Fund Balance Credit

Current Fund Balance	$6,523,462
Growth-Related IIP	$52,745,214
Fund Balance Share of IIP	**12%**

In the North Service Area (Figure 123) the existing fund balance accounts for 5 percent of the growth-related IIP.

Figure 123. North Service Area Existing Fund Balance Credit

Current Fund Balance	$10,482,833
Growth-Related IIP	$192,411,429
Fund Balance Share of IIP	**5%**

STREETS DEVELOPMENT FEES

Central Service Area

The cost components of the central service area streets development fee are listed at the upper portion of Figure 124. As a result of the credits, the net cost per VMT is $451.75.

The streets development fees are based on the VMT per housing unit and 1,000 square feet of nonresidential floor area. For example, the fee for a single family unit is $8,213 ($451.75 per VMT x 18.18 VMTs = $8,213 per single family unit, rounded).

Figure 124. Central Service Area Streets Development Fees

Fee Component	Cost per VMT
Roadway Improvements	$515.81
Impact Fee Study	$0.19
Gross Total	$516.00
Credit for Debt Payments	($2.33)
Credit for Fund Balance (12%)	($61.92)
Net Total	**$451.75**

Development Type	VMT per Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	18.18	**$8,213**	$6,306	$1,907
Multifamily	7.36	**$3,325**	$3,775	($450)
Mobile Home	11.62	**$5,249**	$2,957	$2,292

Development Type	VMT per KSF	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	29.25	**$13,214**	$7,997	$5,217
Office	10.24	**$4,626**	$3,416	$1,210
Industrial	5.63	**$2,543**	$3,020	($477)
Warehouse	2.86	**$1,292**	$1,161	$131
Public/Institutional	6.48	**$2,927**	$2,950	($23)
Hotel/Motel (per room)	10.19	**$4,603**	$4,521	$82

North Service Area

The cost components of the central service area streets development fee are listed at the upper portion of Figure 125. As a result of the credits, the net cost per VMT is $403.22.

The streets development fees are based on the VMT per housing unit and 1,000 square feet of nonresidential floor area. For example, the fee for a single family unit is $7,331 ($403.22 per VMT x 18.18 VMTs = $7,331 per single family unit, rounded).

Figure 125. North Service Area Streets Development Fees

Fee Component	Cost per VMT
Roadway Improvements	$426.71
Impact Fee Study	$0.19
Gross Total	$426.90
Credit for Debt Payments	($2.33)
Credit for Fund Balance (5%)	($21.35)
Net Total	**$403.22**

Development Type	VMT per Unit	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Residential (per housing unit)				
Single Family	18.18	**$7,331**	$7,559	($228)
Multifamily	7.36	**$2,968**	$4,505	($1,537)
Mobile Home	11.62	**$4,685**	$3,545	$1,140

Development Type	VMT per KSF	Maximum Supportable Fee	Current Fee	Increase/ (Decrease)
Nonresidential (per 1,000 square feet)				
Retail/Commercial	29.25	**$11,794**	$9,587	$2,207
Office	10.24	**$4,129**	$4,095	$34
Industrial	5.63	**$2,270**	$3,621	($1,351)
Warehouse	2.86	**$1,153**	$1,392	($239)
Public/Institutional	6.48	**$2,613**	$3,536	($923)
Hotel/Motel (per room)	10.19	**$4,109**	$5,420	($1,311)

STREETS DEVELOPMENT FEE REVENUE

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

Central Service Area

Projected fee revenue shown in Figure 126 is based on the development projections in the *Land Use Assumptions* document and the updated streets 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. Projected development fee revenue equals $35.2 million, 67 percent of the ten-year growth-related portion of the IIP. A funding gap is caused by the credits included in the analysis, but other revenue will need to be raised to fully fund the IIP.

Figure 126. Central Service Area Streets Development Fee Revenue

Infrastructure Costs for Road Facilities

	Total Cost	Growth Cost
Roadway Improvements	$86,862,674	$52,745,214
Total Expenditures	**$86,862,674**	**$52,745,214**

Projected Development Impact Fee Revenue

Year		Single Family $8,213 per unit	Multifamily $5,249 per unit	Retail $13,214 per KSF	Office $4,626 per KSF	Industrial $2,543 per KSF	Institutional $2,927 per KSF
		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2023	11,675	346	1,624	190	107	506
1	2024	11,826	386	1,641	196	109	513
2	2025	12,057	1,108	1,658	205	111	521
3	2026	12,560	1,193	1,672	209	112	529
4	2027	13,093	1,243	1,686	213	114	537
5	2028	13,926	1,302	1,700	218	116	546
6	2029	14,123	1,320	1,715	223	117	554
7	2030	14,333	1,340	1,729	228	119	563
8	2031	14,564	1,362	1,740	236	120	573
9	2032	14,774	1,381	1,751	243	122	584
10	2033	14,998	1,402	1,763	251	123	594
Ten-Year Increase		3,323	1,056	138	61	16	88
Projected Revenue		$27,289,826	$5,544,023	$1,826,357	$283,394	$41,640	$258,956

Projected Revenue	**$35,244,000**
Projected Expenditures	**$52,745,214**
Non-Impact Fee Funding	**$17,501,214**

North Service Area

Projected fee revenue shown in Figure 127 is based on the development projections in the *Land Use Assumptions* document and the updated streets 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. Projected development fee revenue equals $53.9 million, 28 percent of the ten-year growth-related portion of the IIP. A funding gap is caused by the credits included in the analysis, but other revenue will need to be raised to fully fund the IIP.

Figure 127. North Service Area Streets Development Fee Revenue

Infrastructure Costs for Road Facilities

	Total Cost	Growth Cost
Roadway Improvements	$193,858,884	$192,411,429
Total Expenditures	**$193,858,884**	**$192,411,429**

Projected Development Impact Fee Revenue

Year		Single Family $7,331 per unit	Multifamily $4,685 per unit	Retail $11,794 per KSF	Office $4,129 per KSF	Industrial $2,270 per KSF	Institutional $2,613 per KSF
		Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2022	9,189	85	233	21	26	92
1	2023	9,559	135	266	21	26	93
2	2024	10,033	632	300	22	27	95
3	2025	10,753	932	332	22	27	96
4	2026	11,597	1,130	365	23	27	98
5	2027	12,300	1,330	398	23	28	100
6	2028	12,850	1,349	431	24	28	102
7	2029	13,388	1,369	464	24	29	106
8	2030	13,932	1,391	497	25	29	111
9	2031	14,532	1,411	530	27	30	116
10	2032	15,132	1,432	562	28	30	122
Ten-Year Increase		5,943	1,347	329	7	5	30
Projected Revenue		$43,568,133	$6,312,347	$3,879,416	$29,446	$10,756	$78,490
						Projected Revenue	**$53,879,000**
						Total Expenditures	**$193,859,000**
						Non-Impact Fee Funding	**$139,980,000**

WATER RESOURCE FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for the Water Resource Facilities IIP.

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

The Water Resource Facilities IIP includes components for Peoria's share of the future Barlett Dam expansion, purchase of water rights, and the impact fee study updates. The plan-based approach is used for all the components. A credit is included to account for future debt payments for the Gila River Indian Community (GRIC) water rights purchase. The credit allows for future water resource development fee revenue to be used to service the debt.

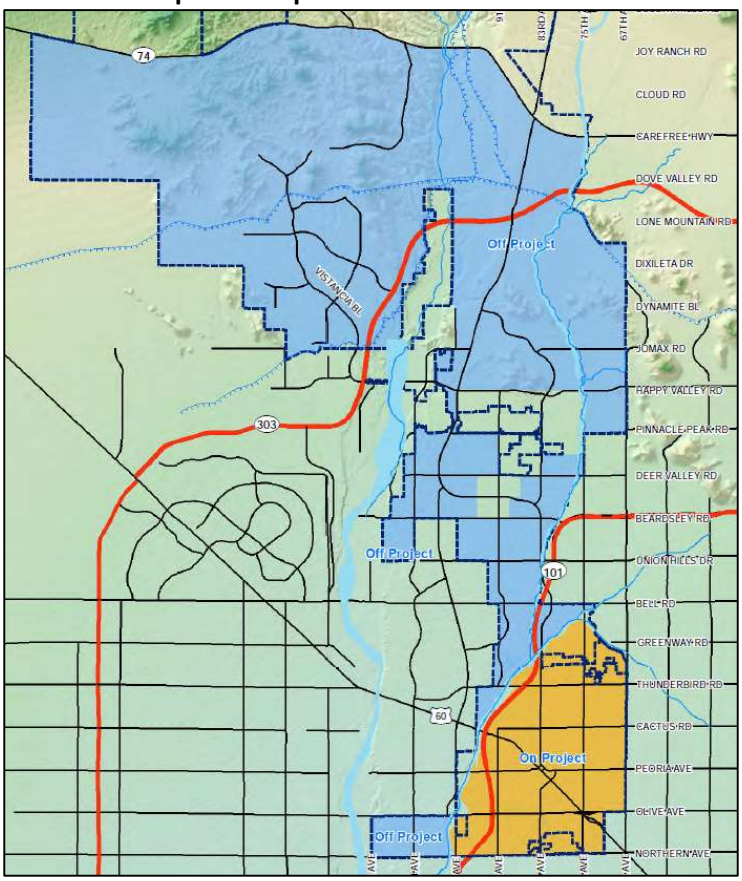
PROPORTIONATE SHARE

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 Water Resource Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using annual water use demand factors.

SERVICE AREA

As shown in Figure 128, there are two service areas for the Water Resource Facilities IIP consistent with the current development fee program. Importantly, only the Off Project Service Area is assessed the fee.

Figure 128. Water Resource Development Impact Fee Service Area



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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."*

A service unit is a standardized measure of demand. The service unit for the water resource development fees is an Equivalent Dwelling Unit (EDU). An EDU represents the demand from a single family detached dwelling unit determined with annual water use. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the water flow capacity available for the meter size.

Water resource facilities are sized to accommodate annual water use. Figure 129 lists the 2023 average water resource usage for an EDU which is equivalent to ¾-inch single family meter. For the whole year, an average EDU used 94,937 gallons.

Figure 129. Water Resource Demand Factors

Year	Residential Annual Totals (gals)	Residential Meters	Annual Average (gals)
3/4-inch Single Family			
2020	4,375,574,000	42,798	102,238
2021	4,273,336,000	43,389	98,489
2022	4,105,792,000	43,071	95,326
2023	4,104,148,000	43,230	94,937
		Annual Average	**94,937**

Water resource development fees are assessed by meter size. The analysis uses the flow capacity (gallons per minute) to calculate the capacity ratio compared to the 30 gpm of a ¾-inch meter. The capacity ratio is then applied to the cost per EDU to calculate the proportionate development fee.

Figure 130. Water Resource Ratio of Service Unit to Development Unit

Single Family

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67
1.5"	Displacement	100	3.33
1.5"	Ultrasonic Mach 10	120	4.00
2"	Displacement	160	5.33
2"	Ultrasonic Mach 10	190	6.33
3"	Compound	300	10.00
3"	Ultrasonic Mach 10	435	14.50
4"	Compound	500	16.67
4"	Ultrasonic Mach 10	750	25.00
6"	Compound	1,000	33.33
6"	Ultrasonic Mach 10	1,600	53.33
8"	Compound	2,000	66.67
8"	Ultrasonic Mach 10	2,800	93.33

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

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 Demand

Figure 131 lists the existing demand for water based on service area. The annual water demand is found by combining the average daily water demand with 365. In total, there is a citywide demand of 12,083 million gallons per year. The majority of the water demand is in the off project service area.

Figure 131. Existing Water Resource Demand by Service Area

Annual Water Usage (MG)	Base Year 2023	Percent of Total
Off Project (CAP) [1]	8,247	68%
On Project (SRP) [2]	3,836	32%
Citywide	12,083	100%

[1] Central Arizona Project
[2] Salt River Project

PROJECTED DEMAND FOR SERVICES AND COSTS

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)(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."*

Projected Demand

Shown below in Figure 132 are projected water demand for the next ten years by service area. The annual water demand is found by combining the average daily water demand with 365. The citywide annual demand is projected to grow by nearly 4,721 million gallons, 40 percent from the base year. Almost 95 percent of the new water demand is in the off project service area.

Figure 132. Projected Water Resource Demand

Annual Water Usage (MG)	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
Off Project (CAP) [1]	8,247	8,518	8,788	10,424	10,694	10,963	11,232	11,501	12,160	12,428	12,696	4,449
On Project (SRP) [2]	3,836	3,864	3,891	3,919	3,946	3,973	4,000	4,027	4,054	4,081	4,108	272
Citywide	12,083	12,382	12,679	14,343	14,640	14,936	15,232	15,528	16,214	16,509	16,804	4,721

[1] Central Arizona Project
[2] Salt River Project

Currently, Peoria is utilizing approximately 60 percent of its CAP allocation, leaving approximately 4,470 MG per year available. This volume roughly covers Off Project demand growth in the next ten years. However, there is a likelihood of reductions to the CAP supplies within the next ten years. City utility staff anticipates this reduction being between one-third to one-half of the allocation.

The calculations find a cost per gallon to serve future water users. These cost factors are combined with the demand from an EDU to calculate the water resource development fee.

Off Project Service Area Projects

In the Off Project IIP, there are two projects regarding the Bartlett Dam expansion along with purchase of water rights. To address the anticipated reduction in available water from the CAP allocation the IIP is contributing 1,706.5 million gallons to the water supply and costs a total $60.9 million. The cost is determined to be 100 percent growth-related as well. The capital cost per 1,000 annual gallons is calculated by comparing the growth-related cost to the projected growth in water use over the next ten years, resulting in a cost of $13.68 per 1,000 annual gallons.

Figure 133. Off Project Service Area Water Resource IIP Cost

Ten-Year IIP	Timing (FY)	Location	Service Area	New Gallons Annually (MG)	Cost	% Growth-Related	Growth-Related Cost
SRP/CAP Interconnect Facility (SCIF) Participation (Bartlett Dam)	FY25-FY27	Off Project	Off Project	1,286.5	$7,736,600	100%	$7,736,600
New Verde Space Storage (Bartlett Dam)	FY27-FY28	Off Project	Off Project		$48,100,000	100%	$48,100,000
White Mountain Apache Tribe Water Rights Purchase	FY28-FY33	Off Project	Off Project	420.0	$5,026,000	100%	$5,026,000
			Total	**1,706.5**	**$60,862,600**		**$60,862,600**

Off Project Growth Cost	$60,862,600
10-Year Water Use Proj (1,000 Annual Gals)	4,448,762
Capital Cost per 1,000 Annual Gallons	**$13.68**

In the Water Resource IIP, two impact fee studies are planned in five-year increments. The studies do not generate new capacity, but are necessary and are attributable to future development. The total cost is attributed to the ten-year growth in gallons to calculate an average cost of $0.01 per gallon.

Figure 134. Off Project Service Area Water Resource Impact Fee Cost

Ten-Year IIP	Timing (FY)	Location	Service Area	New Gallons Annually (MG)	Cost	% Growth-Related	Growth-Related Cost
Water Resource Impact Fee Study Updates	FY28, FY33	Off Project	Off Project	-	$38,746	100%	$38,746
			Total	**-**	**$38,746**		**$38,746**

Citywide Growth Cost	$38,746
10-Year Water Use Proj (1,000 Annual Gals)	4,448,762
Capital Cost per 1,000 Annual Gallons	**$0.01**

REVENUE CREDIT/OFFSET

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there is remaining debt that was issued for the GRIC water rights purchase. In Figure 135, future payments are compared to projected annual water demand (in 1,000 gallons). To account for the time value of money, annual payments per 1,000 gallons are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments is $0.16 per 1,000 gallons.

Figure 135. Credit for Future Debt Payments

Fiscal Year	Payment	Projected 1,000 Gals	Payment/ 1,000 Gals
2024	$619,000	12,381,536	$0.05
2025	$631,000	12,679,403	$0.05
2026	$630,000	14,342,511	$0.04
2027	$630,000	14,639,565	$0.04
Total	**$2,510,000**		**$0.18**
		Discount Rate	3.78%
		Total Credit	**$0.16**

Second, the City has an existing Water Resource Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan. The existing fund balance (Figure 136) accounts for 4 percent of the growth-related IIP.

Figure 136. Off Project Service Area Existing Fund Balance Credit

Current Fund Balance	$2,213,289
Growth-Related IIP	$60,901,346
Fund Balance Share of IIP	**4%**

WATER RESOURCE FACILITIES DEVELOPMENT FEES

Off Project Service Area

The gross total to provide future water resource facilities in the off project service area is $13.69 per gallon. The net cost is found by reducing the gross amount by the credits included in the analysis. As a result, the cost per EDU is $1,232 ($12.98 per 1,000 gallons x 94,937 gallons = $1,232). The base ¾-inch meter is equivalent to a single family unit and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Resource Supply Practices M-1, 7th Edition*. For example, a 1.5-inch meter has a maximum flow of 100 gpm which results in a capacity ratio of 3.33 (100 gpm / 30 gpm). The resulting fee is $4,103 for a 1.5-inch meter (3.33 x $1,232 = $4,103). Note: the current fee schedule assesses the same fee for single family ¾-inch and 1-inch meters. TischlerBise recommends assessing the fee based on the capacity ratio.

Additionally, the City of Peoria has replaced the turbo meter type with the ultrasonic mach 10 meter type. Ultrasonic mach 10 meters have a slightly higher capacity (gpm) than turbo meters of the same size. The higher capacity is reflected in the maximum supportable fee amounts.

Figure 137. Water Resource Facilities Development Fees – Off Project Service Area

Components	Cost per 1,000 Gallons
Off Project Water Resource Projects	$13.69
Gross Total	**$13.69**
Credit for Fund Balance (4%)	**($0.55)**
Future Debt Service Payments	**($0.16)**
Net Total	**$12.98**
Annual Gallons per EDU	**94,937**
Capital Cost per EDU	**$1,232**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$1,232**	$730	$502
*	1"	Displacement	50	1.67	**$2,057**	$730	$1,327

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$1,232**	$730	$502
1"	Displacement	50	1.67	**$2,057**	$1,217	$840
1.5"	Displacement	100	3.33	**$4,103**	$2,433	$1,670
1.5"	Ultrasonic Mach 10	120	4.00	**$4,928**	$2,433	$2,495
2"	Displacement	160	5.33	**$6,567**	$3,893	$2,674
2"	Ultrasonic Mach 10	190	6.33	**$7,799**	$3,893	$3,906
3"	Compound	300	10.00	**$12,320**	$7,300	$5,020
3"	Ultrasonic Mach 10	435	14.50	**$17,864**	$7,300	$10,564
4"	Compound	500	16.67	**$20,537**	$12,167	$8,370
4"	Ultrasonic Mach 10	750	25.00	**$30,800**	$12,167	$18,633
6"	Compound	1,000	33.33	**$41,063**	$24,333	$16,730
6"	Ultrasonic Mach 10	1,600	53.33	**$65,703**	$24,333	$41,370
8"	Compound	2,000	66.67	**$82,137**	$48,667	$33,470
8"	Ultrasonic Mach 10	2,800	93.33	**$114,983**	$48,667	$66,316

WATER RESOURCE FACILITIES DEVELOPMENT FEE REVENUE

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

Off Project Service Area

Projected fee revenue shown in Figure 138 is based on projected development in the off project service area and the updated water resource facilities development fees. Projected development fee revenue equals $57.7 million and projected expenditures equal $60.9 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 138. Off Project Service Area Water Facilities Development Fees Revenue

Water Resource Service Area	Proj 10-Year MG Increase	Cost to Serve per 1,000 Gals	10-Year Capital Cost
Off Project	4,449	$13.69	$60,903,547

Water Resource Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
Off Project	46,860	$1,232	$57,731,699

10-Year Revenue	$57,731,699
10-Year Cost	$60,903,547
Funding Gap	$3,171,847

WATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(a) defines the eligible facilities and assets for 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 citywide utility studies, citywide well expansion, service area water distribution projects, and service area water plant projects. The plan-based approach is used for all the components. Well, distribution, and plant projects are examined separately to capture the flow of water demand through the infrastructure network. The analysis of the water facilities IIP results in a cost per gallon to provide water facility expansion to future water users. A credit is included to account for future debt payments serviced by utility rates that funded past facility expansions.

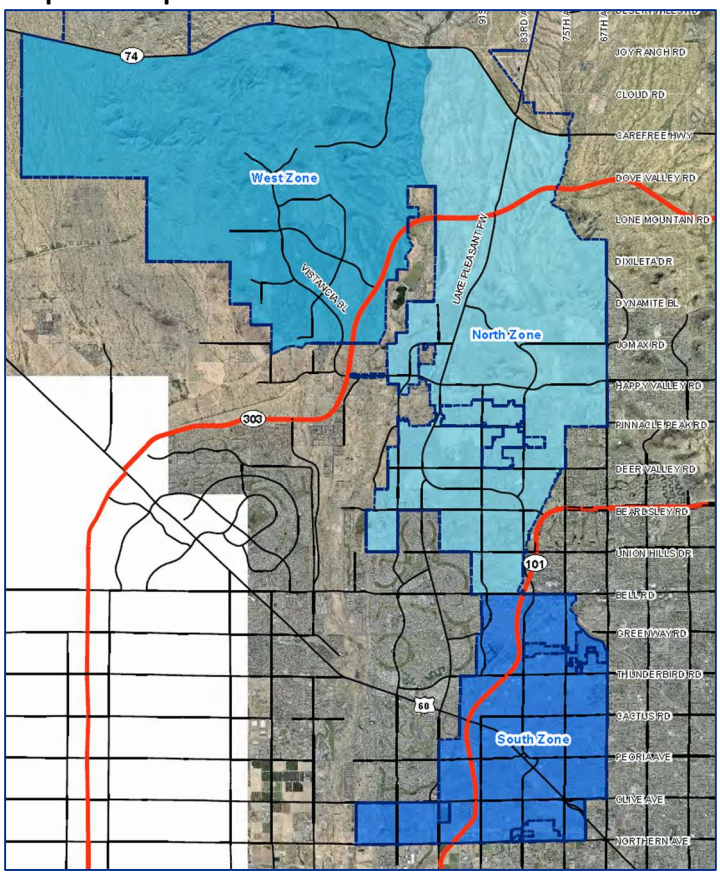
PROPORTIONATE SHARE

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 Water Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using peak day demand factors.

SERVICE AREA

As shown in Figure 139, there are three service areas for the Water Facilities IIP.

Figure 139. Water Development Impact Fee Service Area



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."*

A service unit is a standardized measure of demand. The service unit for the water development fees is an Equivalent Dwelling Unit (EDU). An EDU represents the demand from a single family detached dwelling unit determined with water gallons per day. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the water flow capacity available for the meter size.

Water facilities are sized to accommodate peak usage levels. Figure 140 lists the 2021 average water usage during peak months (June – September) for an EDU which is equivalent to ¾-inch single family meter. During the peak season, an EDU generates a demand of 326 gallons of water per day.

Figure 140. Water Demand Factors

Year/Month		Unique Meters	Sum of Billed (kgals)	Avg. (kgals)	GPD/DU
3/4-inch Single Family					
2020	Jun	42,122	437,515	10.39	346.2
	Jul	42,181	464,520	11.01	355.2
	Aug	42,225	451,690	10.70	345.1
	Sep	42,321	477,835	11.29	376.4
2021	Jun	42,648	429,767	10.08	335.9
	Jul	42,633	463,103	10.86	350.4
	Aug	42,673	410,739	9.63	310.5
	Sep	42,702	395,052	9.25	308.4
				Average	**326**

Source: Peoria Water Billing Report
Note: Staff has recommended not using calendar year 2022 in average calculation because of recording errors that occurred that year.

Water development fees are assessed by meter size. The analysis uses the flow capacity (gallons per minute) to calculate the capacity ratio compared to the 30 gpm of a ¾-inch meter. The capacity ratio is then applied to the cost per EDU to calculate the proportionate development fee.

Figure 141. Water Ratio of Service Unit to Development Unit

Single Family

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67
1.5"	Displacement	100	3.33
1.5"	Ultrasonic Mach 10	120	4.00
2"	Displacement	160	5.33
2"	Ultrasonic Mach 10	190	6.33
3"	Compound	300	10.00
3"	Ultrasonic Mach 10	435	14.50
4"	Compound	500	16.67
4"	Ultrasonic Mach 10	750	25.00
6"	Compound	1,000	33.33
6"	Ultrasonic Mach 10	1,600	53.33
8"	Compound	2,000	66.67
8"	Ultrasonic Mach 10	2,800	93.33

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

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 Demand

Figure 142 lists the existing demand for water based on service area. In total, there is a citywide demand of 33.10 million gallons per day. The majority of the water demand is in the north and south service area.

Figure 142. Existing Water Demand by Service Area

Water Usage (MGD)	Base Year 2023
South	13.73
North	12.65
West	6.72
Citywide	33.10

Source: City of Peoria

PROJECTED DEMAND FOR SERVICES AND COSTS

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)(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."*

Projected Demand

Shown below in Figure 143 are projected water demand for the next ten years by service area. Over the next ten years, the citywide demand is projected to grow by nearly 13 MGD and 40 percent from the base year. Over 50 percent of the new water demand is in the west service area.

Figure 143. Projected Water Demand

Water Usage (MGD)	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
South	13.73	13.83	13.93	14.03	14.12	14.22	14.32	14.42	14.51	14.61	14.71	0.97
North	12.65	12.84	13.04	15.90	16.09	16.29	16.48	16.67	16.86	17.05	17.24	4.59
West	6.72	7.25	7.77	9.37	9.89	10.41	10.94	11.46	13.05	13.57	14.09	7.37
Citywide	33.10	33.92	34.74	39.29	40.11	40.92	41.73	42.54	44.42	45.23	46.04	12.93

Source: City of Peoria

The plan-based average cost approach is applied in the following calculations to find a cost per gallon to serve future water users for each infrastructure category. These cost factors are combined with the demand from an EDU to calculate the water development fee.

Citywide Projects

In the Water IIP, there is a citywide benefitting well construction project. The project is estimated to cost $18,694,000 and will generate 6 MGD of new capacity. As a result, the project costs an average of $3.12 per gallon.

Figure 144. Citywide Well Expansion Cost

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Wells - New Construction	FY26-FY33	Citywide	Citywide	6.00	$18,694,000	100%	$18,694,000
			Total	**6.00**	**$18,694,000**		**$18,694,000**

Citywide Growth Cost	$18,694,000
Citywide IIP Gallons	6,000,000
Capital Cost per Gallon	**$3.12**

In the Water IIP, there are several citywide studies and master plans anticipated over the next ten years. The projects do not generate new capacity, but are necessary and are attributable to future development. The total cost is attributed to the ten-year growth in gallons to calculate an average cost of $0.22 per gallon.

Figure 145. Citywide Utility Studies

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Utility Billing System	FY28	Citywide	Citywide	-	$2,660,000	65%	$1,729,000
Water Impact Fee Study Updates	FY28, FY33	Citywide	Citywide	-	$38,746	100%	$38,746
Integrated Water Utility Master Plan (IWUMP)	FY29-FY30	Citywide	Citywide	-	$1,102,502	100%	$1,102,502
			Total	**0.00**	**$3,801,248**		**$2,870,248**

Citywide Growth Cost	$2,870,248
Ten-Year Increase in Gallons	12,922,195
Capital Cost per Gallon	**$0.22**

South Service Area Projects

There is one water distribution project in the south service area. The project is benefiting both the north and south service area. The south service area accounts for 18 percent of future water demand between the two service areas. This percentage is used to attribute the cost of the project to the service area. The project is contributing 0.20 MGD to the distribution network and $1.3 million is attributed to the south service area, as a result, there is a capital cost per gallon of $6.68.

Figure 146. South Service Area Water Distribution Cost

Water Distribution

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Lake Pleasant Pkwy 24-inch Reclaimed Waterline	FY26	LPP & L303	N & S of Bell Rd	0.20	$1,335,606	100%	$1,335,606
			Total	**0.20**	**$1,335,606**		**$1,335,606**

Total South Service Area Water Needs	$1,335,606
South Service Area IIP Gallons	200,000
Capital Cost per Gallon	**$6.68**

There is one water plant project in the south service area. The project is benefiting both the north and south service area. The south service area accounts for 18 percent of future water demand between the two service areas. This percentage is used to attribute the cost of the project to the service area. Also, the project is a water reclamation facility (WRF) which is determined to be a 25 percent water project (75 percent wastewater project). The project is contributing 3 MGD to the plant and $4.4 million is attributed to the south water service area, as a result, there is a capital cost per gallon of $1.46.

Figure 147. South Service Area Water Plant Cost

Water Plant

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Beardsley WRF Expansion [1]	FY34	Beardsley WRF	N & S of Bell Rd	3.00	$4,376,167	100%	$4,376,167
			Total	**3.00**	**$4,376,167**		**$4,376,167**

North Service Area Growth Cost	$4,376,167
North Service Area IIP Gallons	3,000,000
Capital Cost per Gallon	**$1.46**

[1] Water reclamation facilities (WRF) costs considered to be associated with 25 percent water system expansion and 75 percent wastewater system expansion

North Service Area Projects

There are six water distribution projects in the north service area Water IIP. Overall, the IIP is adding 37.90 MGD and cost $81.9 million, as a result, there is a capital cost per gallon of $2.16.

Figure 148. North Service Area Water Distribution Cost

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Reclaimed Water System Upgrade Program	FY24-FY34	Beardsley WRF to Paloma	North of Bell Rd	3.00	$1,531,339	100%	$1,531,339
CAP/LPP Intersection Wellfield	FY24-FY25	L303 & LPP	North of Bell Rd	8.00	$38,837,384	100%	$38,837,384
Zone 6E Reservoir & Booster Pump Station	FY24-FY25	LPP & CAP Canal	North of Bell Rd	18.00	$23,230,500	100%	$23,230,500
Lake Pleasant Pwky 24-inch Waterline; L303 to SR74	FY26	LPP & L303	North of Bell Rd	0.30	$7,630,000	100%	$7,630,000
Agua Fria Booster Station - Phase II	FY26-FY27	LPP & Lone Mountain	North of Bell Rd	8.40	$4,340,800	100%	$4,340,800
Lake Pleasant Pkwy 24-inch Reclaimed Waterline	FY26	LPP & L303	N & S of Bell Rd	0.20	$6,294,394	100%	$6,294,394
			Total	**37.90**	**$81,864,417**		**$81,864,417**

North Service Area Growth Cost	$81,864,417
North Service Area IIP Gallons	37,900,000
Capital Cost per Gallon	**$2.16**

There is one water plant project in the north service area. The project is benefiting both the north and south service area. The north service area accounts for 82 percent of future water demand between the two service areas. This percentage is used to attribute the cost of the project to the service area. Also, the project is a water reclamation facility (WRF) which is determined to be a 25 percent water project (75 percent wastewater project). The project is contributing 3 MGD to the plant and $20.6 million is attributed to the north water service area, as a result, there is a capital cost per gallon of $6.87.

Figure 149. North Service Area Water Plant Cost

Water Plant

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Beardsley WRF Expansion [1]	FY34	Beardsley WRF	N & S of Bell Rd	3.00	$20,623,833	100%	$20,623,833
			Total	**3.00**	**$20,623,833**		**$20,623,833**

North Service Area Growth Cost	$20,623,833
North Service Area IIP Gallons	3,000,000
Capital Cost per Gallon	**$6.87**

[1] Water reclamation facilities (WRF) costs considered to be associated with 25 percent water system expansion and 75 percent wastewater system expansion

West Service Area Projects

There are eight water distribution projects in the west service area Water IIP. Overall, the IIP is adding 12.76 MGD and cost $80.3 million, as a result, there is a capital cost per gallon of $6.30.

Figure 150. West Service Area Water Distribution Cost

Water Distribution

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Reclaimed Water Transmission Main - Project 2	FY23-FY26	Vistancia	West of Agua Fria	0.50	$21,886,217	100%	$21,886,217
Lake Pleasant Heights - Mystic Water Oversizing	FY24	Lake Pleasant Heights	West of Agua Fria	0.15	$383,325	100%	$383,325
West Agua Fria Water Lines	FY24-FY28	Vistancia	West of Agua Fria	0.30	$6,207,037	100%	$6,207,037
El Mirage Road Waterline Upsizing	FY26	Vistancia/LPH	West of Agua Fria	0.20	$1,700,000	100%	$1,700,000
Vistancia Zone 5W Waterline	FY26-FY27	L303 & Lone Mountain	West of Agua Fria	0.06	$2,320,000	100%	$2,320,000
Westland Reservoir/Booster Station - Phase II	FY27-FY28	Westland & CAP Canal	West of Agua Fria	3.50	$6,380,000	100%	$6,380,000
Jomax Waterline - Loop 303 to El Mirage Road	FY29	L303 & Jomax	West of Agua Fria	0.05	$2,001,500	100%	$2,001,500
Agua Fria West Wellfield	FY31-FY33	L303 & Jomax	West of Agua Fria	8.00	$39,457,500	100%	$39,457,500
			Total	**12.76**	**$80,335,579**		**$80,335,579**

West Service Area Growth Cost	$80,335,579
West Service Area IIP Gallons	12,760,000
Capital Cost per Gallon	**$6.30**

There is one water plant project in the west service area. The project is a water reclamation facility (WRF) which is determined to be a 25 percent water project (75 percent wastewater project). The project is contributing 1.50 MGD to the plant and $20.8 million is attributed to the west water service area, as a result, there is a capital cost per gallon of $13.80.

Figure 151. West Service Area Water Plant Cost

Water Plant

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Jomax WRF Expansion [1]	FY30-FY31	Jomax WRF	West of Agua Fria	1.50	$20,705,000	100%	$20,705,000
			Total	**1.50**	**$20,705,000**		**$20,705,000**

North Service Area Growth Cost	$20,705,000
North Service Area IIP Gallons	1,500,000
Capital Cost per Gallon	**$13.80**

[1] Water reclamation facilities (WRF) costs considered to be associated with 25 percent water system expansion and 75 percent wastewater system expansion

Revenue Credit/Offset

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded water infrastructure expansion which are being serviced through utility rates. To avoid potential double payment for the improvements, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2041. Conservatively, all future payments are included in the analysis.

In Figure 152, future payments are compared to projected water demand. To account for the time value of money, annual payments per gallon are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments is $1.53 per gallon.

Figure 152. Credit for Future Debt Payments

Fiscal Year	Payment	Projected Gallons	Payment/ Gallon
2024	$6,261,370	33,922,015	$0.18
2025	$6,262,492	34,738,091	$0.18
2026	$6,263,348	39,294,552	$0.16
2027	$6,110,160	40,108,398	$0.15
2028	$5,883,180	40,921,130	$0.14
2029	$5,821,423	41,732,747	$0.14
2030	$5,780,056	42,543,249	$0.14
2031	$5,779,159	44,422,735	$0.13
2032	$5,780,064	45,231,008	$0.13
2033	$5,780,136	46,038,166	$0.13
2034	$5,779,173	46,844,210	$0.12
2035	$5,780,043	47,649,139	$0.12
2036	$4,889,592	49,521,953	$0.10
2037	$1,575,001	50,324,653	$0.03
2038	$1,575,139	51,126,238	$0.03
2039	$1,574,595	51,926,709	$0.03
2040	$1,574,517	52,726,065	$0.03
2041	$1,575,153	53,524,306	$0.03
Total	**$84,044,599**		**$1.97**
		Discount Rate	3.78%
		Total Credit	**$1.53**

Second, the City has an existing Water Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan. The citywide existing fund balance (Figure 153) accounts for 9 percent of the growth-related IIP.

Figure 153. Citywide Existing Fund Balance Credit

Current Fund Balance	$1,948,868
Growth-Related IIP	$21,564,248
Fund Balance Share of IIP	**9%**

In the South Service Area (Figure 154) the existing fund balance accounts for 60 percent of the growth-related IIP.

Figure 154. South Service Area Existing Fund Balance Credit

Current Fund Balance	$3,450,590
Growth-Related IIP	$5,711,774
Fund Balance Share of IIP	**60%**

In the North Service Area (Figure 155) the existing fund balance accounts for 7 percent of the growth-related IIP.

Figure 155. North Service Area Existing Fund Balance Credit

Current Fund Balance	$6,829,554
Growth-Related IIP	$102,488,249
Fund Balance Share of IIP	**7%**

In the West Service Area (Figure 156) the existing fund balance accounts for 2 percent of the growth-related IIP.

Figure 156. West Service Area Existing Fund Balance Credit

Current Fund Balance	$2,407,034
Growth-Related IIP	$101,040,579
Fund Balance Share of IIP	**2%**

WATER FACILITIES DEVELOPMENT FEES

South Service Area

The gross total to provide future water facilities in the south service area is $11.48 per gallon. The net cost is found by reducing the gross amount by the credits included in the analysis. As a result, the cost per EDU is $1,555 ($4.77 per gallon x 326 gallons = $1,555). The base ¾-inch meter is equivalent to a single family unit and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Water Supply Practices M-1, 7th Edition*. For example, a 1.5-inch meter has a maximum flow of 100 gpm which results in a capacity ratio of 3.33 (100 gpm / 30 gpm). The resulting fee is $5,178 for a 1.5-inch meter (3.33 x $1,555 = $5,178). Note: the current fee schedule assesses the same fee for single family ¾-inch and 1-inch meters. TischlerBise recommends assessing the fee based on the capacity ratio.

Additionally, the City of Peoria has replaced the turbo meter type with the ultrasonic mach 10 meter type. Ultrasonic mach 10 meters have a slightly higher capacity (gpm) than turbo meters of the same size. The higher capacity is reflected in the maximum supportable fee amounts.

Figure 157. Water Facilities Development Fees – South Service Area

Components	Cost per Gallon
Citywide System and Plan Projects	$0.22
Citywide Well Expansion Project	$3.12
South Service Area Water Distribution Projects	$6.68
South Service Area Water Plant Projects	$1.46
Gross Total	**$11.48**
Credit for Future Debt Payments	**($1.53)**
Credit for Fund Balance Citywide (9%)	**($0.30)**
Credit for Fund Balance South (60%)	**($4.88)**
Net Total	**$4.77**
Peak Average Gallons per EDU	**326**
Capital Cost per EDU	**$1,555**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$1,555**	$3,358	($1,803)
*	1"	Displacement	50	1.67	**$2,597**	$3,358	($761)

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$1,555**	$3,358	($1,803)
1"	Displacement	50	1.67	**$2,597**	$5,518	($2,921)
1.5"	Displacement	100	3.33	**$5,178**	$10,918	($5,740)
1.5"	Ultrasonic Mach 10	120	4.00	**$6,220**	$10,918	($4,698)
2"	Displacement	160	5.33	**$8,288**	$17,398	($9,110)
2"	Ultrasonic Mach 10	190	6.33	**$9,843**	$17,398	($7,555)
3"	Compound	300	10.00	**$15,550**	$32,518	($16,968)
3"	Ultrasonic Mach 10	435	14.50	**$22,548**	$32,518	($9,970)
4"	Compound	500	16.67	**$25,922**	$54,118	($28,196)
4"	Ultrasonic Mach 10	750	25.00	**$38,875**	$54,118	($15,243)
6"	Compound	1,000	33.33	**$51,828**	$108,118	($56,290)
6"	Ultrasonic Mach 10	1,600	53.33	**$82,928**	$108,118	($25,190)
8"	Compound	2,000	66.67	**$103,672**	$216,118	($112,446)
8"	Ultrasonic Mach 10	2,800	93.33	**$145,128**	$216,118	($70,990)

North Service Area

As a result of the cost components and the credits the capital cost per EDU (3/4-inch meter) in the north service area is $3,231.

Figure 158. Water Facilities Development Fees – North Service Area

Components	Cost per Gallon
Citywide System and Plan Projects	$0.22
Citywide Well Expansion Project	$3.12
North Service Area Water Distribution Projects	$2.16
North Service Area Water Plant Projects	$6.87
Gross Total	**$12.37**
Credit for Future Debt Payments	**($1.53)**
Credit for Fund Balance Citywide (9%)	**($0.30)**
Credit for Fund Balance North (7%)	**($0.63)**
Net Total	**$9.91**
Peak Average Gallons per EDU	**326**
Capital Cost per EDU	**$3,231**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$3,231**	$3,745	($514)
*	1"	Displacement	50	1.67	**$5,396**	$3,745	$1,651

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$3,231**	$3,745	($514)
1"	Displacement	50	1.67	**$5,396**	$6,163	($767)
1.5"	Displacement	100	3.33	**$10,759**	$12,208	($1,449)
1.5"	Ultrasonic Mach 10	120	4.00	**$12,924**	$12,208	$716
2"	Displacement	160	5.33	**$17,221**	$19,462	($2,241)
2"	Ultrasonic Mach 10	190	6.33	**$20,452**	$19,462	$990
3"	Compound	300	10.00	**$32,310**	$36,388	($4,078)
3"	Ultrasonic Mach 10	435	14.50	**$46,850**	$36,388	$10,462
4"	Compound	500	16.67	**$53,861**	$60,568	($6,707)
4"	Ultrasonic Mach 10	750	25.00	**$80,775**	$60,568	$20,207
6"	Compound	1,000	33.33	**$107,689**	$121,018	($13,329)
6"	Ultrasonic Mach 10	1,600	53.33	**$172,309**	$121,018	$51,291
8"	Compound	2,000	66.67	**$215,411**	$241,918	($26,507)
8"	Ultrasonic Mach 10	2,800	93.33	**$301,549**	$241,918	$59,631

West Service Area

As a result of the cost components and the credits the capital cost per EDU (3/4-inch meter) in the west service area is $6,914.

Figure 159. Water Facilities Development Fees – West Service Area

Components	Cost per Gallon
Citywide System and Plan Projects	$0.22
Citywide Well Expansion Project	$3.12
West Service Area Water Distribution Projects	$6.30
West Service Area Water Plant Projects	$13.80
Gross Total	**$23.44**
Credit for Future Debt Payments	**($1.53)**
Credit for Fund Balance Citywide (9%)	**($0.30)**
Credit for Fund Balance West (2%)	**($0.40)**
Net Total	**$21.21**
Peak Average Gallons per EDU	**326**
Capital Cost per EDU	**$6,914**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$6,914**	$4,725	$2,189
*	1"	Displacement	50	1.67	**$11,546**	$4,725	$6,821

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$6,914**	$4,725	$2,189
1"	Displacement	50	1.67	**$11,546**	$7,796	$3,750
1.5"	Displacement	100	3.33	**$23,024**	$15,475	$7,549
1.5"	Ultrasonic Mach 10	120	4.00	**$27,656**	$15,475	$12,181
2"	Displacement	160	5.33	**$36,852**	$24,689	$12,163
2"	Ultrasonic Mach 10	190	6.33	**$43,766**	$24,689	$19,077
3"	Compound	300	10.00	**$69,140**	$46,188	$22,952
3"	Ultrasonic Mach 10	435	14.50	**$100,253**	$46,188	$54,065
4"	Compound	500	16.67	**$115,256**	$76,901	$38,355
4"	Ultrasonic Mach 10	750	25.00	**$172,850**	$76,901	$95,949
6"	Compound	1,000	33.33	**$230,444**	$153,685	$76,759
6"	Ultrasonic Mach 10	1,600	53.33	**$368,724**	$153,685	$215,039
8"	Compound	2,000	66.67	**$460,956**	$307,251	$153,705
8"	Ultrasonic Mach 10	2,800	93.33	**$645,284**	$307,251	$338,033

WATER FACILITIES DEVELOPMENT FEE REVENUE

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

South Service Area

Projected fee revenue shown in Figure 160 is based on projected development in the south service area and the updated water 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. Projected development fee revenue equals $4.6 million and projected expenditures equal $11.2 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 160. South Service Area Water Facilities Development Fees Revenue

Water Service Area	Proj 10-Year MGD Increase	Cost to Serve per Gallon	10-Year Capital Cost
South	0.97	$11.48	$11,174,059

Water Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
South	2,986	$1,555	$4,642,820

10-Year Revenue	$4,642,820
10-Year Cost	$11,174,059
Funding Gap	$6,531,239

North Service Area

Projected fee revenue shown in Figure 161 is based on projected development in the north service area and the updated water facilities development fees. Projected development fee revenue equals $45.5 million and projected expenditures equal $56.7 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 161. North Service Area Water Facilities Development Fees Revenue

Water Service Area	Proj 10-Year MGD Increase	Cost to Serve per Gallon	10-Year Capital Cost
North	4.59	$12.37	$56,743,250

Water Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
North	14,071	$3,231	$45,463,604

10-Year Revenue	$45,463,604
10-Year Cost	$56,743,250
Funding Gap	$11,279,645

West Service Area

Projected fee revenue shown in Figure 162 is based on projected development in the west service area and the updated water facilities development fees. Projected development fee revenue equals $156.4 million and projected expenditures equal $172.8 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 162. West Service Area Water Facilities Development Fees Revenue

Water Service Area	Proj 10-Year MGD Increase	Cost to Serve per Gallon	10-Year Capital Cost
West	7.37	$23.44	$172,819,008

Water Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
West	22,616	$6,914	$156,367,206

10-Year Revenue	$156,367,206
10-Year Cost	$172,819,008
Funding Gap	$16,451,802

WASTEWATER FACILITIES IIP

ARS § 9-463.05 (T)(7)(b) defines the eligible facilities and assets for 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 citywide development fee study, citywide capacity projects, service area wastewater collection projects, and service area wastewater plant projects. The plan-based approach is used for all the components. Wastewater collection and plant projects are examined separately to capture the flow of wastewater demand through the overall infrastructure network. The analysis of the wastewater facilities IIP results in a cost per gallon to provide wastewater facility expansion to future users. A credit is included to account for future debt payments served by utility rates that funded past facility expansions.

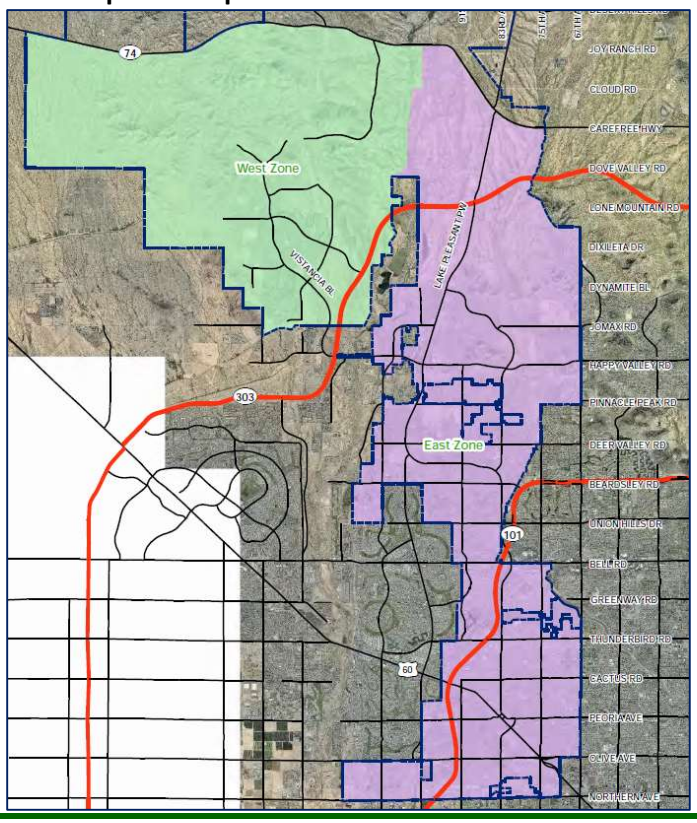
PROPORTIONATE SHARE

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 Wastewater Facilities IIP and development fees will allocate the cost of necessary public services between both residential and nonresidential development using peak day demand factors.

SERVICE AREA

As shown in Figure 163, there are two service areas for the Wastewater Facilities IIP, consistent with the current development fee program.

Figure 163. Wastewater Development Impact Fee Service Area



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."*

A service unit is a standardized measure of demand. The service unit for the wastewater impact fees is an Equivalent Dwelling Unit (EDU). An EDU represents the demand from a single family detached dwelling unit determined with wastewater gallons per day. A single family detached unit is, by definition, one EDU. The number of EDUs for other housing types and nonresidential development is based on the wastewater flow capacity available for the meter size.

Wastewater facilities are sized to accommodate peak usage levels. Additionally, the City of Peoria anticipates capturing 47.9 percent of future residential water usage. To calculate the wastewater use per EDU the daily water use is combined with the capture rate of 47.9 percent. Figure 164 lists the 2021 average water usage during peak months (June – September) for an EDU which is equivalent to ¾-inch single family meter, 326 gallons of water per day. As a result, there is an anticipated wastewater usage of 156 gallons per day.

Figure 164. Wastewater Demand Factors

Water Use per EDU (gallons)	326
Anticipated Residential WW Collection [1]	47.9%
Future Wastewater Gallons per EDU	**156**

[1] City of Peoria Wastewater Master Plan

Wastewater development fees are assessed by meter size. The analysis uses the flow capacity (gallons per minute) to calculate the capacity ratio compared to the 30 gpm of a ¾-inch meter. The capacity ratio is then applied to the cost per EDU to calculate the proportionate development fee.

Figure 165. Wastewater Ratio of Service Unit to Development Unit

Single Family

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio
3/4"	Displacement	30	1.00
1"	Displacement	50	1.67
1.5"	Displacement	100	3.33
1.5"	Ultrasonic Mach 10	120	4.00
2"	Displacement	160	5.33
2"	Ultrasonic Mach 10	190	6.33
3"	Compound	300	10.00
3"	Ultrasonic Mach 10	435	14.50
4"	Compound	500	16.67
4"	Ultrasonic Mach 10	750	25.00
6"	Compound	1,000	33.33
6"	Ultrasonic Mach 10	1,600	53.33
8"	Compound	2,000	66.67
8"	Ultrasonic Mach 10	2,800	93.33

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

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 Demand

Figure 166 lists the existing demand for wastewater based on service area. In total, there is a citywide demand of 15.84 million gallons per day. The majority of the wastewater demand is in the east service area.

Figure 166. Existing Wastewater Demand by Service Area

Wastewater Usage (MGD)	Base Year 2023	Percent of Total
East	12.46	79%
West	3.38	21%
Citywide	15.84	100%

Source: City of Peoria

PROJECTED DEMAND FOR SERVICES AND COSTS

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)(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."*

Projected Demand

Shown below in Figure 167 are projected wastewater demand for the next ten years by service area. The citywide demand is projected to grow by 6 MGD, nearly 40 percent from the base year. Approximately 57 percent of the new wastewater demand is in the west service area.

Figure 167. Projected Wastewater Demand

Wastewater Usage (MGD)	Base Year 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	10-Year Increase
East	12.46	12.59	13.98	14.11	14.25	14.38	14.52	14.65	14.78	14.92	15.05	2.59
West	3.38	3.63	4.37	4.62	4.86	5.11	5.35	6.09	6.34	6.58	6.82	3.44
Citywide	15.84	16.22	18.35	18.73	19.11	19.49	19.87	20.75	21.12	21.50	21.88	6.03

Source: City of Peoria

The plan-based average cost approach is applied in the following calculations to find a cost per gallon to serve future wastewater users for each infrastructure category. These cost factors are combined with the demand from an EDU to calculate the wastewater development fee.

Citywide Projects

In the Wastewater IIP, the City plans to construct an advanced water purification project or Project 3 of the reclaimed water transmission main. Both projects are anticipated to cost approximately $165 million and generate 10 MGD of new capacity. As a result, either project costs an average of $16.50 per gallon.

Figure 168. Citywide Wastewater Capacity Project Cost

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Adv. Water Purification/Reclaimed Water Transmission Main - Project 3	FY32-34	Citywide	Citywide	10.00	$165,000,000	100%	$165,000,000
			Total	**10.00**	**$165,000,000**		**$165,000,000**

Citywide Growth Cost	$165,000,000
Citywide IIP Gallons	10,000,000
Capital Cost per Gallon	**$16.50**

In the Wastewater IIP, two impact fee studies are planned in five-year increments. The studies do not generate new capacity, but are necessary and are attributable to future development. The total cost is attributed to the ten-year growth in gallons to calculate an average cost of $0.01 per gallon.

Figure 169. Citywide Wastewater Impact Fee Studies

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Wastewater Impact Fee Study Updates	FY28, FY33	Citywide	Citywide	-	$38,746	100%	$38,746
			Total	**-**	**$38,746**		**$38,746**

Citywide Growth Cost	$38,746
Ten-Year Increase in Gallons	6,034,665
Capital Cost per Gallon	**$0.01**

East Service Area Projects

There is one collection project in the east service area Wastewater IIP. Overall, the project is adding 1.50 MGD and cost $13 million, as a result, there is a capital cost per gallon of $8.72.

Figure 170. East Service Area Wastewater Collection Cost

Wasterwater Collection

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Lake Pleasant Pkwy 18-inch Sewer	FY26	LPP & L303	East of Agua Fria River	1.50	$13,080,000	100%	$13,080,000
			Total	**1.50**	**$13,080,000**		**$13,080,000**

East Service Area Growth Cost	$13,080,000
East Service Area IIP Gallons	1,500,000
Capital Cost per Gallon	**$8.72**

There is one wastewater plant project in the east service area. Also, the project is a wastewater reclamation facility (WRF) which is determined to be a 75 percent wastewater project (25 percent water project). The project is contributing 3 MGD to the plant and $75 million is attributed to the east wastewater service area, as a result, there is a capital cost per gallon of $25.

Figure 171. East Service Area Wastewater Plant Cost

Wasterwater Plant

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Beardsley WRF Expansion [1]	FY34	Beardsley WRF	East of Agua Fria River	3.00	$75,000,000	100%	$75,000,000
			Total	**3.00**	**$75,000,000**		**$75,000,000**

East Service Area Growth Cost	$75,000,000
East Service Area IIP Gallons	3,000,000
Capital Cost per Gallon	**$25.00**

[1] Water reclamation facilities (WRF) costs considered to be associated with 25 percent water system expansion and 75 percent wastewater system expansion

West Service Area Projects

There are two collection projects in the west service area Wastewater IIP. Overall, the IIP is adding 0.50 MGD and cost $894,436, as a result, there is a capital cost per gallon of $1.79.

Figure 172. West Service Area Wastewater Collection Cost

Wasterwater Collection

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
El Mirage Road Sewer Infrastructure Upsizing	FY24	Vistancia	West of Agua Fria River	0.20	$776,878	100%	$776,878
LPH Mystic Wastewater Oversizing	FY28	Vistancia/LPH	West of Agua Fria River	0.30	$117,558	100%	$117,558
			Total	**0.50**	**$894,436**		**$894,436**

West Service Area Growth Cost	$894,436
West Service Area IIP Gallons	500,000
Capital Cost per Gallon	**$1.79**

There is one wastewater plant project in the west service area. The project is a wastewater reclamation facility (WRF) which is determined to be a 75 percent wastewater project (25 percent water project). The project is contributing 1.50 MGD to the plant and $62,115,000 is attributed to the west wastewater service area, as a result, there is a capital cost per gallon of $41.41.

Figure 173. West Service Area Wastewater Plant Cost

Wasterwater Plant

Ten-Year IIP	Timing (FY)	Location	Service Area	Gallons (MGD)	Cost	% Growth-Related	Growth-Related Cost
Jomax WRF Expansion [1]	FY30-FY31	Jomax WRF	West of Agua Fria River	1.50	$62,115,000	100%	$62,115,000
			Total	**1.50**	**$62,115,000**		**$62,115,000**

West Service Area Growth Cost	$62,115,000
West Service Area IIP Gallons	1,500,000
Capital Cost per Gallon	**$41.41**

[1] Water reclamation facilities (WRF) costs considered to be associated with 25 percent water system expansion and 75 percent wastewater system expansion

Revenue Credit/Offset

Evaluation of other revenues funding capital expansion is necessary to ensure the development fee is proportionate and there are no double charging scenarios.

First, there are several existing bonds that funded wastewater infrastructure expansion which are being serviced through utility rates. To avoid potential double payment for the improvements, a credit is necessary because new development that will pay the impact fee will also contribute to future payments on this remaining debt. Future payments are planned through 2041. Conservatively, all future payments are included in the analysis.

In Figure 174, future payments are compared to projected wastewater demand. To account for the time value of money, annual payments per gallon are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. The total net present value of future payments is $1.71 per gallon.

Figure 174. Credit for Future Debt Payments

Fiscal Year	Payment	Projected Gallons	Payment/ Gallon
2024	$6,338,102	16,222,688	$0.39
2025	$6,350,867	18,350,556	$0.35
2026	$6,369,303	18,730,622	$0.34
2027	$4,699,984	19,110,168	$0.25
2028	$2,316,248	19,489,193	$0.12
2029	$1,606,178	19,867,697	$0.08
2030	$969,361	20,745,417	$0.05
2031	$967,961	21,122,881	$0.05
2032	$969,361	21,499,824	$0.05
2033	$969,361	21,876,246	$0.04
2034	$967,961	22,252,148	$0.04
2035	$969,321	23,126,752	$0.04
2036	$967,641	23,501,613	$0.04
2037	$969,001	23,875,953	$0.04
2038	$969,241	24,249,773	$0.04
2039	$968,361	24,623,072	$0.04
2040	$968,361	24,995,851	$0.04
2041	$969,161	25,368,109	$0.04
Total	**$39,305,769**		**$2.04**
		Discount Rate	3.78%
		Total Credit	**$1.71**

Second, the City has an existing Wastewater Impact Fee Fund balance that will fund a portion of the IIP. To account for this revenue, the fund balance is compared to the IIP to find its share of the plan. The citywide existing fund balance (Figure 175) accounts for 0.5 percent of the growth-related IIP.

Figure 175. Citywide Existing Fund Balance Credit

Current Fund Balance	$807,995
Growth-Related IIP	$165,038,746
Fund Balance Share of IIP	**0.5%**

In the East Service Area (Figure 176) the existing fund balance accounts for 4 percent of the growth-related IIP.

Figure 176. East Service Area Existing Fund Balance Credit

Current Fund Balance	$3,710,489
Growth-Related IIP	$88,080,000
Fund Balance Share of IIP	**4.0%**

In the West Service Area (Figure 177) the existing fund balance accounts for 1 percent of the growth-related IIP.

Figure 177. West Service Area Existing Fund Balance Credit

Current Fund Balance	$761,241
Growth-Related IIP	$63,009,436
Fund Balance Share of IIP	**1.0%**

WASTEWATER FACILITIES DEVELOPMENT FEES

East Service Area

The gross total to provide future wastewater facilities in the east service area is $50.23 per gallon. The net cost is found by reducing the gross amount by the credits included in the analysis. As a result, the cost per EDU is $7,346 ($47.09 per gallon x 156 gallons = $7,346). The base ¾-inch meter is equivalent to a single family unit and a capacity ratio is used to convert the base meter fee proportionately for larger meters. The capacity ratios are calculated based on data published in *AWWA Manual of Wastewater Supply Practices M-1, 7th Edition*. For example, a 1.5-inch meter has a maximum flow of 100 gpm which results in a capacity ratio of 3.33 (100 gpm / 30 gpm). The resulting fee is $24,462 for a 1.5-inch meter (3.33 x $7,346 = $24,462). Note: the current fee schedule assesses the same fee for single family ¾-inch and 1-inch meters. TischlerBise recommends assessing the fee based on the capacity ratio.

Additionally, the City of Peoria has replaced the turbo meter type with the ultrasonic mach 10 meter type. Ultrasonic mach 10 meters have a slightly higher capacity (gpm) than turbo meters of the same size. The higher capacity is reflected in the maximum supportable fee amounts.

Figure 178. Wastewater Facilities Development Fees – East Service Area

Components	Cost per Gallon
Citywide Projects	$16.51
East Service Area WW Collection Projects	$8.72
East Service Area WW Plant Projects	$25.00
Gross Total	**$50.23**
Credit for Future Debt Payments	**($1.71)**
Credit for Citywide Fund Balance (0.5%)	**($0.08)**
Credit for Service Area Fund Balance (4%)	**($1.35)**
Net Total	**$47.09**
Peak Average Gallons per EDU	**156**
Capital Cost per EDU	**$7,346**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$7,346**	$1,913	$5,433
*	1"	Displacement	50	1.67	**$12,268**	$1,913	$10,355

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$7,346**	$1,913	$5,433
1"	Displacement	50	1.67	**$12,268**	$3,124	$9,144
1.5"	Displacement	100	3.33	**$24,462**	$6,150	$18,312
1.5"	Ultrasonic Mach 10	120	4.00	**$29,384**	$6,150	$23,234
2"	Displacement	160	5.33	**$39,154**	$9,782	$29,372
2"	Ultrasonic Mach 10	190	6.33	**$46,500**	$9,782	$36,718
3"	Compound	300	10.00	**$73,460**	$18,257	$55,203
3"	Ultrasonic Mach 10	435	14.50	**$106,517**	$18,257	$88,260
4"	Compound	500	16.67	**$122,458**	$30,364	$92,094
4"	Ultrasonic Mach 10	750	25.00	**$183,650**	$30,364	$153,286
6"	Compound	1,000	33.33	**$244,842**	$60,630	$184,212
6"	Ultrasonic Mach 10	1,600	53.33	**$391,762**	$60,630	$331,132
8"	Compound	2,000	66.67	**$489,758**	$121,164	$368,594
8"	Ultrasonic Mach 10	2,800	93.33	**$685,602**	$121,164	$564,438

West Service Area

As a result of the cost components and the credits the capital cost per EDU (3/4-inch meter) in the west service area is $8,968.

Figure 179. Wastewater Facilities Development Fees – West Service Area

Components	Cost per Gallon
Citywide Projects	$16.51
West Service Area WW Collection Projects	$1.79
West Service Area WW Plant Projects	$41.41
Gross Total	**$59.71**
Credit for Future Debt Payments	**($1.71)**
Credit for Citywide Fund Balance (0.5%)	**($0.08)**
Credit for Service Area Fund Balance (1%)	**($0.43)**
Net Total	**$57.49**
Peak Average Gallons per EDU	**156**
Capital Cost per EDU	**$8,968**

Single Family

	Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
	3/4"	Displacement	30	1.00	**$8,968**	$3,157	$5,811
*	1"	Displacement	50	1.67	**$14,977**	$3,157	$11,820

* Note: Current fee schedule assesses the same amount for 3/4" and 1" single family meters

Multifamily & Nonresidential

Meter Size (inches)	Meter Type	Flow (gpm)	Capacity Ratio	Maximum Supportable Fee	Current Base Fee	Increase/ (Decrease)
3/4"	Displacement	30	1.00	**$8,968**	$3,157	$5,811
1"	Displacement	50	1.67	**$14,977**	$5,197	$9,780
1.5"	Displacement	100	3.33	**$29,863**	$10,297	$19,566
1.5"	Ultrasonic Mach 10	120	4.00	**$35,872**	$10,297	$25,575
2"	Displacement	160	5.33	**$47,799**	$16,417	$31,382
2"	Ultrasonic Mach 10	190	6.33	**$56,767**	$16,417	$40,350
3"	Compound	300	10.00	**$89,680**	$30,697	$58,983
3"	Ultrasonic Mach 10	435	14.50	**$130,036**	$30,697	$99,339
4"	Compound	500	16.67	**$149,497**	$51,097	$98,400
4"	Ultrasonic Mach 10	750	25.00	**$224,200**	$51,097	$173,103
6"	Compound	1,000	33.33	**$298,903**	$102,097	$196,806
6"	Ultrasonic Mach 10	1,600	53.33	**$478,263**	$102,097	$376,166
8"	Compound	2,000	66.67	**$597,897**	$204,097	$393,800
8"	Ultrasonic Mach 10	2,800	93.33	**$836,983**	$204,097	$632,886

WASTEWATER FACILITIES DEVELOPMENT FEE REVENUE

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

East Service Area

Projected fee revenue shown in Figure 180 is based on projected development in the east service area and the updated wastewater 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. Projected development fee revenue equals $122.2 million and projected expenditures equal $130.3 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 180. East Service Area Wastewater Facilities Development Fees Revenue

Wastewater Service Area	Proj 10-Year MGD Increase	Cost to Serve per Gallon	10-Year Capital Cost
East	2.59	$50.23	$130,324,524

Wastewater Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
East	16,632	$7,346	$122,176,954

10-Year Revenue	$122,176,954
10-Year Cost	$130,324,524
Funding Gap	$8,147,570

West Service Area

Projected fee revenue shown in Figure 181 is based on projected development in the west service area and the updated wastewater facilities development fees. Projected development fee revenue equals $197.7 million and projected expenditures equal $205.4 million. The resulting funding gap is a function of the credit for future debt serving payments and existing fund balance. Based on the actual mix of meter sizes used in the future the projected development fee revenue shown below will change.

Figure 181. West Service Area Wastewater Facilities Development Fees Revenue

Wastewater Service Area	Proj 10-Year MGD Increase	Cost to Serve per Gallon	10-Year Capital Cost
West	3.44	$59.71	$205,408,931

Wastewater Service Area	Proj 10-Year EDU Increase	Fee per EDU	10-Year Fee Revenue
West	22,052	$8,968	$197,762,185

10-Year Revenue	$197,762,185
10-Year Cost	$205,408,931
Funding Gap	$7,646,746

APPENDIX A. CREDIT FOR COMMUNITY FACILITIES DISTRICTS DEBT PAYMENTS

There have been water and wastewater improvements constructed by community facilities districts (CFDs) that would have otherwise needed to be funded by the City of Peoria. In these cases, the CFDs debt financed the infrastructure projects and are assessing an annual property tax within its boundary to fund the annual debt service payments. To ensure the Peoria is not double charging for capital expansion projects, a credit it calculated by comparing the future debt payments to projected EDUs. To account for the time value of money, annual payments per EDU are discounted using a net present value formula based on an average current interest rate of the bond, 3.78 percent. Currently, the City of Peoria is administering these credits when building permit applications are submitted so separate fee schedules are not necessary.

There are three CFDs included in the analysis. First, the Vistancia CFD has a total of $12.6 million in debt service remaining over the next three years. These payments are compared to projected EDUs and the discount rate is applied to find a total credit of $1,638 per EDU. Also, based on the infrastructure that was fund with the debt, the credit is split between water and wastewater.

Figure 182. Vistancia CFD Credit

Vistancia CFD - Series 2020 Refunding			
Year	P&I Payment	Proj. EDUs	Payment per EDU
2024	$4,047,800	6,961	$581
2025	$4,283,200	7,166	$598
2026	$4,284,800	7,342	$584
Total	**$12,615,800**		**$1,763**
		Discount Rate	3.78%
		Total Credit	**$1,638**

	Per EDU
Water Credit	**$902**
WW Credit	**$736**

The Vistancia West CFD has a total of $1.9 million in debt service remaining over the next six years. These payments are compared to projected EDUs and the discount rate is applied to find a total credit of $1,721 per EDU. Also, based on the infrastructure that was fund with the debt, the credit is split between water and wastewater.

Figure 183. Vistancia West CFD Credit

Vistancia West CFD - Series 2016 & 2019			
Year	P&I Payment	Proj. EDUs	Payment per EDU
2024	$582,100	1,021	$570
2025	$655,713	1,021	$642
2026	$656,500	1,021	$643
2027	$661,750	1,021	$648
2028	$660,650	1,021	$647
2029	$658,400	1,021	$645
Total	**$1,894,313**		**$1,855**
		Discount Rate	3.78%
		Total Credit	**$1,721**

	Per EDU
Water Credit	**$960**
WW Credit	**$761**

Lastly, the Mystic CFD recently issued debt for a total of $5 million through 2044. These payments are compared to projected EDUs and the discount rate is applied to find a total credit of $3,312 per EDU. Also, based on the infrastructure that was fund with the debt, the credit is split between water and wastewater.

Figure 184. Mystic CFD Credit

Mystic CFD - Series 2023			
Year	P&I Payment	Proj. EDUs	Payment per EDU
2024	$154,688	870	$178
2025	$241,976	1,044	$232
2026	$239,126	1,253	$191
2027	$241,276	1,487	$162
2028	$238,276	1,575	$151
2029	$240,276	1,643	$146
2030	$240,026	1,693	$142
2031	$239,526	1,745	$137
2032	$238,776	1,745	$137
2033	$242,776	1,745	$139
2034	$241,276	1,745	$138
2035	$240,706	1,745	$138
2036	$239,932	1,745	$137
2037	$238,950	1,745	$137
2038	$242,762	1,745	$139
2039	$241,162	1,745	$138
2040	$239,356	1,745	$137
2041	$242,344	1,745	$139
2042	$239,468	1,745	$137
2043	$241,376	1,745	$138
2044	$242,844	1,745	$139
Total	**$4,966,898**		**$3,132**
		Discount Rate	3.78%
		Total Credit	**$2,189**

	Per EDU
Water Credit	**$1,095**
WW Credit	**$1,095**

APPENDIX B. 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."*

The total revenues from these sources that can be attributed to new development over the next five years are summarized in Figure 185. However, most of this revenue will be used for ongoing operations and maintenance purposes.

Only revenue generated by new development that is dedicated to growth-related capital improvements needs to be considered in determining the extent of the burden imposed by new development. As discussed in greater detail in the Executive Summary and subsequent chapters of the analysis, offsets against impact 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 to be used for growth-related improvements. The analysis provided in the individual chapters of this report has identified the need for the following offsets against the fees: (1) outstanding debt that will be partially serviced by revenue from new residents; and (2) existing balances of impact fee funds.

Figure 185. Revenue Projections

Source	FY25	FY26	FY27	FY28	FY29
City Sales Tax - General Fund	$922,553	$1,983,887	$1,829,945	$1,285,825	$1,448,825
City Sales Tax - Half Cent Sales Tax Fund	$407,150	$872,902	$805,067	$565,622	$637,259
City Sales Tax - Transportation Sales Tax Fund	$7,731	$14,235	$10,910	$9,052	$9,955
Property Tax	$81,103	$185,064	$177,760	$130,393	$153,282
State-Shared Sales Tax	$383,007	$847,515	$792,841	$566,183	$649,688
Urban Revenue Sharing (Income Tax)	$457,062	$1,019,731	$954,961	$681,145	$778,991
Auto in Lieu Tax	$133,488	$292,388	$268,558	$187,681	$210,096
Franchise Fees	$67,286	$143,179	$128,075	$87,384	$95,733
Subtotal, General Government	$2,459,381	$5,358,900	$4,968,117	$3,513,286	$3,983,828
Water Revenue	$857,818	$1,899,683	$1,879,446	$1,358,877	$1,541,948
Sewer Revenue	$377,055	$889,940	$933,850	$691,608	$784,615
Subtotal, Utility	$1,234,873	$2,789,622	$2,813,296	$2,050,485	$2,326,563
Total	**$3,694,253**	**$8,148,522**	**$7,781,413**	**$5,563,771**	**$6,310,391**

APPENDIX C. 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). 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 186. Cost of Professional Services

Total Study Cost	$135,610

Study Components	Share of Study Cost	
Parks and Recreation	14%	$19,373
Police	14%	$19,373
Fire	14%	$19,373
Transportation	14%	$19,373
Water Resource	14%	$19,373
Water	14%	$19,373
Wastewater	14%	$19,373
Total	**100%**	**$135,610**

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. Development fees will be assessed to all new residential units. One-time development fees are determined by site capacity (i.e., number of residential units).

Single Family.

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 if 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.

Multifamily.

1. Includes 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. 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.
3. 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.

Mobile home.

1. A mobile home generally consists of a manufactured home that are sited and installed on permanent foundations. A mobile home park typically includes community facilities such as a recreation room, swimming pool, and laundry facilities.

NONRESIDENTIAL DEVELOPMENT

The maximum supportable general nonresidential development categories (defined below) can be used for all new construction. 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).

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

Office. Establishments providing management, administrative, professional, or business services; personal and health care services. By way of example, Office includes banks and business offices.

Industrial. Establishments primarily engaged in the production and transportation. By way of example, industrial includes manufacturing plants, trucking companies, utility substations, power generation facilities, and telecommunications buildings.

Warehouse. A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. By way of example, warehouse includes high-cube transload and short-term storage warehouse, fulfillment center warehouse, high-cube parcel hub warehouse.

Public/Institutional. 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 hospitals.

Hotel/Motel. A hotel/motel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room.