UPDATE – THE COUNCIL MEETING TO APPROVE OR DISAPPROVE THE UPDATED LUA AND IIP IS MOVED FROM THURDSAY, JANUARY 24 TO TUESDAY, JANUARY 22.

NOTICE OF PUBLIC HEARING ON LAND USE ASSUMPTIONS AND INFRASTRUCTURE IMPROVEMENT PLAN

Pursuant to A.R.S § 9-463.05, public notice is hereby given that the Gilbert Town Council will hold a public hearing to discuss and review an update to the land use assumptions and infrastructure improvement plan (IIP) associated with the police, fire, parks and recreation, traffic signal, roads and intersections, water, wastewater, and general government system development fees charged by the Town. The public hearing will be held on Thursday, December 20, 2018, at 6:30 pm in the Town Council Chambers (50 E. Civic Center Drive, Gilbert). The Council will approve or disapprove the amendments to the land use assumptions and IIP at a Council Meeting to be held on ~~Thursday, January 24, 2019,~~ Tuesday, January 22, 2019, in the Town Council Chambers.

A separate public hearing on potential changes to the police, fire, parks and recreation, traffic signal, roads and intersections, water, wastewater, and general government development fees will be considered *after* Council has approved or disapproved amendments to the land use assumptions and IIP.

A copy of the proposed land use assumptions and IIP is attached to this notice and also published on the Town's website (www.gilbertaz.gov).

Posted: October 19, 2018
Updated: December 10, 2018

Town of

GILBERT

2018 System Development Fee – Land Use Assumptions and Infrastructure Improvement Plan Study

Final Report / October 9, 2018

RAFTELIS

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RAFTELIS

October 9, 2018

Ms. Kelly Pfost
Management and Budget Director
Town of Gilbert
50 East Civic Center Drive
Gilbert, AZ 85296

Subject: System Development Fee Study
Land Use Assumptions and Infrastructure Improvement Plan

Dear Ms. Pfost,

Raftelis is pleased to provide this 2018 System Development Fee Study report to the Town of Gilbert.

This report details the development of the Town's projected land use assumptions, infrastructure improvements plan, and the calculation of the fee for each service area. The proposed fees follow the requirements set forth in the Arizona Revised Statute 9-463.05.

We would like to thank you, Mr. Justin Romney, and the entire staff engaged in this project for their assistance. Questions regarding this report and the Study should be directed to Mr. Cristiano or me at the contact information below.

Sincerely,
RAFTELIS

Rick Giardina
Executive Vice President
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Manager
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303-305-1138

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Table of Contents

List of Tables and Figures

List of Abbreviations Used Throughout the Report

ARS – Arizona Revised Statutes
AWWA – American Water Works Association
DU – Dwelling Unit
ERU – Equivalent Residential Unit
Fee – Impact fee, system development fee
GO Bond – General Obligation Bonds
IIP – Infrastructure Improvement Plan
ITE – Institute of Traffic Engineers
IWRMP – Integrated Water Master Plan
KSF – 1,000 square feet
LOS – Level of Service
LUA – Land Use Assumptions
LUA Period – 10-year growth period from LUA
MAG – Maricopa Association of Governments
mgd – Million Gallons per Day
PFMPC – Public Facilities Municipal Property Corporation
SDF – System Development Fee
sf – Square feet
Statute – Arizona Revised Statute §9-463.05
VMT – Vehicle Miles Traveled
WRMPC – Water Resources Municipal Property Corporation
WRP – Water Reclamation Plant
WTP – Water Treatment Plant
WWTP – Wastewater Treatment Plant

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Section 1. Executive Summary

Introduction

The Town of Gilbert (Town) retained Raftelis to conduct a comprehensive update to the non-utility and utility system development fees (SDFs or fees). Water and wastewater fees were last updated in 2017, while all other fees were updated in 2014. This report outlines the service units, and level of service methodologies, the calculation of the land use assumptions (LUA), infrastructure improvement plan (IIP) and the calculation of the proposed fees. The fee areas include:

- Fire
- Police
- Traffic Signals
- Roads and Intersections (New)
- Parks and Recreation
- Water
- Wastewater
- General Government

The Town also requested that Raftelis develop a new SDF for recovering the costs associated with road and intersection expansions. These calculations can be found in Section 7 of the report.

Findings and Conclusions

Arizona Revised Statute §9-463.05 (Statute) identifies the specific requirements for municipalities to assesses system development fees. SDFs can only be calculated and assessed for expansion-related existing or proposed improvements included in an approved IIP. The IIP must be tied to the LUA or growth projections that is tied to the service area in which fees will be enacted. The Statute also provides for strict notification, public hearing, and implementation schedules, among other provisions. This report provides an IIP and LUA for the various necessary public infrastructure to meet the demands of growth over the next 10-year period, FY 2019 – FY 2028 (LUA period).

This comprehensive update completed by Raftelis includes changes to the IIP as well as the LUA from the previous studies. The proposed fees are anticipated to be implemented in July 2019. Table 1 compares the existing and proposed fees for all land uses.

Table 1: Comparison of Current and Proposed SDFs
Non-Utility

Proposed Fees	Fire	Police	Traffic Signals	Roads	Parks and Recreation	General Gov't	Total
Residential (per housing unit)							
Single Unit	$1,131	$642	$557	$5,058	$5,405	$1,002	$13,795
2+ Units per Structure	735	417	431	3,922	3,512	651	9,668
Nonresidential (per square foot of building)							
Industrial	0.582	0.601	0.230	1.666	0.213	0.430	3.722
Commercial	0.838	0.866	1.170	6.998	0.306	0.610	10.788
Office & Other Services	1.062	1.097	0.460	3.272	0.388	0.780	7.059

Current Fees	Fire	Police	Traffic Signals	Roads	Parks and Recreation	General Gov't	Total
Residential (per housing unit)							
Single Unit	$749	$1,720	$450	$0	$4,081	$1,155	$8,155
2+ Units per Structure	515	1,182	296	0	2,805	794	5,592
Nonresidential (per square foot of building)							
Industrial	0.280	0.350	0.470	0.000	0.300	0.200	1.600
Commercial	0.440	0.570	1.080	0.000	0.500	0.300	2.890
Office & Other Services	0.560	0.630	0.650	0.000	0.700	0.400	2.940

Change in Fee Level	Fire	Police	Traffic Signals	Roads	Parks and Recreation	General Gov't	Total
Residential (per housing unit)							
Single Unit	$382	($1,078)	$107	$5,058	$1,324	($153)	$5,640
2+ Units per Structure	220	(765)	135	3,922	707	(143)	4,076
Nonresidential (per square foot of building)							
Industrial	0.302	0.251	(0.240)	1.666	(0.087)	0.230	2.122
Commercial	0.398	0.296	0.090	6.998	(0.194)	0.310	7.898
Office & Other Services	0.502	0.467	(0.190)	3.272	(0.312)	0.380	4.119

Table 1 (Continued): Comparison of and Proposed SDFs
Water and Wastewater

Proposed Fees	Water Resources	Water Infrastructure	Wastewater Neely	Wastewater Greenfield	Total Neely	Total Greenfield
3/4-inch	$3,112	$3,609	$157	$2,586	$6,878	$9,307
1-inch	5,197	6,027	262	4,318	11,486	15,542
1 1/2-inch	10,364	12,019	522	8,610	22,905	30,993
2-inch	16,589	19,239	834	13,780	36,662	49,608
Current Fees	Water Resources	Water Infrastructure	Wastewater Neely	Wastewater Greenfield	Total Neely	Total Greenfield
3/4-inch	$1,563	$4,723	$1,933	$3,182	$8,219	$9,468
1-inch	2,611	7,884	3,226	5,313	13,721	15,808
1 1/2-inch	5,206	15,719	6,431	10,593	27,356	31,518
2-inch	8,333	25,158	10,292	16,953	43,783	50,444
Change in Fee Level	Water Resources	Water Infrastructure	Wastewater Neely	Wastewater Greenfield	Total Neely	Total Greenfield
3/4-inch	$1,549	($1,114)	($1,776)	($596)	($1,341)	($161)
1-inch	2,586	(1,857)	(2,964)	(995)	(2,235)	(266)
1 1/2-inch	5,158	(3,700)	(5,909)	(1,983)	(4,451)	(525)
2-inch	8,256	(5,919)	(9,458)	(3,173)	(7,121)	(836)

Report Outline

This report is organized by fee area. A summary of each section is provided below.

Section 1. Executive Summary: Summarizes the findings and recommendations for this System Development Charge Study.

Section 2. Introduction: This section provides a brief introduction to SDFs and the approach taken to calculate updated SDFs in this report.

Section 3. Land Use Assumptions: Summarizes the LUA forecast. The LUA forecast is a major component of forecasting the need for future infrastructure improvements and the timing of these improvements. The Town is anticipated to experience significant growth over the next ten years, requiring significant investment in infrastructure.

Section 4. Fire Infrastructure Improvements: Outlines the infrastructure needs for the Fire Department to maintain the current LOS provided to existing development and future development. The fire SDF is designed to recover for investments made to provide the necessary fire stations, as well as for providing additional apparatus to serve growth.

Section 5. Police Infrastructure Improvements: Outlines the infrastructure needs for the Police Department to maintain the current LOS provided to existing development and future development. The Police Department will be responsible for providing additional police stations, patrol vehicles, and additional communications equipment to provide service for growth.

Section 6. Traffic Signal Infrastructure Improvements: Outlines the infrastructure needs for the ongoing traffic signal improvement program that addresses conditions at each intersection and aims to alleviate congestion generated from growth. The improvements include major intersections (arterial/arterial) and minor intersections (arterial/collector).

Section 7. Road Infrastructure Improvements (New): Outlines the infrastructure needs for the arterial streets and intersections in the Town to support additional traffic demands and congestion generated from growth.

Section 8. Parks and Recreation Infrastructure Improvements: Outlines the infrastructure needs for the Parks and Recreation Department to maintain the current LOS provided to existing development. The Parks and Recreation Department will be responsible for providing additional parks that will benefit growth.

Section 9. Water Infrastructure Improvements: Outlines the infrastructure needs for the Water Department to maintain the current LOS provided to existing development and future growth. The Water Department is responsible for providing the required system capacity to ensure the LOS is maintained for future development.

Section 10. Wastewater Infrastructure Improvements: Outlines the infrastructure needs for the Wastewater Department to maintain the current LOS provided to existing development and future growth. The

Wastewater Department is responsible for providing sufficient collection system and treatment capacity to ensure the LOS is maintains for future development. In addition, the wastewater department must ensure that reclaimed facilities are sized to meet the necessary disposal and recharge regulations for future development.

Section 11. General Government: Per Statute, the Town is recovering debt service payments linked to infrastructure that was allowable prior to the 2014 revisions. Once all existing debt is repaid, the Town will no longer collect General Government SDFs.

Appendix A. Debt Service Schedule: Contains the principal and interest amortization schedule for all outstanding debt used in the SDF calculations.

Appendix B. Non-residential Land Use Classifications: Contains examples of building and development types under the land use types used in the calculation of SDFs.

Appendix C. Forecast of Revenues Other Than Fees: Contains the projections of non-SDF revenues as required by the Statute.

Appendix D. Derivation of Functional Population: Contains the derivation of the functional population allocation basis.

Reliance on Town Provided Data

During the course of this project, the Town provided Raftelis with a variety of information including financial reports and projected capital expenditures for each fee area. Raftelis has reviewed the data for reasonableness and general representation of cost and related activities. Raftelis did not independently assess or verify the accuracy of such data – historic or projected. We have relied on this data in the formulation of our findings and recommendations, as well as in the preparation of this report. There will be differences between actual and projected data, and these differences may be significant. Therefore, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the Town, nor does Raftelis have any responsibility for updating this report for events occurring after the date of this report. Below is a list of the major source documents used for this study:

- Maricopa Association of Government 2016 Economic Data
- Institute of Transportation Engineers Trip Generation Manual
- Town of Gilbert Transportation Master Plan, October 2014
- Town of Gilbert Regional Park Master Plan Concept, August 2016
- Draft Integrated Water Resources Master Plan Update 2018
- Town of Gilbert Current Debt Position Publication, July 2018
- Capital Improvement Plan FY 2019-2028

Legal Disclaimer

The Town of Gilbert retained Raftelis to conduct the SDF study. During the technical review and analysis, Raftelis relied on Town data and discussions with Town staff to develop the SDFs. In addition, Raftelis used industry-standard resources including data from the Maricopa Association of Governments (MAG) and the Institute of Transportation Engineers (ITE) in the development of growth projections, levels of service, and fees.

These fees have been developed in accordance with the Statute. In calculating the fees for the Town, the analysis shows that the proposed fees for each service area provide the additional necessary funding needed for the indicated public services and that the fees bear a reasonable relationship to the burden imposed. If a fee-payer believes the development has a non-standard impact on the Town, the fee-payer is responsible to provide written documentation to the Town describing the anticipated impact and why application of the standard SDF would not bear a reasonable relationship to the burden imposed.

Section 2. Introduction

SDFs are one-time fees assessed to new development in the Town to fund the additional capacity required to serve new development; the SDF represents the unit cost of this capacity. The Statute states that a municipality may assess fees to offset the costs to provide necessary public services. This includes the cost of infrastructure, improvements, property, architectural services, financing and professional services to develop fees. Under Arizona law the development of fees must meet the following requirements:

- Provide a beneficial use to the development
- Fees must be calculated based on an IIP
- Fees must not exceed the proportionate share of capacity costs of public facilities based on service units, needed to provide the necessary public services to the development
- Costs for necessary public service shall not exceed the current level of service (LOS)
- Fees may only be used to fund projects identified in the approved infrastructure improvements plan for expansion-related facilities. Fee cannot be used to correct existing deficiencies or to fund operating expenses.

An SDF is designed to recover the capital cost of system capacity dedicated to or "used up" by new development. Generally, there are a variety of recognized capital recovery methodologies that can serve as a rational basis for computing the capital cost of the service areas to be studied as part of this project.

There are four generally accepted methodologies used to calculate SDFs. They are described below.

- ***Recoupment (Buy-in).*** New development pays for their proportionate share of existing facilities that have available capacity to serve growth. This methodology is often used for water, wastewater, and stormwater utilities. Revenue from these fees are 'recouped' by existing rate payers thereby compensating them for their initial investment to serve existing and future growth.
- ***Hybrid.*** This method is also typically reserved for utility SDFs. This method considers the amount and cost of available capacity along with the cost and amount of future capacity. Similar to the plan-based average cost, the available capacity costs and future capacity costs are divided by the sum of available and projected capacity.
- ***Incremental Expansion.*** The method develops the existing level of service for each of the facilities based on specific characteristics of the facility. It is assumed there are no existing deficiencies or future capacity in facility infrastructure. New development pays for its proportionate share of growth-related facilities that is sufficient to maintain current LOS standards. Revenue from fees under incremental expansion will be reserved for funding future development.
- ***Plan-based.*** This method allocates costs from an approved capital improvement program (CIP) to specific service units (e.g. population, jobs, square feet, etc.). The improvement projects are typically detailed in a master plan or other planning document. In these planning documents, the projects are equated to development growth through different land use assumptions. There are two methods in which to calculate the plan-based SDF.
    1. Average cost. Total cost of facilities by total demand units.

2. Proportionate share. The growth-related share of the facility can be allocated based on the net increase demand over the planning horizon.

For this study, Raftelis used the following approaches for each:

- Fire – Incremental Expansion
- Police – Incremental Expansion
- Traffic Signals – Plan-based
- Roads and Intersections – Plan-based
- Parks – Plan-based
- Water – Hybrid
- Wastewater – Hybrid
- General Government - Recoupment

Note that to recover debt service payments within each category, a recoupment approach was generally used.

SDF Calculation Process

The utility SDF assessment schedule is based on water meter size. The non-utility assessment schedule is based on either per dwelling unit for residential land uses or per square foot of building space for non-residential land uses, as shown in Table 2. Raftelis used data from ITE to derive trips rates and jobs per square foot.

Table 2: Assessment Schedule Units

Land Use	Assessment Method
Non-Utility	
Single Family	$ per Dwelling Unit
2+ Units per Structure	$ per Dwelling Unit
Industrial	$ per sf of building size
Commercial	$ per sf of building size
Office & Other	$ per sf of building size
Utility	
Water	Water Meter Size
Wastewater	Water Meter Size

The development of SDFs vary by the different types of fees. In general, the police, fire, and parks and recreation fees follow these steps:

- Determine service unit allocation
- Calculate existing level of service
- Calculate future maximum facility requirements based on growth and level of service by land use
- Determine total infrastructure improvements costs attributable to growth

- Allocate growth-related infrastructure improvement cost to land use (i.e. residential and nonresidential for non-utility and meter size for water and wastewater)
- Calculate cost per unit (i.e., per population count for residential or per square foot for nonresidential)
- For non-utility, multiply cost per unit by the persons per housing unit for residential or jobs per square foot for nonresidential. For utility, multiply unit cost by the (peak water demand per ERU for water and average demand per ERU for wastewater

Service Units

Service units serve as the basis of allocating the proportionate share of facilities between residential and non-residential. This proportionality represents the demands placed on the system by residential and non-residential. The allocation factors used should be based on service units that are a reasonable measure of who or what is causing the demand. These service units are also projected over the study period to determine the cost responsibility for the residential and non-residential development type. Table 3 summarizes the service units by development type.

Table 3: Service Unit Allocation Factors

Development	Units
Fire	Calls for Service
Police	Calls for Service
Traffic Signals	Vehicle Trip Ends
Roads and Intersections	Vehicle Miles Traveled
Parks	Daytime Population
Water Resources	Average day demand
Water Infrastructure	Peak day demand
Wastewater	Average day flow
General Government	Functional Population

Level of Service

LOS is an indicator of the extent or amount of service currently provided or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. Generally, LOS indicates the capacity per unit of demand for a public facility. When calculating SDFs, the costs for new facilities must be based on the same level of service as existing facilities. In other words, SDFs cannot be used to recover existing deficiencies in the system or be used to build facilities which exceed the existing level of service. Each fee uses a specific LOS measure to determine the maximum amount that can be allocated to growth. The existing LOS can be determined for each fee area and land use as shown in Table 4.

Table 4: Level of Service Measurements

Development	Units
Fire	Facility square feet per population or per job Apparatus per 1,000 population or jobs
Police	Facility square feet per officer and Officers per 1,000 population or jobs, Vehicles per 1,000 population or jobs, Equipment per 1,000 population or jobs
Traffic Signals	Proportionate share of trip ends
Roads and Intersections	Arterials and collector's lane miles per VMT
Parks	Acres per 1,000 population or jobs, people or jobs per pool, linear feet of trails per population or job, square feet of community centers per population or job
Water	Peak water demand, gallons per day per ERU
Wastewater	Average day water demand, gallons per day per ERU
General Government	Debt service based in accordance with ARS 9-463.05.R.1.

Level of Service for Police, Fire, and Parks and Recreation

The LOS calculation is stated on a per unit basis. This per unit basis is the relationship between measurement criteria of a facility or equipment (e.g., square feet, linear feet, number of facilities) and the residential and non-residential service units that can be served by those facilities. For example, the existing residential LOS for parks would be the number of allocated acres divided by residential population. In a similar manner, the residential LOS for police vehicles is the number of vehicles allocated divided by the residential population.

Level of Service for Traffic Signals and Road and Intersections

The LOS for transportation facilities is a qualitative measure of a roadway's effectiveness at handling traffic. The LOS for transportation-related fees is typically measured in vehicle trips or vehicle miles traveled. Vehicle trips are defined by ITE as a single or one-directional vehicle movement to or from a site. VMT, or vehicle miles traveled represents the product of total trips, trip adjustments, and average trip length by land use.

Level of Service for Water and Wastewater

The LOS calculation for water and wastewater contains fewer steps and is stated as the peak water demand per ERU. The wastewater LOS is the average water use per ERU adjusted for a return to wastewater factor. Peak flow is used for the water calculation due to the nature of obtaining rights for water resources and deploying water supplies through use of the treatment plants and wells. These water rights and systems are designed to accommodate peak flow events.

Level of Service for General Government

The LOS for General Government SDFs is based on the remaining debt to be recovered from financing the facilities over the study period. The debt is allocated to residential and non-residential based on function population. Functional population is an allocation method which equitably allocates costs to the land use types.

Future Facility Requirements

Using the existing level of service, future facility requirements can be determined. The future supportable facilities are the number of growth units multiplied by the existing LOS (populations, jobs, etc.) for each development type.

Infrastructure Improvements Plan (IIP)

The Statute outlines the specific requirements of the IIP which are summarized below:

- Necessary public services and the cost to upgrade, update, expand, correct or replace the necessary public facilities to meet the existing needs.
- An analysis of the total capacity, level of current usage, and commitments for usage of capacity of existing necessary public services.
- Description of necessary public facilities of facility expansions and the costs associated with and attributable to development in the service.
- 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 table establishing the ratio of a service unit to various land uses.
- Show the projected total number of service units from new development from the approved LUA.
- An analysis to show the projected demand for necessary public services required by new development over a period not to exceed ten years.
- A forecast of revenues generated by new service other than development fees.

To develop the IIP, the following must be completed. The sum of the future supportable facilities represents the total number of facilities and the cost of those facilities that can be funded by SDFs. The fundable portion of growth-related capital through SDFs is then allocated to the residential and non-residential developments based on the number of future facilities and the unit cost of facilities. The unit cost of the facility by development type is the fundable capital allocation divided by the number of growth units.

Calculation of Fee

Because service units for each development type may vary from the assessment schedule basis, the unit costs developed in the step above must be restated in the correct units. For many of the fees, the residential fee must be restated from a population basis to a dwelling unit basis or a job to square foot basis. The people per household is derived from historical estimates from the American Fact Finder data set, by the U.S. Census Bureau. The conversion factor is people per household. For non-residential, jobs must be restated in square feet. This conversion is jobs per square foot. The jobs per square foot is derived from ITE. Utility SDFs are the product of unit cost of capacity (facilities) and the demand per ERU. For transportation, the impact fee is the product of the VMT by land use type and the rate per VMT.

Each fee calculation includes the existing balance of SDFs receipts available. In some cases the SDF balance is negative, indicative of advance funding provided to the service from the Town's General Fund, i.e., effectively a "loan" from the General Fund. The balances for each area are provided in Table 5.

Table 5: Existing SDF Balances

Description	Estimated Ending Balance 6/30/2018
Fire Protection	($11,351,600)
Police Protection	$2,138,300
Traffic Signals	$9,502,300
Parks and Recreation	$671,000
Water System	$7,252,400
Water Resources	$2,177,400
Wastewater - Neely	$4,991,200
Wastewater - Greenfield	$17,186,700
General Government	($6,471,200)

ARS §9-463.05.B.8 allows for the recovery of principal and interest costs associated with funding expansion-related projects.

> *"Projected interest charges and other finance costs may be included in determining the amount of development fees only if the monies are used for the payment of principal and interest on the portion of the bonds, notes or other obligations issued to finance construction of necessary public services or facility expansions identified in the infrastructure improvements plan."*

The fee areas listed below include principal and interest costs on outstanding debt as a portion of their SDF. This outstanding debt was used to fund growth-related projects. The principal and interest costs included in each SDFs is based on the proportionate share of growth for the LUA period. In addition, the general government and fire SDFs used internal loans to maintain a positive balance in the fund. Table 6 shows the loans by fee area. The debt service schedules for each loan are shown in Appendix A.

Table 6: Loans by Service

Parks and Recreation	PFMPC 2017 Revenue Refunding Bonds PFMPC 2014 Revenue Refunding Bonds PFMPC 2009 Revenue Bonds
General Government	PFMPC 2014 Revenue Refunding Bonds PFMPC 2011 Revenue Refunding Bonds Internal Borrowing
Police	PFMPC 2017 Revenue Refunding Bonds PFMPC 2014 Revenue Refunding Bonds PFMPC 2011 Revenue Refunding Bonds PFMPC 2009 Revenue Bonds
Fire	PFMPC 2017 Revenue Refunding Bonds PFMPC 2017 Revenue Bonds PFMPC 2011 Revenue Refunding Bonds PFMPC 2009 Revenue Bonds Internal Borrowing
Water	WRMPC 2016 Revenue Refunding Bonds
Wastewater	WRMPC 2018 Senior Lien Utility System Revenue Bonds

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Section 3. Land Use Assumptions (LUA)

General

ARS §9-463.05.D details the requirements for development of the LUA. This section provides the LUA and forecast over the next 10-years.

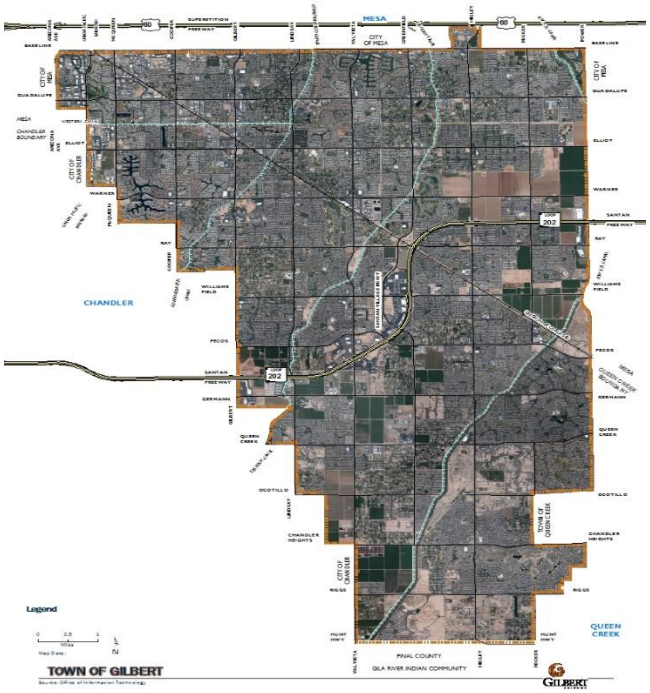
Service Areas

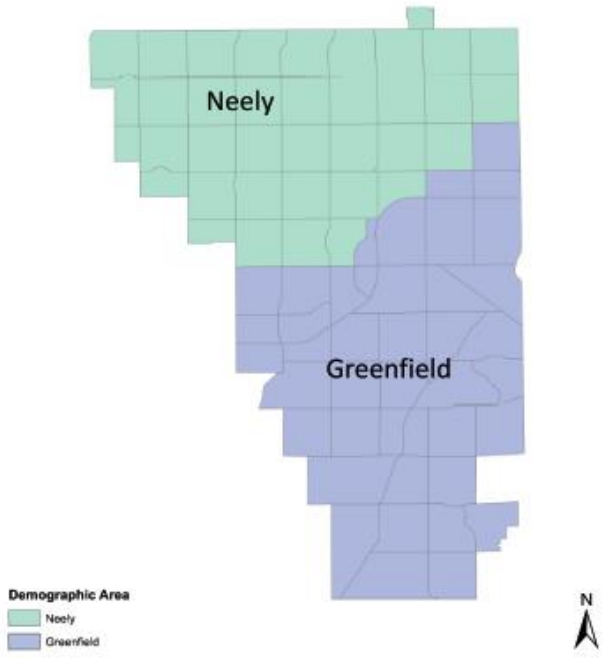
SDFs are assessed on a Town-wide basis with the exception of the wastewater SDFs. These service areas are described below:

- Wastewater Service:
  - Neely Wastewater Treatment Plant
  - Greenfield Wastewater Treatment Plant

Figure 1 shows the Town's service area boundary and the Neely and Greenfield service areas for wastewater.

Figure 1: Town of Gilbert Municipal Boundaries/ Boundaries for Wastewater Service Areas





Residential Growth Trends

To develop a reasonable residential growth forecast over the LUA Period (i.e., FY 2019 through FY 2028), Raftelis obtained and reviewed single family permit data for the past seven years. Over the seven-year period, the average annual number of single family permits was 1,762. Over the last two-years, the average per year was 1,601. The historic number of single family permits, as provided by the Town, is shown in Table 7.

Table 7: Single Family Permit History

Year	Single Family Permits
2011	1,545
2012	2,418
2013	1,927
2014	1,435
2015	1,810
2016	1,602
2017	1,600

MAG last updated their forecasts in 2016. The MAG forecast for residential units in the Town of Gilbert provided for an annual average of 1,157 total single family and multi-family units each year (1,069 per year through 2020 and 1,179 per year through 2028). In reviewing only the single family permits from Table 7, it was determined an adjustment to the MAG forecast was appropriate.

Additional data utilized to develop the following residential unit growth forecast is from the U.S. Census Bureau, which provides an estimate of the number of dwelling units by type currently existing in the Town. For 2016 the U.S. Census Bureau estimates there are 66,030 single family homes and 8,245 multi-family units in the Town, resulting in an 89% single family and 11% multi-family unit residential mix. The adjusted forecast developed below maintains the current mix of single family and multi-family units.

The approach taken for the adjusted forecast was to rely on recent growth trends in the Town, blended with the MAG forecast, to show a decreasing growth rate over the LUA Period. The past two-year average single family unit growth of 1,601 units is maintained in 2019. In maintaining the existing mix of single family and multi-family units, an additional 198 multi-family units are forecast for 2019. This yields a total of 1,799 residential units. The blending approach used for existing growth trends and the MAG growth forecast assumes that by the final year of the LUA Period (2028), the Town will be growing at the rate forecast by MAG. The residential unit forecast developed for the Town of Gilbert is detailed in Table 8.

Table 8: Projected Number of Residential Units

Year	Single Family	Multi-family	Total	Estimated Population [1]
2019	1,601	198	1,799	5,483
2020	1,540	190	1,730	5,273
2021	1,478	183	1,661	5,062
2022	1,417	175	1,592	4,852
2023	1,355	168	1,523	4,641
2024	1,294	160	1,454	4,432
2025	1,233	152	1,385	4,222
2026	1,171	145	1,316	4,011
2027	1,110	137	1,247	3,801
2028	1,049	130	1,179	3,593
Total	**13,248**	**1,638**	**14,886**	**45,370**

[1] Assumes 3.17 persons per housing unit for single family dwelling units and 2.06 persons per housing unit for multi-family dwelling units. Source: US Census Bureau 2012-2016 American Community Survey Estimates.

Using MAG population estimates for the Town for 2018 of 254,999 people, and adding 45,370 over the next ten years, the Town is forecast to have a total population of 300,369 by 2028.

Land Use Assumptions

The number of added residential units and non-residential square feet is used to determine the unit cost of facilities. Raftelis used historical MAG data and projected growth rates from the Town to estimate the number of added units over the study period. The wastewater utility SDF serves two distinct areas; Neely and Greenfield. Table 9 summarizes the growth projections in these areas.

Table 9: Land Use Assumptions

Description		Dwelling Units 2018	2028	Change
Residential				
Neely		47,157	51,782	4,625
Greenfield		40,843	51,104	10,261
Total		**88,000**	**102,886**	**14,886**
Description	PPH [1]	Population [2] 2018	2028	Change
Residential				
Neely	3.17 SF	137,178	150,744	13,566
Greenfield	2.06 MF	117,821	149,625	31,804
Total		**254,999**	**300,369**	**45,370**
Non-residential		Jobs 2018	2028	Change
Neely				
Industrial		9,789	10,166	377
Commercial		17,433	19,383	1,950
Office and Other Jobs		28,071	31,465	3,394
Total		**55,293**	**61,014**	**5,721**
Greenfield				
Industrial		1,170	1,922	752
Commercial		17,547	23,489	5,942
Office and Other Jobs		14,039	22,140	8,101
Total		**32,756**	**47,551**	**14,795**
Non-residential	Jobs per 1,000 sf [3]	Square Feet 2018	2028	Change
Neely				
Industrial	1.626	6,020	6,250	230
Commercial	2.342	7,440	8,280	840
Office and Other	2.967	9,460	10,600	1,140
Total		**22,920**	**25,130**	**2,210**
Greenfield				
Industrial	1.626	720	1,180	460
Commercial	2.342	7,490	10,030	2,540
Office and Other	2.967	4,730	7,460	2,730
Total		**12,940**	**18,670**	**5,730**

[1] People per household projected based on historical U.S. Census Bureau estimates. SF = Single Family. MF = Multi-family.
[2] Population, dwelling units, and jobs from 2016 MAG. Population and dwelling units adjusted to reflect current Town growth trends.
[3] Jobs per 1,000 square feet from Institute of Transportation Engineers (ITE).

Section 4. Fire

Description of Service

Pursuant to ARS §9-463.05.T.7(f), fire facilities are defined as all appurtenances, equipment and vehicles. Fire 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 from more than one station or substation.

Existing Inventory, LOS and Future Plan

The fire SDF will primarily recover the cost to provide additional facilities and fire apparatus to the department based on needs generated by growth. The infrastructure needs generated by growth have been separated into two distinct categories including facilities and fire apparatus. The future needs are forecast based on the existing LOS, which is typically represented by square feet of facilities or number of apparatus per 1,000 service units.

Service Units

As described in Section 3. Land Use Assumptions, the growth in population and jobs in the Town are referred to as service units for police and fire services. The service units are used to first measure the existing LOS provided to development and then to forecast the needs required by future development based on providing a certain LOS. Raftelis used calls for service as the service unit allocation. Since the mix of development in the Town is changing between residential and non-residential, the most current year call data for 2018 is relied upon to allocate demands. Residential call data includes calls to single family and multi-family dwellings and includes calls for group assisted living facilities that are often located in single family homes. Calls designated to open fields, construction sites, roadways and other miscellaneous land uses were not included in the analysis.

Table 10: Fire Service Units – Calls for Service

Year	Residential	Non-residential	Total
2014	76.6%	23.4%	100.0%
2015	74.0%	26.0%	100.0%
2016	72.0%	28.0%	100.0%
2017	69.3%	30.7%	100.0%
2018	68.8%	31.2%	100.0%

Fire Facilities

The fire department currently operates 11 facilities. Over the past few years the Town has invested in fire facilities that it anticipates will serve development through buildout. Through this investment the Town has

incurred debt and negative Fire SDF balances. The debt and negative SDF balances for fire facilities will be recovered from future development. The 11 fire stations the Town operates are provided below:

Table 11: Existing Fire Facilities

Description	Square Feet
Station 1	23,628
Station 2	10,852
Station 3	15,369
Station 4	5,160
Station 5	10,495
Station 6	10,486
Station 7	14,000
Station 8	10,684
Station 9	12,250
Station 10	13,206
Station 11	10,500
Total	**136,630**

Table 12 provides the LOS of square feet of building space per service unit provided to existing development. This LOS will serve as the baseline amount to forecast the needs generated by future development. The residential and non-residential proportionate share service units are based on the calls for service from 2018.

Table 12: Fire Building Space per Service Unit – FY 2018

Description	Amount
Residential Share (% Calls for service)	68.8%
Square Feet	94,001
Population in 2018	254,999
Square Feet per person	**0.37**
Non-residential Share (% Calls for service)	31.2%
Square Feet	42,629
Jobs in 2018	88,049
Square feet per job	**0.48**

With a current LOS of 0.37 for residential and 0.48 for non-residential, a population growth of 45,370 and job growth of 20,516, the Town would be able to develop an additional 26,647 square feet of facilities. However, since the Town has already developed the necessary facilities to serve growth through buildout, a different approach will be utilized. To advance fund the fire facilities, the Town has borrowed money from the General Fund (GF) through an internal loan in addition to the use of PFMPC loans. Each year the GF charges interest on the internal loan to approximate the investment earnings the GF receives on other funds available. The current principal outstanding on the internal loan is $11,351,600. Since this internal loan funded facilities

that will serve the Town through buildout, the loan will be repaid by SDFs through buildout. Using this approach, the following analysis (see Table 13) was done to calculate the costs to be included in the Fire IIP.

Table 13: Fire Facilities Required to Serve Growth

Description	Amount
Remaining Loan Amount	$11,351,600
Forecast Annual Interest Rate	1.00%
Percent Apportioned to 10-year LUA Period [1]	61.4%
Amount Apportioned to 10-year LUA Period	$6,974,500
Estimated Interest Cost	383,600
Costs included in IIP	**$7,358,100**

[1] Calculation of 10-year growth apportionment:

Projected 2050 Total	
Population	312,007
Jobs	138,276
Total	**450,283**
Estimated 2018 Total	
Population	254,999
Jobs	88,049
Total	**343,048**
Total Growth in Service Units (2018-2050)	**107,235**
Gilbert 2028 Development (LUA Growth)	
Population	45,370
Jobs	20,516
Growth in Service Units (2018-2028)	**65,886**
Percent of total growth through 2028: [65,886 (2028 growth) divided by 107,235 (2050 growth)]	**61.4%**

Fire Apparatus

Another capital asset that can be funded through SDFs are fire apparatus. The Town's apparatus primarily consists of trucks and other response vehicles. Vehicles for administrative use have been excluded. Table 14 provides the calculation of the existing LOS in terms of apparatus provided to existing development.

Table 14: Fire Apparatus per 1,000 Service Units – FY 2018

Description	Amount
Residential Share	68.8%
Apparatus/Equipment	21
Population in 2018	254,999
Equipment per 1,000 people	**0.08**
Non-residential Share	31.2%
Apparatus/Equipment	10
Jobs in 2018	88,049
Equipment per 1,000 jobs	**0.11**

With the current LOS for residential and non-residential and considering the growth in population and jobs, the Town will need to add a total of 6 apparatus items during the LUA Period.

Table 15: Fire Apparatus Required to Serve Growth

Description	Amount
Residential	
Population Growth (2019-2028)	45,370
Equipment per 1,000 people	0.08
Apparatus Supportable	4
Non-residential	
Job Growth (2019-2028)	20,516
Equipment per 1,000 jobs	0.11
Apparatus Supportable	2
Total Added Supportable Apparatus	**6**

Fire TOPAZ System

The Town is part of the Easy Valley Cooperative, which includes Mesa and Apache Junction, to provide radio support and communications infrastructure for fire, police and public works functions of each city. As part of this study, the costs identified for project MF2230 in the Town's CIP document have been allocated 1/3 each to police and fire, with the remaining 1/3 being excluded from this study as it pertains to public works. The total, escalated and allocated TOPAZ costs for the fire department are shown in Table 16.

Table 16: Fire Escalated and Allocated TOPAZ Costs

Description	Amount	Timing	Escalation Factor	Escalated Cost	Allocated Cost
Year 1 Cost	$429,000	2019	0.0%	$429,000	$143,000
Year 2 Cost	225,000	2020	3.0%	231,800	77,267
Year 3 Cost	385,000	2021	6.1%	408,400	136,133
Year 4 Cost	320,000	2022	9.3%	349,700	116,567
Year 5 Cost	175,000	2023	12.6%	197,000	65,667
Years 6-10 Cost	1,260,000	2024	15.9%	1,460,700	486,900
Total	**$2,794,000**			**$3,076,600**	**$1,025,533**

Fire IIP

Table 17 summarizes the necessary fire facility and apparatus improvements to serve growth over the planning period. Included in the Fire IIP is recovery of debt service from outstanding PFMPC bonds, Series 2009, 2011 Refunding, 2017 Refunding and 2017 with outstanding total principal of $9,978,590. Interest has been included in the amount shown in Table 17. The 10-year project costs include an annual escalation allowance of 3%, based on the past 3-year average from the Engineering News Record (ENR) Construction Cost Index (CCI). In conjunction with the PFMPC bonds, the internal loan was used to fund infrastructure for growth.

Table 17: Fire Department IIP FY 2019 – FY 2028

Description	Attributes	Timing	Amount
MF2290 - Adaptive Response Unit 1	1 apparatus	2023	$1,125,500
MF2160 - Adaptive Response Unit 2	1 apparatus	2024	1,159,300
TOPAZ System		Ongoing	1,025,533
Reimbursement for Interfund Loan		Ongoing	7,358,100
PFMPC Bonds [1]		Ongoing	12,857,506
Plus: IIP Study and Fee Study			23,179
Less: Current SDF Balance			0
Total IIP			**$23,549,118**

[1] Appendix A shows the outstanding debt service schedules for fire facilities.

Fire Fee Calculations

The unit cost for residential and non-residential development is calculated by allocating the IIP cost proportionately and dividing by the growth units in dwelling units and jobs, respectively. Table 18 calculates the unit cost by land use type.

Table 18: Fire Cost per Service Unit

Description	Amount
Total Fire IIP	$23,549,118
Development of Residential Unit Cost	
Residential Allocation (% of Calls)	68.8%
Residential Proportional Cost	$16,201,793
Population Growth through FY 2028	45,370
Residential Unit Cost per Person	**$357.10**
Development of Non-residential Unit Cost	
Non-residential (% of Calls)	31.2%
Non-residential Proportional Cost	$7,347,325
Job Growth through FY 2028	20,516
Non-residential Unit Cost per Job	**$358.13**

The unit cost calculated in Table 18 can be restated in terms of the units used for the fire system development fee schedule. As noted in Table 19, the residential fee is calculated by applying the persons per dwelling unit factor as developed in Section 2. Non-residential is restated in square feet by multiplying the unit cost per job by the number of jobs per square foot (again, see Table 19). The calculated fees have been rounded to the nearest dollar.

Table 19: Calculated Fire SDFs

Residential (per housing unit)	PPH Unit	Calculated Fees	Current Fees	$ Change	% Change
Single Unit	3.17	$1,131	$749.33	$381.67	50.9%
2+ Units per Structure	2.06	$735	515.25	$219.75	42.6%

Non-residential (sf of building)	Jobs per sf	Calculated Fees	Current Fees	$ Change	% Change
Industrial	0.00163	$0.582	$0.280	$0.302	107.9%
Commercial	0.00234	$0.838	$0.440	$0.398	90.5%
Office & Other Services	0.00297	$1.062	$0.560	$0.502	89.6%

Revenue Forecast

The fire revenue forecast for the 10-year study period is shown in Table 20.

Table 20: Fire Facilities Revenue Forecast
FY 2019 – FY 2028

Description	10-year Increase	Calculated Fire SDF	Revenue Forecast
Single Family (units)	13,249	$1,131	$14,984,619
2+ Units Res. (units)	1,637	735	1,203,195
Industrial (sf)	690,000	0.582	401,580
Commercial (sf)	3,380,000	0.838	2,832,440
Office & Other Services (sf)	3,870,000	1.062	4,109,940
Total			**$23,531,774**

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Section 5. Police

Description of Service

Pursuant to ARS §9-463.05.T.7(f), police facilities include all appurtenances, equipment and vehicles. 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, airplanes or a facility that is used for training officers from more than one station or substation.

The police department is responsible for providing constant and reliable service throughout the Town limits. To provide these services as well as keep officers on patrol, the Town is responsible for developing/ purchasing office space for the sworn officers as well as the support staff and for purchasing patrol vehicles for sworn officers. The SDF will provide the Town funding to maintain a consistent LOS of building space, with certain provisions, and patrol vehicles to future development as is currently provided to existing development. The LOS will be described further in this section.

Existing Inventory, LOS and Future Plan

The police SDF will primarily recover the cost to provide additional facilities, patrol vehicles and communications equipment such as radios to the department based on needs generated by growth. The infrastructure needs generated by growth have been separated into three distinct categories including i) buildings, ii) police vehicles, and ii) communication equipment. The future needs are forecast based on the existing LOS, which is typically represented by number of officers per 1,000 service units, number of vehicles per 1,000 service units, and communication equipment per 1,000 service units.

Service Units

As described in Section 3. Land Use Assumptions, the growth in population and jobs in the Town are referred to as service units for police services. The service units are used to first measure the existing LOS provided to development and then to forecast the needs required by future development based on providing a certain LOS. Raftelis used calls for service as the service unit allocation. Since the mix of development in the Town is changing between residential and non-residential, the most current year call data for 2018 is relied upon to allocate demands.

Table 21: Police Calls for Service

Year	Residential	Non-residential	Total
2014	66.0%	34.0%	100.0%
2015	61.8%	38.2%	100.0%
2016	60.6%	39.4%	100.0%
2017	59.0%	41.0%	100.0%
2018	58.7%	41.3%	100.0%

Table 22 provides summary information from Section 3, that will be referred to and relied upon throughout this section.

Table 22: Police Service Units

Description	Population	Jobs	Total
Existing Service Units	254,999	88,049	343,048
10-Year Growth	45,370	20,516	65,886
% Change	17.8%	23.3%	19.2%

As shown in Table 22, there are currently 343,048 service units generating the need for police services in the Town. The amount is forecast to grow by 19.2%, equal to 65,886 service units. This growth rate will require a future investment in infrastructure, as discussed below.

Police Facilities

Table 23 lists the existing police facilities and square feet utilized to serve existing development.

Table 23: Existing Police Facilities

Description	Square Feet
Public Safety Center	58,454
SASC Building	15,792
Property and Evidence	14,596
Total	**88,842**

Table 24 provides the existing LOS of square feet per service unit of building space provided to existing development. This LOS will serve as the baseline amount to forecast the needs generated by future development. The LOS is stated in officers per 1,000 people and officers per 1,000 jobs.

Table 24: Police Building Space per Service Unit – FY 2018

Description	Amount
Total Building Facilities Square Feet	88,842
Number of Sworn Officers (2018)	251
Square Feet per Officer	354
Residential Share (% Calls for Service)	58.7%
Allocated Officers	147
Population in 2018	254,999
Officers per 1,000 people	**0.576**
Non-residential Share (% Calls for Service)	41.3%
Allocated Officers	104
Jobs in 2018	88,049
Officers per 1,000 jobs	**1.181**

With a current LOS of 0.576 for residential and 1.181 for non-residential and a population growth of 45,370 and job growth of 20,516, the Town will need to develop an additional 17,700 square feet of facilities as shown in Table 25.

Table 25: Facilities Required to Serve Growth

Description	Amount
Residential	
Population Growth (2019-2028)	45,370
Officers per 1,000 People	0.576
Additional Officers Supportable	26
Square Feet per Officer	354
Square Feet of Building Space	**9,204**
Non-residential	
Job Growth (2019-2028)	20,516
Officers per 1,000 Jobs	1.181
Additional Officers Supportable	24
Square Feet per Officer	354
Square Feet of Building Space	**8,496**
Maximum Supportable Square Feet	**17,700**

Patrol Vehicles

Another capital asset that can be funded through SDFs is equipped police vehicles. Table 26 provides the calculation of the existing LOS in terms of patrol vehicles provided to existing development.

Table 26: Patrol Vehicles per 1,000 Service Units – FY 2018

Description	Amount
Police Vehicles	214
Residential Share (calls for service)	58.7%
Allocated Vehicles	126
Population in 2018	254,999
Vehicles per 1,000 People	**0.494**
Non-residential Share (calls for service)	41.3%
Allocated Vehicles	88
Jobs in 2018	88,049
Vehicles per 1,000 Jobs	**0.999**

With the current LOS for residential and non-residential and considering the growth in population and jobs, the Town will need to add a total of 42 police vehicles during the study period as noted in Table 27.

Table 27: Patrol Vehicles Required to Serve Growth

Description	Amount
Residential	
Population Growth (2019-2028)	45,370
Vehicles per 1,000 People	0.494
Vehicles Supportable	**22**
Non-residential	
Job Growth (2019-2028)	20,516
Vehicles per 1,000 Jobs	0.999
Vehicles Supportable	**20**
Maximum Supportable Vehicles	**42**

Communication Equipment

In order to effectively communicate and respond to incidents, the police department relies on various forms of radio systems. The police department currently uses XTS-5000 Motorola Portable Radios along with other communications infrastructure. In forecasting future need, it is anticipated the police department's primary need will be purchasing additional portable radios to equip officers and vehicles. As population and job growth continues in the Town, the radios are becoming increasingly congested. With the current state of congestion, and Service Units anticipated to grow by almost 19.2% over the next 10-years, the police department will need to add additional facilities to meet the increased radio traffic. Table 28 provides the calculation of the existing LOS in terms of communications equipment provided to existing development.

Table 28: Police Communication Equipment per 1,000 Service Units – FY 2018

Description	Amount
Communication Equipment	410
Residential Share (calls for service)	58.7%
Allocated Communication Equipment	241
Population in 2018	254,999
Communication Equipment per 1,000 People	**0.945**
Non-residential Share (calls for service)	41.3%
Allocated Communication Equipment	169
Jobs in 2018	88,049
Communication Equipment per 1,000 Jobs	**1.919**

With the current LOS for residential and non-residential and considering the growth in population and jobs, the Town can add a total of 82 communication components items during the study period. Table 29 shows the calculation of the number of added communication components.

Table 29: Communication Equipment Required to Serve Growth

Description	Amount
Residential	
Population Growth (2019-2028)	45,370
Com. Equipment per 1,000 People	0.945
Com. Equipment Supportable	**43**
Non-residential	
Job Growth (2019-2028)	20,516
Com. Equipment per 1,000 Jobs	1.919
Com. Equipment Supportable	**39**
Maximum Supportable Communication Equipment	**82**

Police TOPAZ System

The Town is part of the Easy Valley Cooperative, which includes Mesa and Apache Junction, to provide radio support and communications infrastructure to support the fire, police and public works functions of each city. As part of this study, the costs identified for project MF2230 (the TOPAZ system) in the Town's CIP document have been allocated 1/3 each to police and fire, with the remaining 1/3 being excluded from this study as it pertains to public works.

The total, escalated and allocated costs for the police department are provided in Table 30.

Table 30: Police Escalated and Allocated TOPAZ Costs

Description	Amount	Timing	Escalation Factor	Escalated Cost	Allocated Cost
Year 1 Cost	$429,000	2019	0.0%	$429,000	$143,000
Year 2 Cost	225,000	2020	3.0%	231,800	77,267
Year 3 Cost	385,000	2021	6.1%	408,400	136,133
Year 4 Cost	320,000	2022	9.3%	349,700	116,567
Year 5 Cost	175,000	2023	12.6%	197,000	65,667
Years 6-10 Cost	1,260,000	2024	15.9%	1,460,700	486,900
Total	**$2,794,000**			**$3,076,600**	**$1,025,533**

Police IIP

Table 31 summarizes the necessary police facility improvements to serve growth over the planning period. Included in the Police IIP is recovery of debt service from outstanding PFMPC bonds, Series 2009, Series 2011 Refunding, Series 2014 Refunding, and Series 2017 Refunding with outstanding total principal of $7,113,169. Interest has been included in the amount shown in Table 31.

Table 31: Police Department IIP FY 2019 – FY 2028

Description	Attributes	Timing	Amount
Police Facilities Expansion [1]	17,700 sf	2021	$7,098,762
Police Vehicles [2]	42 Vehicles	Ongoing	2,058,000
Police Equipment [3]	82 Com. Equip	Ongoing	852,800
TOPAZ System		Ongoing	1,025,533
PFMPC Bonds [4]		Ongoing	7,862,574
Subtotal Projects			**$18,897,669**
Plus: IIP and Fee Study			23,577
Less: Current SDF Balance			(2,138,300)
Total IIP			**$16,782,946**

[1] Cost based on Public Safety Complex facility construction in 2004. This facility was originally built for $47,306,107 and provided 178,000 square feet. To represent cost escalation the CCI index indicates that construction costs have increased by 50.9% since 2004. In current day costs the 178,000 square feet would cost $71,388,000 or $401.06 per square foot. Multiplying the $401.06 per square foot by the needed 17,700 square feet yields the facility cost of $7,098,762.
[2] The current average cost per police vehicle for the Town is $42,300. Assuming vehicle purchases are distributed evenly over the LUA Period an escalation factor of 15.9% has been applied to the average cost. 15.9% represents annual cost escalation of 3% for five-years.
[3] The current average cost per piece of communications equipment for the Town is $9,000. Assuming equipment purchases are distributed evenly over the LUA Period, similar to vehicles, an escalation factor of 15.9% has been applied to the average cost. 15.9% represents annual cost escalation of 3% for five-years.
[4] Remaining principal and interest payments on debt service. See Appendix A.

Police Fee Calculations

Based on the LOS analysis and the improvements identified in the IIP to meet the demands of growth during the LUA Period, the following police SDFs are calculated. First the cost per service unit is calculated, then the SDF level for each land use is identified pursuant to the service units added.

Table 32: Calculated Police Cost per Service Unit

Description	Attributes	Amount
Total Police IIP		$16,782,946
Development of Residential Unit Cost		
Police Facilities Expansion	9,204 sf	$3,691,356
Police Vehicles	22 Vehicles	1,078,000
Police Equipment	43 Com. Equip	447,200
TOPAZ System	58.7%	601,988
Debt Service Recovery	58.7%	4,615,331
Plus: IIP and Fee Study		12,704
Less: Current SDF Balance	58.7%	($1,255,180)
Total		**$9,191,399**
Population Growth through 2028		45,370
Residential Unit Cost per Person		**$202.59**
Development of Non-residential Unit Cost		
Police Facilities Expansion	8,496 sf	$3,407,406
Police Vehicles	20 Vehicles	980,000
Police Equipment	39 Com. Equip	405,600
TOPAZ System	41.3%	423,545
Debt Service Recovery	41.3%	3,247,243
Plus: IIP and Fee Study		10,873
Less: Current SDF Balance	41.3%	($883,120)
Total		**$7,591,548**
Job Growth through 2028		20,516
Non-residential Unit Cost per Job		**$370.04**

Using the Cost per Service Unit calculated above and applying it to each land use based on the proposed equivalent factors derived in Section 3. Land Use Assumptions, the following fee levels are calculated. The calculated fees have been rounded down to the nearest dollar.

Table 33: Calculated Police SDFs

Residential (per housing unit)	PPH Unit	Calculated Fees	Current Fees	$ Change	% Change
Single Unit	3.17	$642	$1,719.67	($1,077.67)	-62.7%
2+ Units per Structure	2.06	417	1,181.75	(764.75)	-64.7%

Non-residential (sf of building)	Jobs per sf	Calculated Fees	Current Fees	$ Change	% Change
Industrial	0.00163	$0.601	$0.350	$0.251	71.7%
Commercial	0.00234	0.866	0.570	0.296	51.9%
Office & Other Services	0.00297	1.097	0.630	0.467	74.1%

As shown in Table 33, the fee levels are increasing for each of the non-residential development land uses and decreasing for the residential land uses. The primary influence on the changes in fee level is the adjustment to the approach for determining the LOS. With a shift to relying on call data as a proxy for demand, the overall demand apportioned to non-residential development increased, resulting in higher fees.

Revenue Forecast

The police revenue forecast is shown in Table 34.

Table 34: Police Revenue Forecast
FY 2019 – FY 2028

Description	10-yr Increase	Calculated Police SDF	Revenue Forecast
Single Family (units)	13,249	$642	$8,505,858
2+ Units Res. (units)	1,637	417	682,629
Industrial (sf)	690,000	0.601	414,690
Commercial (sf)	3,380,000	0.866	2,927,080
Office & Other Services (sf)	3,870,000	1.097	4,245,390
Total			**$16,775,647**

Section 6. Traffic Signals

Description of Service

Pursuant to ARS §9-463.05.T.7(e), street facilities are those 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 Town is responsible for managing and maintaining the network signals to accommodate traffic. The Town currently maintains 199 street lights. The Town currently assesses a traffic signals fee, which will be updated to reflect the current LOS and cost of providing these improvements.

The Town adopted an Intersection Improvement Master Plan (IIMP) in 2014. The purpose of the IIMP was to document the existing and projected demands at major arterial intersections within the Town and recommend a prioritized list of improvements to the LOS. The expansion-related projects contained in this traffic signals SDF analysis are based in part from the results of this study.

Existing Demand

The traffic signals SDF was developed using trip generation and trip factors published by ITE *Trip Generation Manual, 10th Edition*. The trip ends used in this analysis correlate to the Town's land use classification. Trip ends represent two trips. For example, a trip from home to work and from work to home counts as two trips. The total trips by land use have been divided by two to avoid double-counting, as detailed below.

The trip adjustment factor accounts for commuting patterns in Gilbert and pass-by trips. The standard, unweighted approach assigns 50% to each of the average weekday trip end factors for each development type to account for one-way destination trips. However, certain types of development are subject to different types of traffic patterns, so additional weighting has been identified. According to the OnTheMap tool, a web application created by the US Census Bureau, 86.8% of the residents living in Gilbert are employed outside of Town limits. Additionally, the 2017 National Household Travel Survey (2017 NHTS) identifies that weekday work trips are typically 30% of all outbound trips (i.e., a portion of the 50% of trips normally not counted for residential development will be counted since travel is occurring on Gilbert roads, but the trip end is not within Gilbert). Using these factors, it is calculated that an additional 13% (50% x 86.8% x 30%) of trips will be allocated to residential development, bringing the total to 63%.

For commercial development, the trip adjustment factors are weighted based off the traffic studies from the ITE Manual 10th Edition. These studies indicate that on average 33% of vehicles entering shopping centers are passing by with the intent of arriving at some other primary destination. Therefore, the remaining 66% of the trip ends (i.e., 50% of all trips) will be assigned to the commercial land uses. This calculation yields a reduction from the standard 50% to 33% (66% x 50%).

To determine the trips generated by each type of development, the average weekday trip ends and the trip adjustment factors are used and applied to the number of units for each type of development. Table 35 is provided to identify the current number of trips generated by existing development.

Table 35: Existing Development Trip Generation

Description	Unit Type	Units	Avg. Weekday Trip Ends [1]	Trip Adjustment Factor [1]	Daily Trips Generated	Trip Rate per Unit
		(A)	(B)	(C)	A x B x C =(D)	
Single Family	Units	78,320	9.44	63.0%	465,785	5.95
Multi-family	Units	9,680	7.32	63.0%	44,640	4.61
Industrial	sf	6,740,000	0.0050	50.0%	16,715	0.0025
Commercial	sf	14,930,000	0.0378	33.0%	185,990	0.0125
Office/Other	sf	14,190,000	0.0097	50.0%	69,105	0.0049
Total Trips Generated					**782,235**	

[1] Trip Generation, Institute of Transportation Engineers, 2017.

Existing LOS

The existing LOS provided in the Town is based on the 199 existing traffic signals divided by the number of ten thousand trips (trips/10,000). Trips are stated on a per 10,000 basis to be on a similar numerical basis as the number of traffic signals. The calculation of the current LOS is as follows: 199 traffic signals divided by (782,235 trips divided by 10,000) equals 2.5 traffic signals per 10,000 trips. As a standard going forward, the IIP and SDF calculations will not provide greater than 2.5 traffic signals for each additional 10,000 trips forecasted.

Traffic Signals IIP

The Town has identified a list of major intersection (arterial/arterial) traffic signal improvements necessary to support additional traffic from growth. The Town also does 2 or 3 additional improvements at minor intersections (arterial/collector) each year. Additional improvements such as traffic management improvements and control have been apportioned between existing development and growth. Based on the LOS of traffic signals, 2.5 traffic signals per 10,000 trips, growth can support the addition of 38 signals in total. As shown in Table 36, growth is forecast to add 149,007 additional trips. To calculate the 38 signals the following calculation is performed: 2.5 traffic signals per 10,000 trips times (149,007 trips / 10,000) = 38.

Table 36: Growth Trip Generation

Description	Unit Type	Unit Growth 2028	Trip Rate per Unit	Daily Trips Generated
Single Family	Units	13,249	5.95	78,794
Multi-family	Units	1,637	4.61	7,549
Industrial	sf	690,000	0.0025	1,711
Commercial	sf	3,380,000	0.0125	42,106
Office/Other	sf	3,870,000	0.0049	18,847
Total Trips Generated				**149,007**

With 782,235 daily trips generated by existing development and 149,007 daily trips forecast to be added by growth over the next 10-years, the total daily trips in the Town will be 931,242. Trip generation allocation factors were applied to equitably allocate the project costs associated with traffic management improvements between existing development and growth. The following calculation using trip generation values was used the factor for growth: 149,007 daily trips added by growth divided by total trips of 931,243 equals 16%. The 16% represents the percentage of total trips in 2028 that will be attributed to growth. Therefore, the projects identified that will benefit the entire Town's traffic management, will be allocated 16% to growth. The traffic signals IIP projects and costs are provided in Table 37:

Table 37: Traffic Signals IIP Projects

Project #	Description	Type	Cost	Year	Escalation Factor	Escalated Cost	Growth Share	Growth Cost
TS1310	Advanced Traffic Mgmt Sys. - Phase III	System	$1,283,000	2020	3.00%	$1,321,000	16%	$211,360
TS1330	Advanced Traffic Mgmt Sys. - Phase V	System	1,881,000	2022	9.27%	2,055,000	16%	328,800
TS1340	Advanced Traffic Mgmt Sys. - Phase VI	System	1,344,000	2024	15.93%	1,558,000	16%	249,280
TS1440	Recker and Cooley Loop North	Signal	516,000	2020	3.00%	531,000	100%	531,000
TS1450	Recker and Cooley Loop South	Signal	517,000	2020	3.00%	533,000	100%	533,000
TS1460	Williams Field and Cooley Loop West	Signal	517,000	2020	3.00%	533,000	100%	533,000
TS1470	Williams Field and Cooley Loop East	Signal	517,000	2020	3.00%	533,000	100%	533,000
TS1500	Riggs and Recker	Signal	523,000	2024	15.93%	606,000	75%	454,500
TS1540	Val Vista and Ocotillo	Signal	543,000	2019	0.00%	543,000	100%	543,000
TS1550	Val Vista and Chandler Heights	Signal	560,000	2019	0.00%	560,000	100%	560,000
TS1570	Recker and Warner	Signal	542,000	2024	15.93%	628,000	100%	628,000
TS1580	Recker and Ocotillo	Signal	544,000	2023	12.55%	612,000	75%	459,000
TS1620	Higley and Coldwater	Signal	544,000	2023	12.55%	612,000	100%	612,000
TS1860	Val Vista and Appleby	Signal	554,000	2019	0.00%	554,000	100%	554,000
TS1900	Queen Creek and Recker Road	Signal	533,000	2019	0.00%	533,000	100%	533,000
TS1910	Pecos and Napa	Signal	556,000	2019	0.00%	556,000	100%	556,000
TS1920	American Heroes Way/Gilbert Rd Signal	Signal	475,000	2019	0.00%	475,000	100%	475,000
TS1700	Adapt. Signal Control Sys.-Santan Mall Area	System	2,769,000	2020	3.00%	2,852,000	16%	456,320
TSMIN	Minor Intersections (2.6 per year)	Signal	14,664,800			14,665,000	100%	14,665,000
	Total Projects		**$29,382,800**			**$30,260,000**	**77%**	**$23,415,260**

With 12 major signal improvements identified and 3 minor signal improvements (TS1860, TS1910, and TS1920 are minor intersections) identified, the Town can support an additional 23 minor signal improvements over the last nine years of the forecast. With an average cost per signal identified in 2019 dollars of $550,000, a cost escalation factor of 15.9% has been added assuming the projects are completed at a pace of 2.6 per year. The escalation factor represents 2019 through 2024, or approximately half way through the forecast to represent the average cost increase.

Traffic Signals Fee Calculations

Based on the LOS analysis and the improvements identified in the IIP to meet the demands of growth during the LUA Period, the following traffic signals SDFs are calculated. First the cost per trip is calculated, then the SDF level for each land use is identified pursuant to the trip rates per unit.

Table 38: Traffic Signals Cost per Trip Calculation

Description	Growth Cost
Project Costs	$23,415,260
IIP and Fee Studies	23,841
Existing Balance	(9,502,300)
Total	**$13,936,801**
Trips Added	149,007
Cost per Trip	**$93.53**

Table 39 shows the calculation for the traffic signals fees.

Table 39: Traffic Signals Fees

Land Use Type	Trips per Unit	Cost per Trip	Calculated	Existing	Change-$	Change-%
Single Unit	5.95	$93.53	$556	$450	$106	24%
2+ Units per Structure	4.61	$93.53	$431	$296	$135	46%
Industrial sf	0.0025	$93.53	$0.231	$0.470	($0.239)	-51%
Commercial sf	0.0125	$93.53	$1.165	$1.080	$0.085	8%
Office & Other Services sf	0.0049	$93.53	$0.455	$0.650	($0.195)	-30%

Revenue Forecast

The traffic signals revenue forecast is summarized in Table 40.

Table 40: Traffic Signals Revenue Forecast
FY 2019 – FY 2028

Description	10-yr Increase	Traffic Signals SDF	Revenue Forecast
Single Family (Units)	13,249	$556	$7,366,444
2+ Units Residential (Units)	1,637	431	705,547
Industrial (sf)	690,000	0.231	159,390
Commercial (sf)	3,380,000	1.165	3,937,700
Office & Other Services (sf)	3,870,000	0.455	1,760,850
Total			**$13,929,931**

Section 7. Roads and Intersections

Description of Service

Pursuant to ARS §9-463.05.T.7(e), street facilities are those 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 Town is responsible for managing and maintaining the network of streets to accommodate traffic, which currently consists of over 238 center lane miles of traffic. The Town requested Raftelis to calculate a 'roads' fee. Within the roads fee are costs associated with arterial and collector improvements as well as intersection expansions.

The Town adopted an Transportation Master Plan (TMP) in 2014. The purpose of the TMP was to prepare an integrated, multi-modal plan that addresses a number of issues within the Town and incorporate recommendations from this and other studies. The expansion-related projects contained in this SDF analysis are based in part from the results of these studies.

The projects listed in the 10-year capital plan are designed to meet the traffic LOS, which is a qualitative measure of a roadway's effectiveness of handing traffic volumes. Traffic levels of service are rated 'A' to 'F'; 'A' represents free flow conditions and 'F' represents a congested, unstable flow or overcapacity. The Town maintains a current LOS of 'D'. The SDFs developed for this study are based on this LOS. According to the 2014 Transportation Master Plan, a LOS 'D' or better was considered the minimum LOS for the Town.

The 2014 TMP defines arterials and collectors as:

- ***Arterials***. Arterials are high capacity roadways that carry large volumes of traffic between areas of high residential density, employment, retail and commercial land uses. Arterial streets provide limited direct access to abutting land uses. Primarily, the arterial street system in Gilbert is laid out on the mile grid.
- ***Collectors.*** Collector streets provide connections between arterial roadways and local streets linking residential, employment, and commercial areas. Collector streets strengthen the continuity of the street network and establish an interconnected street pattern between the arterial grid streets. An interconnected collector street system provides multiple routes, diffuses automobile traffic and provides better accessibility for non-motorized traffic.

Existing Demand

A similar methodology will be utilized for transportation impacts as for traffic signals, with the addition of an average trip length factor that will better reflect the use of roadways by land use in the Town. Table 41 provides the number of lane miles and the lane miles of capacity provided by the Town on major and minor arterials and collectors.

Table 41: Existing Lane Miles

Description	Miles	# of Lanes	Lane Miles	Trip Capacity per Lane [1]	Lane Miles of Capacity [2]
Major Arterials	59.74	6	358.44	9,000	3,225,960
Minor Arterials	76.22	4	304.88	8,875	2,705,810
Collectors	102.48	2	204.96	8,250	1,690,920
Total	**238.44**		**868.28**		**7,622,690**

[1] Amounts from Town of Gilbert Transportation Master Plan, May 2014.
[2] Lane miles multiplied by trip capacity per lane.

Using the trip generation information developed in Table 35 in the Traffic Signals section, and dividing into the current number of lane miles of capacity shown above, an average trip length of 9.74 miles is developed.

Table 42: Average Trip Length

Description	Amount
Total Lane Miles of Capacity	7,622,690
Daily Trips Generated	782,235
Average Trip Length	**9.74**

This average trip length figure, in conjunction with the trip length weighting factor for each type of development, will be utilized to determine the VMT generated by existing development. The trip length weighting factor for each land use is derived from the 2017 NHTS. On average, residential trips, including home-based work trips or trips for social and recreational purposes, are 114% of the average trip length. For commercial development, shopping trips are generally 75% of the average trip length. The other non-residential land uses typically generate trips that are 90% of the average. Table 43 shows the calculation of VMT for each type of development.

Table 43: Existing Development VMT

Description	Daily Trips Generated	Trip Length Factor	Average Trip Length	VMT	VMT per Unit
	(D)	(E)	(F)	D x E x F = (G)	B x C x E x F = (H)
Single Family	465,785	114%	9.74	5,164,421	65.94
Multi-family	44,640	114%	9.74	494,938	51.13
Industrial	16,715	90%	9.74	146,393	0.02172
Commercial	185,990	75%	9.74	1,362,064	0.09123
Office/Other	69,105	90%	9.74	605,345	0.04266
Total	**782,235**			**7,773,161**	

Note: See Table 35 for (B) and (C) amounts.

Existing LOS

To determine the existing LOS provided in the Town, the 868.28 (see Table 41) lane miles are divided by the number of ten thousand VMT (VMT/10,000). The VMT are first divided by 10,000 to be on a similar numerical basis as the number of lane miles. The calculation of the current LOS is as follows: 868.28 arterial lane miles divided by (7,773,161 VMT divided by 10,000) equals 1.12 lane miles per 10,000 VMT. As a standard going forward, the IIP and SDF calculations will not provide greater than 1.12 lane miles of arterial and collector roads for each additional 10,000 VMT forecasted.

Transportation IIP

Using the growth outlined in the LUA, the following subsections provide the demand forecast over the LUA Period along with the maximum lane mile improvements based on the LOS standards. The projects included in the IIP are driven by growth, so costs have been fully allocated over the 10-year period.

Table 44: Projected Growth

Description	Unit Type	10-Year LUA Growth	VMT per Unit	VMT
Single Family	Dwelling Units	13,249	65.94	873,639
Multi-family	Dwelling Units	1,637	51.13	83,700
Industrial	1,000 sf	690,000	0.02172	14,987
Commercial	1,000 sf	3,380,000	0.09123	308,357
Office/Other	1,000 sf	3,870,000	0.04266	165,094
Total VMT				**1,445,777**

With a current LOS of 1.12 lane miles per 10,000 VMT and a projected growth of 1,445,777 VMT over the LUA Period, the Town could fund and develop a maximum of 161.93 lane miles of arterial and collector streets over the LUA Period to maintain the current LOS.

The Town has identified 13 projects for the IIP that include intersection improvements and lane widening projects for arterials and collectors. These projects are primarily driven by the growth identified in the 10-year LUA forecast.

Table 45: Roads and Intersections IIP Projects

Project Number	Description	Lane Miles	Cost	Allocation to Growth	Growth Cost
	Roadway Improvements				
ST0540	Ocotillo Road – Greenfield to Higley	2.0	$59,450,700	100%	$59,451,000
ST0980	Higley Road – Riggs to Hunt Highway	2.2	12,333,150	100%	12,333,000
ST0990	Ocotillo Rd – 148th Street to Greenfield	3.0	12,956,100	100%	12,956,000
ST1200	Power Rd – Guadalupe to Santan FWY	4.5	8,333,334	100%	8,333,000
	Roads IIP Projects	11.7	$93,173,284	100%	$93,173,000
	Intersection Improvements				
ST1300	Warner and Greenfield Intersection		$12,319,000	16%	$1,971,000
ST1310	Ray and Gilbert Intersection		12,319,000	16%	1,971,000
ST1320	Elliot and Gilbert Intersection		9,674,000	16%	1,548,000
ST1330	Guadalupe and Val Vista Intersection		13,399,000	16%	2,144,000
ST1340	Guadalupe and Power Intersection		7,494,000	16%	1,199,000
ST1350	Guadalupe and Greenfield Intersection		14,319,000	16%	2,291,000
ST1360	Elliot and Greenfield Intersection		13,440,000	16%	2,150,000
ST1370	Elliot and Val Vista Intersection		15,145,000	16%	2,423,000
ST1390	Elliot and Higley Intersection		12,519,000	16%	2,003,000
	Intersection IIP Projects		$110,628,000	16%	$17,700,000
	Total Projects		$203,801,284		$110,873,000
	IIP and Fee Studies				28,916
	Total Roads and Intersections IIP				**$110,901,916**
	VMT Growth				1,445,777
	Cost per VMT				**$76.71**

Fee Calculation

Using the Cost per VMT calculated above and applying it to each land use based on the VMT per service unit from Table 43, the following fee levels are calculated. The calculated fees have been rounded down to the nearest dollar.

Table 46: Roads and Intersections Fee Levels

Category of Development	VMT per Dev. Unit	Cost per VMT	Calculated SDF
Single Unit Housing (Units)	65.94	$76.71	$5,058
2+ HU per Structure (Units)	51.13	$76.71	$3,922
Industrial (sf)	0.02172	$76.71	$1.666
Commercial (sf)	0.09123	$76.71	$6.998
Office & Other Services (sf)	0.04266	$76.71	$3.272

Revenue Forecast

The roads and intersection revenue forecast is summarized in Table 47 below.

Table 47: Roads and Intersections Revenue Forecast

Description	10-yr Increase	Transportation SDF	Revenue Forecast
Single Family (Units)	13,249	$5,058	$67,013,442
2+ Unit Residential (Units)	1,637	3,922	6,420,314
Industrial (sf)	690,000	1.666	1,149,540
Commercial (sf)	3,380,000	6.998	23,653,240
Office & Other Services (sf)	3,870,000	3.272	12,662,640
Total			**$110,899,176**

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Section 8. Parks and Recreation

Description of Service

Pursuant to ARS §9-463.05.T.7(g), necessary public services are described as 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 Town provides parks and recreation services for the use and enjoyment of all residents, visitors, and employees. Through the availability of parks, the Town is able to provide a place for sporting activities, summer camps, and art programs. As the Town continues to grow, additional park and recreation facilities will be required to accommodate additional people and to ensure parks are available in proximity to where development is occurring. The park fee includes regional parks, trails, pools, and community centers.

Existing Inventory, LOS and Future Plan

Allocation between Residential and Non-residential Land Uses

To account for the varying intensity in use of park facilities, a weighting factor has been developed to represent the daytime population in Town. For residents, it is assumed there is a potential impact to parks 365 days per year and 16.5 hours per day. Parks in Gilbert are open from 5:30am to 10pm each day, or 16.5 hours. 365 days times 16.5 hours per day equals 6,022.5 hours per year, or 250.94 days for each person. The non-residential land uses do not benefit from parks at the same level as homes and the residents residing in them who participate in a wide variety of activities. To reflect the lower intensity of benefit from parks, it has been assumed that over the course of the year each employee works 250 days and has the potential to impact parks for 2 hours per day. This assumption revolves around the idea that employees may have small windows of opportunity before or after work or on their lunch break to use a park in the Town. However, if employees are also residents, it has been reflected that outside of work hours, any use of parks in the Town is done as a resident. 250 days times 2 hours per day equals 500 hours per year, or 20.83 days for each employee (job). These impact hours are then used to develop the percentage of IIP project costs to be recovered by residential and non-residential land uses.

Table 48: Parks and Recreation Land Use Daytime Population Allocation

Description	Days per Year per Person	FY 2018 Service Units	Total Impact Hours	Daytime Population Allocation %
	(A)	(B)	(A) x (B)	
Residential	250.94	254,999	63,988,812	97%
Non-residential	20.83	88,049	1,834,354	3%
Total			**65,823,166**	**100%**

Parks

The Town provides more than 361.9 acres of public parks, greenbelts, and special use areas, the SDFs focus on neighborhood parks that are often used by nearby residents and businesses.

Table 49: Existing Park Inventory

Description	Improved Acres
Freestone [1]	72.7
Crossroads [1]	54.0
Discovery Park [1]	44.2
Gilbert Soccer Complex	42.0
McQueen Park Phases I & II	41.0
Cosmo	17.0
Zanjero	11.0
Gilbert Regional Ph 1A&1B [2]	50.0
Desert Sky Ph 1 [2]	30.0
Total	**361.9**
Average Acres per Park	***40.2***

[1] Acres exclude lakes, community centers, etc.
[2] Parks currently under construction.

To determine the LOS provided to existing development, the service units for the Town are divided into the number of acres allocated to each broad land use class. The LOS per 1,000 service units is calculated in Table 50.

Table 50: Allocation Factors and Level of Service

Description	Improved Acres [1]
Residential Share (Daytime Population)	97%
Allocated Acres	351.0
Population in 2018	254,999
Acres per 1,000 people	**1.376**
Non-residential Share (Daytime Population)	3%
Allocated Acres	10.9
Jobs in 2018	88,049
Acres per 1,000 jobs	**0.124**

[1] Calculated based on the allocation factor developed in Table 48 applied against the improved acreage identified in Table 49.

Based on the LOS identified above for acres of parks per 1,000 service units for residential and non-residential development, Table 51 provides the calculation of future park needs. As growth continues to occur in the Town, there is a desire to maintain the standard provided to existing development. In order to achieve this standard, Table 51 provides an illustration of the amount of park space necessary to maintain the current LOS.

Table 51: Parks Future Projects to Maintain LOS

Description	Growth in Service Units	Park Acreage per 1,000 Service Units	Calculated Park Acreage
Residential	45,370	1.376	62.4
Non-residential	20,516	0.124	2.5
Total	**65,886**		**64.9**

With a current LOS of 1.376 acres per 1,000 residential service units, 0.124 acres per 1,000 non-residential service units, and a projected growth of 65,886 service units over the LUA Period, the Town will need to fund and develop an additional 64.9 acres of parks over the LUA Period to support growth and maintain the current LOS.

Parks IIP

Table 52 summarizes the estimated cost per acre used for development of the IIP. The Gilbert Regional Park Master Plan identified costs for developing the remaining 225 acres as shown in Table 52.

Table 52: Parks IIP

Description	Master Plan Cost	Year	Escalated Cost [1]	Acres	$ per Acre
Gilbert Regional Park	$85,568,733	2024	$99,198,000	225	$440,880

[1] Annual cost escalation of 3% compounded from 2019 through project year is added to Master Plan cost amount.

Direct Benefit

The Gilbert Regional Park (Gilbert Regional) and the Desert Sky District Park (Desert Sky)[1] are two of the newest additions to the Town's parks and recreational system. The total planned build-out for these parks is 272 and 165 acres, respectively. The first phase of development for Gilbert Regional is underway and consists of approximately 50 acres. The first phase of development for Desert Sky is also underway and consists of approximately 30 acres. These parks are funded through a number of financing mechanisms including SDFs.

A.R.S. § 9-463.05(7)(g) states, in part,
"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."

Although not specifically defined in A.R.S. § 9-463.05, municipalities and the development community have generally accepted the definition of "direct benefit" from the model ordinance created in conjunction with the League of Arizona Cities and Towns. Consistent with that model ordinance, the Town adopted the following definition in its SDF Ordinance:

> *Direct Benefit: A benefit to a Service Unit resulting from a Capital Facility that: (a) addresses the need for a Necessary Public Service created in whole or in part by the Service Unit; and that (b) meets either of the following criteria: (i) the Capital Facility is located in the immediate area of the Service Unit and is needed in the immediate area of the Service Unit to maintain the Level of Service; or (ii) the Capital Facility substitutes for, or eliminates the need for a Capital Facility that would have otherwise have been needed in the immediate area of the Service Unit to maintain the Town's Level of Service.*

The Town has identified the need and amenities required to meet the growing population demands in the immediate area of the parks. These requirements are documented in the Town's Gilbert Regional Conceptual Master Plan (August 2016), the Gilbert Regional Park – Business Plan (August 2016), Town Council minutes, and other publicly-available documents. By developing the full acreage at Gilbert Regional and Desert Sky, the facilities can be located nearer to the new growth they serve; drive times can be minimized for those new residents who live, work and recreate near the parks; and unnecessary trips can be eliminated for those who would otherwise need to travel to facilities located at disaggregated parks instead of to centrally located facilities at Gilbert Regional and Desert Sky. In addition, these larger parks will negate the need to build several smaller parks at the same level of service. The published master plans and other documents also outline the specific facilities to be included at Gilbert Regional and Desert Sky. Because these are documented plans, the Town will be able to assign future system development fee revenue to only those facilities needed to

[1] Desert Sky was previously called Rittenhouse District Park.

maintain the level of service. This will provide a transparent process for interested parties and ensure that the use of system development fees is compliant with A.R.S. § 9-463.05.

Parks Fee Calculations

Based on the LOS analysis for growth and the improvements identified in the IIP to meet the demands of growth, the following cost per person and per job for park facilities are calculated.

Table 53: Calculated Parks Cost per Service Unit

Description	Amount
Residential Share	
Acres	62.4
Cost per Acre	$440,880
Cost Allocation	$27,510,900
Growth in Population	45,370
Cost per Person	**$606.37**
Non-residential	
Acres	2.5
Cost per Acre	$440,880
Cost Allocation	$1,102,200
Growth in Jobs	20,516
Cost per Job	**$53.72**

Pools

The Town has 4 pools that are often used by nearby residents and businesses. These pools are the Mesquite Aquatic Center, the Greenfield Pool, the Williams Field Pool, and the Perry Pool.

To determine the LOS provided to existing development, the service units for the Town are divided into the number of pools allocated to each broad land use class. The LOS per 1,000 service units is calculated in Table 54.

Table 54: Allocation Factors and Level of Service

Description	Amount
Residential Share (Daytime Population)	97%
Allocated Pools	3.9
Population in 2018	254,999
People per pool	**65,400**
Non-residential Share (Daytime Population)	3%
Allocated Pools	0.1
Jobs in 2018	88,049
Jobs per pool	**880,500**

Based on the LOS identified above for pools per 1,000 service units for residential and non-residential development, Table 55 provides the calculation of future pool needs.

Table 55: Pool Improvements to Maintain LOS

Description	Growth in Service Units	LOS Service Units per Pool	Maximum Supportable Pools
Residential	45,370	65,400	0.69
Non-residential	20,516	880,500	0.02
Total	**65,886**		**0.71**

With a current LOS allowing for a maximum supportable 0.69 pools for residential development and 0.02 pools for non-residential the Town will need to fund and develop an additional 0.71 pools over the LUA Period to support growth and maintain the current LOS.

Pools IIP

Tables 56 and 57 summarize the planned pool improvements, of which 71% will be funded by growth, and associated costs to serve growth over the planning period.

Table 56: Pools IIP

Description	Project Cost	Year	Escalated Project Cost [1]	10-Year Allocation	10-Year Growth Cost
South Area Pool	$15,700,000	2022	$17,156,000	71%	$12,180,700

[1] Annual cost escalation of 3% compounded from 2019 through project year is added to project cost amount.

Pools Fee Calculations

Based on the LOS analysis for growth and the improvements identified in the IIP to meet the demands of growth, the following cost per person and per job for pool facilities are calculated.

Table 57: Calculated Pools Cost per Service Unit

Description	Amount
Residential Share	
Pools	0.69
Cost Allocation	$11,837,600
Growth in Population	45,370
Cost per Person	**$260.91**
Non-residential	
Non-residential Share	
Pools	0.02
Cost Allocation	$343,100
Growth in Jobs	20,516
Cost per Job	**$16.72**

Trails

The Town has a total of 93,092 linear feet of trails. To determine the LOS provided to existing development, the service units for the Town are divided into the feet of trails allocated to each broad land use class. The LOS per 1,000 service units is calculated in Table 58.

Table 58: Trails Allocation Factors and Level of Service

Description	Amount
Residential Share	97%
Allocated Trails Length	90,299
Population in 2018	254,999
Linear Feet per Person	**0.35**
Non-residential Share	3%
Allocated Trails Length	2,793
Jobs in 2018	88,049
Linear Foot per Job	**0.03**

Based on the LOS identified above for trails per 1,000 service units for residential and non-residential development, Table 59 provides the calculation of future trail needs.

Table 59: Trail Improvements to Maintain LOS

Description	Growth in Service Units	Linear Feet per Service Unit	Total Linear Feet
Residential (People)	45,370	0.35	16,066
Non-residential (Jobs)	20,516	0.03	651
Total	**65,886**	**0.38**	**16,717**

With a current LOS of 0.35 linear feet per person, 0.03 linear feet per job, and a projected growth of 65,886 service units over the LUA Period, the Town will need to fund and develop an additional 16,717 linear feet over the LUA Period to support growth and maintain the current LOS.

Trails IIP

Tables 60 and 61 summarize the necessary trail improvements and associated costs to serve growth over the planning period. Using the Town's current 10-year CIP, the average cost per linear foot for five trail expansion projects is used to develop the IIP. By averaging the cost of these improvements, the Town will be able to deploy trail SDF funds as needed for each of these projects. The average cost per linear foot, adjusted for future cost escalation depending on the anticipated timing of each project, for CIP projects PR0330, PR0060, PR0840, PR0850, and PR0970 is $371.62.

Table 60: Average Trail Cost per Linear Foot

Description	Marathon Trail	Hertitage Middle	Santan Vista Phase II	Santan Vista Phase III	Santan Vista Phase IV	Total
Project Number	PR0330	PR0060	PR0840	PR0850	PR0970	
Length in miles	8.0	1.5	1.2	3.5	1.0	15.2
Length in linear feet [1]	42,240	7,920	6,547	18,480	5,280	80,467
Cost	**$15,251,000**	**$1,735,000**	**$1,742,000**	**$5,681,000**	**$2,097,000**	**$26,506,000**
	2024	2019	Project Year 2019	2024	2020	
Escalation [2]	15.9%	0.0%	0.0%	15.9%	3.0%	
Escalated Cost	$17,680,000	$1,735,000	$1,742,000	$6,586,000	$2,160,000	$29,903,000
Cost/linear foot	**$418.56**	**$219.07**	**$266.07**	**$356.39**	**$409.09**	**$371.62**

[1] 5,280 linear feet per mile.
[2] Cost provided in 2019 dollars. 3% per year cost escalation projected for future costs.

Table 61: Trail IIP

Description	10-Year Cost
Unit Cost	$371.62
Supportable Linear Fee	16,717
Total Allocated to Growth	**$6,212,300**

Trails Fee Calculations

Based on the LOS analysis for growth and the improvements identified in the IIP to meet the demands of growth, the following cost per person and per job for trail facilities are calculated.

Table 62: Calculated Trails Cost per Service Unit

Description	Amount
Residential Share	
Trails	16,066
Cost Allocation	$5,970,400
Growth in Population	45,370
Cost per Person	**$131.59**
Non-residential	
Trails	651
Cost Allocation	$241,900
Growth in Jobs	20,516
Cost per Job	**$11.79**

Community Centers

The Town currently has four community centers that serve existing development. As previously mentioned, future development of community centers is limited to a maximum of 3,000 square feet for growth. Below is a list of the existing community centers.

Table 63: Existing Community Centers

Existing Facilities	Square Feet
Freestone Center	48,500
McQueen Park Center	26,800
Gilbert Community Center	16,000
Page Park Center	8,880
Total	**100,180**

The allocation factors for park facilities are utilized for community centers as well and the LOS is provided in Table 64:

Table 64: Community Centers Allocation Factors and LOS

Description	Amount
Residential Share	97%
Allocated Square Feet	97,175
Population in 2018	254,999
Square Feet per person	**0.381**
Nonresidential Share	3%
Allocated Square Feet	3,005
Jobs in 2018	88,049
Square Feet per job	**0.034**

Based on the LOS identified for residential and non-residential above, Table 65 identifies that maximum supportable square feet from a LOS basis and the maximum supportable square feet as limited by the statute. As can be seen, the LOS as limited by the statute is less than the existing LOS provided to existing development. Therefore, the Town is not providing a higher level of service to future development.

Table 65: Community Center Improvements to Maintain LOS

Description	LOS Analysis	Statute Limit
Residential		
Growth in Population 2028	45,370	45,370
Square Feet per person	0.381	0.064
Square Feet Supportable	**17,286**	**2,910**
Nonresidential		
Growth in Jobs 2028	20,516	20,516
Square Feet per job	0.034	0.004
Square Feet Supportable	**698**	**90**
Maximum Square Feet Supportable	**17,984**	**3,000**

Community Centers IIP

Tables 66 and 67 summarize the necessary community center improvements and associated costs to serve growth over the planning period. Using the Town's historical cost of development community centers, adjusted for historic construction cost escalation as measured by the Engineering News Record (ENR) Construction Cost Index (CCI), an average cost per square foot is developed. In 2009 the Town constructed the Gilbert Community Center, which is 16,550 square feet, for a cost of $7,650,459. Using the CCI index from 2009 to 2017, costs increased 25.3% over that period. In today's dollars the Gilbert Community Center would cost $9,585,000, with an average cost per square foot of $579.15.

Table 66: Community Centers IIP

Description	10-Year Cost
Unit Cost	$579.15
Supportable Square Fee	3,000
Total Allocated to Growth	**$1,737,400**

Community Centers Fee Calculation

Based on the LOS analysis for growth and the improvements identified in the IIP to meet the demands of growth, the following community center SDF is calculated. First the cost per service unit is calculated, then the SDF level for each land use is identified pursuant to the service units added.

Table 67: Calculated Community Centers Cost per Service Unit

Description	Amount
Residential Share	
Square Feet	2,910
Cost per Square Foot	$579.15
Cost Allocation	$1,685,300
Growth in Population	45,370
Cost per Person	**$37.15**
Non-residential	
Square Feet	90
Cost per Square Foot	$579.15
Cost Allocation	$52,100
Growth in Jobs	20,516
Cost per Job	**$2.54**

Total Parks and Recreation Fees

Using the project costs assigned to growth in this section, Table 68 shows the complete Parks and Recreation IIP. Included in the Parks IIP is recovery of debt service from outstanding PFMPC bonds for Series 2009, Series 2014 Refunding, and Series 2017 Refunding with outstanding total principal of $25,989,615. Interest has been included in the amount shown in Table 68.

Table 68: Parks and Recreation IIP

Description	Attributes	Timing	Amount
Park Improvements	64.9 Acres	FY 2019/20	$28,613,100
Pool Improvements	0.71 Pools	FY 2021/22	12,180,700
Trail Improvements	16,717 Linear Feet	FY 2023/24	6,212,300
Community Centers	3,000 sf	FY 2019/20	1,737,400
PFMPC Bonds		Ongoing	31,969,411
Subtotal Project Costs			**$80,712,911**
Plus: IIP and Fee Study			21,939
Less: Current SDF Balance [1]			(671,000)
Total			**$80,063,850**

[1] Projected balance remaining after completion of Gilbert Regional Phase 1A & 1B and Desert Sky Phase 1.

Using the cost per service unit calculated for each component of the Parks and Recreation SDF above and applying it to each land use based on the proposed equivalent factors, the fee levels provided in Table 69 are calculated.

Table 69: Summary of Unit Costs for Parks and Recreation

Description	Cost per Person	Cost per Job
Cost Recovery for Debt Service [1]	$683.00	$47.00
Park Improvements	606.37	53.72
Pools	260.91	16.72
Trails	131.59	11.79
Community Centers	37.15	2.54
Master Plan, IIP, and Fee Study	0.47	0.03
SDF Balance Offset	(14.35)	(0.98)
Total	**$1,705.14**	**$130.82**

[1] PFMPC Bonds as provided in Appendix A.

Table 70: Calculated Parks and Recreation Fees

Residential (per housing unit)	PPH Unit	Calculated Fees	Current Fees	$ Change	% Change
Single Family Unit	3.17	$5,405	$4,081	$1,324	32%
2+ Units Res.	2.06	$3,512	2,805	$707	25%
Non-residential (sf of building)	**Jobs per sf**	**Calculated Fees**	**Current Fees**	**$ Change**	**% Change**
Industrial	0.00163	$0.213	0.300	($0.087)	-29%
Commercial	0.00234	$0.306	0.500	($0.194)	-39%
Office & Other Services	0.00297	$0.388	0.700	($0.312)	-45%

Revenue Forecast

The parks revenue forecast is shown in Table 71.

Table 71: Parks and Recreation Revenue Forecast
FY 2019 – FY 2028

Description	10-yr Increase	Calculated Parks SDF	Revenue Forecast
Single Family (Units)	13,249	$5,405	$71,610,845
2+ Units Residential (Units)	1,637	3,512	5,749,144
Industrial (sf)	690,000	0.213	146,970
Commercial (sf)	3,380,000	0.306	1,034,280
Office & Other Services (sf)	3,870,000	0.388	1,501,560
Total	**22,826**		**$80,042,799**

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Section 9. Water

Description of Service

Pursuant to ARS §9-463.05.T.7(b), water facilities permitted in the IIP include the supply, transportation, treatment, purification, and distribution of water, and any appurtenances for those facilities. As set forth in the discussion below, the primary water infrastructure needs for the Town over the next several years involve water supply and treatment.

The Town provides potable water with water supply consisting of a combination of ground and surface water sources. The entire water system infrastructure includes water resources, wells, treatment facilities, transmission, distribution, storage, administrative facilities, vehicles, and equipment including meters. The following provides an analysis of the resource and facility costs included in the IIP and SDF calculations.

Existing Inventory, LOS and Future Plan

The Town has a complex portfolio of water resources. This portfolio has been designed to provide a continuous, sustainable supply of water to the Town residents at a reasonable cost. These supplies are structured to meet current demands from customers as well as demands through the build-out period. This portfolio is subject to the State of Arizona Groundwater Act's 'Safe Yield' goals within the Active Management Areas (AMAs) of the State. The Town has identified a number of water resource projects over the study period to meet these requirements.

The Town operates four pressure zones which are served by two water treatment plants and several facilities that include groundwater wells, ground storage tanks, and booster stations. The North Water Treatment Plant serves zones 1, 2 and 4 and has a capacity of 45 million gallons per day (mgd). The NWTP also has a 16 mgd on-site reservoir onsite for storage. The NWTP receives its water from the Salt River Project (SRP) Eastern Canal.

The Santan Vista Water Plant (SVWTP) serves zones 2 and 3 and has a capacity of 48 mgd, 24 mgd of which is owned by the Town; the remainder is owned by the City of Chandler. The Town and the City of Chandler operate the plant through an intergovernmental agreement. SVWTP also includes an onsite 12 mgd reservoir storage.

The Town also relies on groundwater to meet the demands on the system. The Town has nearly 44 mgd of groundwater availability not including reservoir storage. This groundwater is treated using chlorine as a disinfectant and conveyed through the Town's distribution system. The Town also has a total storage capacity of 47.7 million gallons.

The Town has identified a number of water infrastructure projects to meet growth-related demands over the study period including wells, storage reservoirs and pump stations.

Water Level of Service and Growth Demand

Water LOS parameters are typically expressed on a gallons per day basis. The allocation of water service for land use types are based on the 2018 IWRMP level of 406 gallons per day (average daily flow basis) per ERU. The Town obtains water resources based on average daily demand forecasts, whereas the system infrastructure is designed to supply based on peak day demands. A water loss allowance of 7.5% has been included in the average day demand based on the 2018 IWRMP. Peak demands per ERU are based on a system-wide peaking factor of 1.6 times average day demand also based on the 2018 IWRMP. The average day demands with water losses and peak demands have been factored into developing the growth-related increase in demands over the study period. A total of 17,481 ERUs are projected during the IIP planning period based on the LUA and demand per unit:

Table 72: FY 2019- FY 2028 Water ERU and Demand Projections

Description	Average Day gpd [1]	Ave Day w/Losses [2]	Peak Day Demand [3]	ERU per Unit	Unit Growth	ERU Growth	Average Day Water Demand (mgd)	Max Day Water Demand (mgd)
Residential (per unit)	406	439	702	1.00	14,886	14,886	6.534	10.449
Industrial (per 1,000 sf)	112	121	193	0.28	690	193	0.083	0.133
Commercial (per 1,000 sf)	191	206	330	0.47	3,380	1,589	0.696	1.115
Office & Other Services (per 1,000 sf)	85	92	147	0.21	3,870	813	0.356	0.568
Total					**22,826**	**17,481**	**7.669**	**12.265**

[1] From the 2018 IWRMP Master Plan, Table 3-3.
[2] Adjusted to reflect 7.5% water losses, from the 2018 IWRMP
[3] Adjusted to reflect 1.6 average system peaking factor, from the 2018 IWRMP Master Plan.

Water Facility Improvements

Water Resources

The Town is responsible for acquiring adequate water resources to ensure availability of water to existing and future development. The Town currently has adequate water to supply existing development and has identified the following sources to supplement growth. As shown below, the Town has identified 13,090,000 gallons in additional water resources that it will obtain at various costs and reliabilities. However, since growth will only need 7,669,000, the average cost per gallon has been developed to determine the cost recovery required from growth.

Table 73: Water Resources Expansion Projects

Project Number	Description	Capacity Acre-Feet	Firm Capacity [1]	Total Project
WA 0830	Water Rights - WMA Settlement	4,226	3,248	$10,600,000
WA 0940	Water Rights Phase II	2,500	2,500	31,960,000
WA 0980	San Carlos Apache Tribe Water Rights Lease	5,925	5,629	31,210,000
WA 1060	NIA Priority CAP Water Acquisition	1,832	1,282	2,771,000
WA 1200	Water Rights Resiliency and Capacity	2,000	2,000	20,128,000
Total		**16,483**	**14,659**	**$96,669,000**

Total Capacity Added (average gallons per day) [2]	13,090,000
Average cost per gallon	$7.38
10-Year Increase in Demand (average gallons per day)	7,671,000
10-Year Cost Allocation	**$56,597,000**
Less: Current SDF Balance	(2,177,400)
Net 10-Year Cost Allocation	**$54,419,600**

[1] Based on the nature of agreements for water rights, each has been adjusted to reflect the "firm" capacity based on the reliability scores assigned to each source of water. The capacity and reliability score for each is as follows: WA0830 3,066 acre-feet at 70% and 1,160 acre-feet at 95%; WA0980 5,925 acre-feet at 95%; WA1060 1,832 acre-feet at 70%.
[2] One acre-foot is equal to 325,851 gallons.

Production and Treatment Capacity

The Town operates an integrated system consisting of wells, treatment plants, and a distribution system to adequately produce, treat, and distribute water to customers. The water system currently consists of two water treatment plants. Prior to 2007, water production and treatment was provided through wells and the North Water Treatment Plant (NWTP). To meet growth-related demands for water service, the Town constructed the first phase of the SVWTP for 12mgd along with a 5mgd expansion to the NWTP in 2007. Additionally in 2007 the Town constructed 6mgd supply through well projects WA020, WA061 and WA078. The Town constructed Phase II of the SVWTP in 2018. This provided an additional 12 mgd of capacity.

Phase I of the SVWTP along with the NWTP expansion and other capacity related projects was funded in part by the 2007 MPC bonds. In 2016, those bonds were refunded under a 2017 bond issue for $115 million. This 2017 bond funded the remaining costs from the 2007 bonded projects as well as the SVWTP Phase II and WA0620, a reservoir, pump station and well conversion project with capacity of four million gallons.

Because the system is integrated and water from the various sources is used in certain ways to maximize the operational efficiencies, Raftelis used the hybrid average cost methodology. This is a widely accepted methodology used in utility-based SDFs and is promulgated by the American Water Works Association M1 Manual, *Principles of Rates, Fees, and Charges*, Seventh Edition. In this approach the cost for the expansion of the NWTP and the two phases of the SVWTP, along with the well projects, are divided by the sum of the total existing capacity available for growth and future growth. Table 74 shows the total cost of providing each of the facilities and their associated capacities.

Table 74: Average Cost per Gallon for Water Production Capacity

Project #	Description	Year	Total Project	Escalated Amount	mgd Added
[1]	Santan Phase I and NWTP Expansion [2]		$177,415,126	$177,415,126	23.000
WA 0700	Santan Phase II [3]		43,795,233	43,795,233	12.000
WA 0270	Well, 2 MG Reservoir and Pump Station	2024	13,424,000	15,562,000	2.000
WA 0710	Ray and Recker Well (2 mgd)	2019	5,568,000	5,568,000	2.000
WA 0800	Bridges Well (2 mgd)	2020	4,476,000	4,610,000	2.000
WA 0810	Direct System Well (2 mgd)	2022	5,932,000	6,482,000	2.000
WA 0880	Warner and Recker Well (2 mgd)	2019	6,771,000	6,771,000	2.000
WA 1230	New Reservoir and Treatment System	2020	8,586,000	8,844,000	4.000
WA 0620	Reservoir, Pump Station and Well Conversion [3]	2019	19,090,230	19,090,000	2.000
WA 0670	Zone 2 to 4 Interconnect	2019	1,008,000	1,008,000	
WA 1120	Waterline – Power Road Elliot to Warner	2024	2,662,000	3,086,000	
WA 1260	Water Line – Lindsay – Baseline to Harwell	2021	224,000	238,000	
	Total Costs		**$288,951,589**	**$292,469,359**	**51.000**
	Cost per Gallon			**$5.73**	

[1] 2007 bond issue funded the following projects: WA020, WA023, WA025, WA048, WA050, WA058, WA059, WA060, WA061, WA075, WA076, WA078, and land for WA088.
[2] Cost reflects actual principal and interest payments from original 2007 bond issue for payments from 2007 through 2016. When bonds were refunded in 2016, remaining payments beginning FY 2017 of principal and interest were added to represent the total cost of the project.
[3] Cost reflects principal and interest payments from 2016 bond issue associated with this project.

Total Water Resources and Infrastructure Unit Cost

Table 75 summarizes the unit cost of capacity for each fee component.

Table 75: Total Water Resources and Infrastructure

Description	Water Resources (avg day)	Water Infrastructure (max day)
Water Resources	$7.38	
Water Treatment		$5.73
Existing SDF Balance Offset	(0.29)	(0.59)
Net Cost per Gallon	**$7.09**	**$5.14**
Gallons per Day of Capacity per ERU	439	702
IIP and Fee Study per ERU		$1.30
3/4 -inch Fee (Equivalent to one ERU)	**$3,112**	**$3,609**

Water Fee Calculation

Water SDFs are assessed by meter size and increase based on the AWWA 3/4-inch meter capacity relationships. One ERU is equated to a 3/4-inch meter, which is the smallest and most common meter size

available. The following provides the calculated fees by meter size using AWWA equivalent ratios and are the same as the Town's existing equivalent ratios. Raftelis recommends that meter sizes greater than 2-inch be assessed on an individual basis.

Table 76: Calculated Water Resources SDFs

Meter Size	ERU Ratio	Calculated Fees	Current Fees	$ Change	% Change
3/4-inch	1.00	$3,112	$1,563	$1,549	99%
1-inch	1.67	5,197	2,611	2,586	99%
1 1/2-inch	3.33	10,364	5,206	5,158	99%
2-inch	5.33	16,589	8,333	8,256	99%

Table 77: Calculated Water Infrastructure SDFs

Meter Size	ERU Ratio	Calculated Fees	Current Fees	$ Change	% Change
3/4-inch	1.00	$3,609	$4,723	($1,114)	-24%
1-inch	1.67	6,027	7,884	(1,857)	-24%
1 1/2-inch	3.33	12,019	15,719	(3,700)	-24%
2-inch	5.33	19,239	25,158	(5,919)	-24%

SDFs for meter sizes greater than 2 inches should be based on the ratio of their demands to the demand of a 3/4-inch meter or one ERU. For water resources, the SDF is the ratio of average day demand for the development divided by the average day demand for a 3/4-inch meter. In a similar manner, the water infrastructure SDF should be based on the ratio of the development's peak day demand to the peak day demand of a 3/4-inch meter. This study used an average day demand of 439 gallons per day and a peak day demand of 702 gallons per day for a 3/4-inch meter. These values were taken from the 2018 IWRMP.

Revenue Forecast

The water resources and infrastructure SDF revenue forecasts are shown in Tables 78 and 79.

Table 78: Water Resources Revenue Forecast FY 2019 – FY 2028

Description	ERUs Added	3/4-Inch SDF	Revenue Forecast
Single Family	13,249	$3,112	$41,230,888
2+ Units Residential	1,637	3,112	5,094,344
Industrial	193	3,112	600,616
Commercial	1,589	3,112	4,944,968
Office & Other Services	813	3,112	2,530,056
Total	**17,481**		**$54,400,872**

Table 79: Water Infrastructure Revenue Forecast FY 2019 – FY 2028

Description	ERUs Added	3/4-Inch SDF	Revenue Forecast
Single Family	13,249	$3,609	$47,815,641
2+ Units Residential	1,637	3,609	5,907,933
Industrial	193	3,609	696,537
Commercial	1,589	3,609	5,734,701
Office & Other Services	813	3,609	2,934,117
Total	**17,481**		**$63,088,929**

Section 10. Wastewater

Description of Service

Pursuant to ARS §9-463.05.T.7(a), wastewater facilities permitted in the IIP include collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities.

The Town provides central wastewater collection, treatment, and disposal service throughout the Town limits. The following provides an analysis of the resource and facility costs included in the IIP and SDF calculations.

Wastewater SDF Service Areas

The Town has two wastewater treatment plants each of which serve specific areas as provided in Figure 1 on page 12. The service areas are:

- Neely
- Greenfield

Wastewater Infrastructure

The Town owns the Neely Water Reclamation Plant (WRP) and the Greenfield WRP. The Neely WRP serves the North and West areas of the Town and has a permitted capacity of 11 mgd. The Greenfield WRP is co-owned and operated by the City of Mesa and Queen Creek. The Town currently owns 8 mgd capacity in the Greenfield WRP. Each of the WRPs are capable of producing Class A+ reuse water.

The Town's wastewater collection system consists of over 880 miles of collection mains which convey wastewater to the Neely and Greenfield WRPs. The collection system includes several lift stations which are used to convey wastewater through the collection system to the WRPs.

Wastewater Level of Service and Growth Demand

The LOS parameters for wastewater are typically expressed on an average gallon per day basis. According to the 2018 IWRMP, the allocation of wastewater service for both the Neely and the Greenfield WRP is 154 gallons per day (average daily flow basis) per ERU.

As an industry standard, wastewater treatment plant capacities are typically defined in terms of the average daily flow for the population equivalents that are served as well as anticipated hydraulic loadings (BOD/COD) of a specific service area. A wastewater treatment plant's actual capacity is a complex function of physical constraints (i.e. process area volumes and equipment capacities), influent quality characteristics, and treatment plant operational factors (i.e. loading rates, sludge age and recycle rates) which can vary significantly. Accounting for this variability may be impractical for assessing the design capacity. As a result,

the use of average day demand for design purposes is most appropriate. Raftelis used average day treatment plant capacities and average day demands per ERU to calculate the wastewater SDF.

Based on the LUA, 5,321 ERUs are projected for the Neely wastewater fee area and 12,152 for the Greenfield fee area during the IIP planning period.

Table 80: FY 2019- FY 2028 Neely Wastewater ERU and Demand Projections

Description	GPD [1]	ERU per Unit	Unit Growth	ERU Growth	Sewer Demand (mgd)
Residential (Units)	154	1.00	4,625	4,625	0.712
Industrial (1,000 sf)	42	0.27	230	62	0.010
Commercial (1,000 sf)	72	0.47	840	395	0.060
Office & Other Services (1,000 sf)	32	0.21	1,140	239	0.036
Total			**6,835**	**5,321**	**0.818**

[1] Assumes a return to sewer ratio of 35%, based on average day water demands. From 2018 IWRMP.

The LOS is applied to the project ERUs to derive the project wastewater demand to meet the LUA Period projections:

Table 81: FY 2019- FY 2028 Greenfield Wastewater ERU and Demand Projections

Description	gpd [1]	ERU per Unit	Unit Growth	ERU Growth	Sewer Demand (mgd)
Residential (Units)	154	1.00	10,261	10,261	1.580
Industrial (1,000 sf)	42	0.27	460	124	0.019
Commercial (1,000 sf)	72	0.47	2,540	1,194	0.183
Office & Other Services (1,000 sf)	32	0.21	2,730	573	0.087
Total				**12,152**	**1.869**

[1] Assumes a return to sewer ratio of 35%, based on average day water demands. From 2018 IWRMP.

Wastewater Facility Improvements

The primary wastewater infrastructure needs for the Town over the next several years include principal and interest payments on the Greenfield WWTP expansion, reuse and recharge facilities, and collection system expansions.

Greenfield WRP Expansion

In joint effort with Mesa and Queen Creek, the Town is designing improvements as part of the Phase III Expansion for the Greenfield WRP. The expansion will increase the Town's capacity from 8 mgd to 12 mgd. Planned improvements are part of the original plant master plan developed in 2004 and construction is scheduled to be completed in 2020.

The eligible impact fee costs include principal and interest payments on the recently issued 2018 revenue bond, which total $47,077,100. Table 82 shows the average cost per gallon for this facility expansion.

Table 82: Greenfield WRP Expansion (8 mgd to 12 mgd)

Description	Amount
Project Cost (Principal and Interest) [1]	$55,010,486
Additional Capacity (average day gallons)	4,000,000
Cost per Gallon of Capacity	$13.75
10-Year Increase in Gallons per Average Day	1,869,000
10-Year Share of Cost	**$25,700,000**

[1] From Town's Current Debt Position publication, page 46. Amount reflects payments beginning FY 2019.

Other Greenfield Service Area Expansion Projects

The Town has additional projects in the Greenfield service area associated with reuse and recharge facilities. The unit cost is calculated below.

Table 83: Greenfield Reuse/Recharge Expansion Projects

Project	Description	Year	Total Project	Escalated Amount
WW0720	Germann and Higley 18" Main	2019	$4,709,000	$4,709,000
WW0770	South Recharge Site - Phase II	2019	6,269,000	6,269,000
WW0780	GWRP Pump Station Expansion	2019	728,000	728,000
WW0940	Recharge Facility and 4 Recharge Wells Ph. 1	2019	2,277,000	2,277,000
WW0940	Recharge Facility and 4 Recharge Wells Ph. 2	2024	6,884,000	7,980,000
Total				**$21,963,000**
10-Year Increase in Demand (average gallons per day)				1,869,000
Average cost per gallon				**$11.75**

Total Greenfield Infrastructure Unit Cost

Table 84 summarizes the unit cost of capacity for each fee component.

Table 84: Total Greenfield Unit Cost Summary

Description	Total Cost
Wastewater Treatment	$25,700,000
Reclaimed Water Reuse/Recharge	21,963,000
Existing SDF Balance Offset	(16,286,700)
Total Greenfield IIP Costs	**$31,376,300**
10-Year Increase in Demand (average gallons per day)	1,869,000
Net Cost per Gallon	**$16.78**
Average Day Gallons of Demand per ERU	154
IIP and Fee Study Cost per ERU	$1.30
3/4-inch Fee (Equivalent to one ERU)	**$2,586**

Neely Service Area Expansion Projects

The Neely service area is nearly built-out. However, there are expansion projects needed to expand capacity in certain areas of the system. Table 85 summarizes these projects.

Table 85: Neely Collection and Reuse/Recharge Expansion Projects

Project	Description	Year	Total Project	Escalated Amount
WW0700	Candlewood Lift Station & Force Main (10% growth share)	2019	$988,000	$988,000
WW0690	Relief Sewers	2020	2,940,000	3,028,000
WW0890	Recovery Well	2019	1,806,000	1,806,000
Total			**$5,734,000**	**$5,822,000**
10-Year Increase in Demand (average gallons per day)				818,000
Average cost per gallon				**$7.12**

Table 86: Total Neely Unit Cost Summary

Description	Total Cost
Wastewater Collection and Reuse/Recharge	$5,822,000
Existing SDF Balance Offset	(4,991,200)
Total Neely IIP Costs	**$830,800**
10-Year Increase in Demand (average gallons per day)	818,000
Net Cost per Gallon	**$1.02**
Average Day Gallons of Demand per ERU	154
IIP and Fee Study Cost per ERU	$1.30
3/4-inch Fee (Equivalent to one ERU)	**$157**

Wastewater Fee Calculation

Similar to water fees, the wastewater SDFs are assessed by meter size and increase based on the AWWA meter capacity relationships. One ERU is equated to a 3/4-inch meter, which is the smallest and most common meter size available. The following provides the calculated fees by meter size using AWWA equivalent ratios and are the same as the Town's existing equivalent ratios. Raftelis recommends that meter sizes greater than 2" be assessed on an individual basis.

Table 87: Calculated Greenfield SDF

Meter Size	ERU Ratio	Calculated Fees	Current Fees	$ Change	% Change
3/4-inch	1.00	$2,586	$3,182	($596)	-19%
1-inch	1.67	4,318	5,313	(995)	-19%
1.5-inch	3.33	8,610	10,593	(1,983)	-19%
2-inch	5.33	13,780	16,953	(3,173)	-19%

Table 88: Calculated Neely SDF

Meter Size	ERU Ratio	Calculated Fees	Current Fees	$ Change	% Change
3/4-inch	1.00	$157	$1,933	($1,776)	-92%
1-inch	1.67	262	3,226	(2,964)	-92%
1.5-inch	3.33	522	6,431	(5,909)	-92%
2-inch	5.33	834	10,292	(9,458)	-92%

SDFs for meter sizes greater than 2 inches should be based on the ratio of their average days demands to the average day demand of a 3/4-inch meter or one ERU. This study used an average day demand of 154 gallons per day fo a 3/4-inch meter. These values were taken from the 2018 IWRMP

Revenue Forecast

The Greenfield and Neely revenue forecasts are shown in Tables 89 and 90, respectively.

Table 89: Greenfield Revenue Forecast FY 2019 – FY 2028

Description	ERUs Added	3/4-Inch SDF	Revenue Forecast
Single Family	9,133	$2,586	$23,617,938
2+ Units Residential	1,128	2,586	2,917,008
Industrial	124	2,586	320,664
Commercial	1,194	2,586	3,087,684
Office & Other Services	573	2,586	1,481,778
Total	**12,152**		**$31,425,072**

Table 90: Neely Revenue Forecast
FY 2019 – FY 2028

Description	ERUs Added	3/4-Inch SDF	Revenue Forecast
Single Family	4,116	$157	$646,212
2+ Units Residential	509	157	79,913
Industrial	62	157	9,734
Commercial	395	157	62,015
Office & Other Services	239	157	37,523
Total	**5,321**		**$835,397**

Section 11. General Government

Description of Service

Pursuant to ARS §9-463.05(R), a municipality may continue to assess a development fee adopted before January 1, 2012 for any facility that was financed before June 1, 2011 if:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.

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

S. Through August 1, 2014, a development fee adopted before January 1, 2012 may be used to finance construction of a facility and may be pledged to repay debt service obligations if:

1. The facility that is being financed is a facility that is described under subsection T, paragraph 7, subdivisions (a) through (g) of this section.

2. The facility was included in an infrastructure improvements plan adopted before June 1, 2011.

3. The development fees are used for the payment of principal and interest on the portion of the bonds, notes or other debt service obligations issued to finance construction of the necessary public services or facility expansions identified in the infrastructure improvement plan.

The Town has a number of public facilities outside of the categories discussed in this report. Currently the Town has two facilities funded by impact fees with outstanding principal and interest payments. The South Area Service Center and the Perry Branch Library are funded by a combination of PFMPC loans and internal borrowing. The 2011 PFMPC loan has outstanding principal and interest of $1.7 million, the 2014 PFMPC loan has outstanding principal and interest of $4.7 million and there is an interfund loan of $6.5 million.

Under State Statute, SDFs can no longer be assessed for governmental facilities built after 2012. However, for facilities constructed prior to 2012 financed with debt, SDFs can be used to recover the remaining principal and interest on the loan.

Since the PFMPC Loans are set to be retired in 2021, the remaining debt service on these loans can be used to establish the cost per service unit for residential population and non-residential jobs.

Calculation of Fee

Raftelis used a functional population basis to allocate costs between residential and non-residential land uses. This approach is consistent with the Town's previous SDC study[2]. The functional population can be defined as a measure of the equivalent population to be served by governmental facilities. The functional population works well when specific measures may not be available, or data is unreliable. In addition, the functional population method can result in more stable fees over time. More traditional methods such as population or square feet are more one-dimensional and do not consider other factors that drive demands for service. The functional population concept is to capture the weighted demands of residents who work in and outside of the Town, who do not work, and those jobs that are filled by those who live in the Town and those that are commuters. Each of these groups place a different demand for facilities on a daily basis. These demands are dependent on the amount of time spent in the Town. Measuring that demand by assigning hours to each of these groups weights the impact both residents and non-residents place on facilities. Appendix C shows the derivation of the functional population used for the General Government SDF.

Table 91: General Government PFMPC Loans and Cost per Service Unit

Description	Total	Residential	Non-residential
Functional Population		78%	22%
PFMPC Loan Cost Allocation	$6,404,742	$4,995,700	$1,409,000
Service Unit Growth (3-Years)		15,818	5,368
PFMPC Cost per Service Unit		$316.00	$262.00
IIP and Study Cost per Service Unit		0.38	0.28
Total Cost per Service Unit		**$316.38**	**$262.28**

The cost per service unit identified in Table 91 is designed to recover the funds necessary from growth in 2019 through 2021. However, the Town still has the interfund loan of $6.5 million that will be recovered from SDFs as well. The rates calculated above will be left in place and charged to development until the internal loan is fully repaid. With growth identified in the LUA section, it is anticipated that after 2021 it will take between three to four years for the internal loan to be fully repaid at the rates identified in Table 90.

The cost per service unit identified in Table 91 are converted to SDFs on Table 92, using the appropriate persons per household and jobs per square foot factors:

[2] Town of Gilbert Land Use Assumptions, Infrastructure Improvements Plan, and Development Fees prepared by TishlerBise, May 2014.

Table 92: Calculated General Government SDF

Type	Service Units per Development Unit	Calculated Fees	Current Fees	$ Change	% Change
Single Family Unit	3.17	$1,002	$1,155	($153)	-13%
2+ Units per Structure	2.06	651	794	(143)	-18%
Industrial sf	0.00163	0.430	0.200	0.230	115%
Commercial sf	0.00234	0.610	0.300	0.310	103%
Office & Other Services sf	0.00297	0.780	0.400	0.380	95%

Revenue Forecast

The general government revenue forecast is provided in Table 93 below:

Table 93: General Government Revenue Forecast FY 2019 – FY 2028

Description	7-yr Increase	Gen Gov SDF	Revenue Forecast
Single Family (Units)	9,918	$1,002	$9,937,836
2+ Unit Residential (Units)	1,226	651	798,126
Industrial (sf)	480,000	0.430	206,400
Commercial (sf)	2,300,000	0.610	1,403,000
Office & Other Services (sf)	2,660,000	0.780	2,074,800
Total			**$14,420,162**

Note: The General Government SDF will sunset once $12.9 million has been collected (PFMPC Loans and Internal Loans).

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APPENDIX A:

Existing Debt Service Schedules

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Public Facilities Municipal Property Corporation

Combined Debt Service
[Fire Portion]

Date	Principal	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-
01/01/2019	-	238,026.72	238,026.72	-
07/01/2019	468,226.10	238,026.72	706,252.82	944,279.54
01/01/2020	-	227,373.78	227,373.78	-
07/01/2020	489,862.80	227,373.78	717,236.58	944,610.36
01/01/2021	-	215,512.32	215,512.32	-
07/01/2021	512,910.00	215,512.32	728,422.32	943,934.64
01/01/2022	-	202,889.77	202,889.77	-
07/01/2022	1,262,659.50	202,889.77	1,465,549.27	1,668,439.04
01/01/2023	-	176,123.28	176,123.28	-
07/01/2023	1,317,475.00	176,123.28	1,493,598.28	1,669,721.56
01/01/2024	-	148,186.41	148,186.41	-
07/01/2024	1,373,701.50	148,186.41	1,521,887.91	1,670,074.32
01/01/2025	-	113,843.87	113,843.87	-
07/01/2025	1,444,928.00	113,843.87	1,558,771.87	1,672,615.74
01/01/2026	-	77,720.67	77,720.67	-
07/01/2026	1,517,565.50	77,720.67	1,595,286.17	1,673,006.84
01/01/2027	-	39,781.53	39,781.53	-
07/01/2027	1,591,261.25	39,781.53	1,631,042.78	1,670,824.31
Total	**$9,978,589.65**	**$2,878,916.70**	**$12,857,506.35**	**-**

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculations	7/01/2016
Average Life	7.957 Years
Average Coupon	4.8249391%

Par Amounts Of Selected Issues

Pub Fac MPC 2009 -Fire	249,393.75
Pub Fac MPC 2011 -Fire	462,134.40
Pub Fac MPC 2017	6,450,000.00
Pub Fac MPC 2017 Ref -Fire	2,817,061.50
TOTAL	**9,978,589.65**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2017
[Fire Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	70,426.54	70,426.54	-
07/01/2019	70,902.75	5.000%	70,426.54	141,329.29	211,755.83
01/01/2020	-	-	68,653.97	68,653.97	-
07/01/2020	335,818.00	5.000%	68,653.97	404,471.97	473,125.94
01/01/2021	-	-	60,258.52	60,258.52	-
07/01/2021	352,750.00	5.000%	60,258.52	413,008.52	473,267.04
01/01/2022	-	-	51,439.77	51,439.77	-
07/01/2022	302,659.50	5.000%	51,439.77	354,099.27	405,539.04
01/01/2023	-	-	43,873.28	43,873.28	-
07/01/2023	317,475.00	5.000%	43,873.28	361,348.28	405,221.56
01/01/2024	-	-	35,936.41	35,936.41	-
07/01/2024	333,701.50	5.000%	35,936.41	369,637.91	405,574.32
01/01/2025	-	-	27,593.87	27,593.87	-
07/01/2025	349,928.00	5.000%	27,593.87	377,521.87	405,115.74
01/01/2026	-	-	18,845.67	18,845.67	-
07/01/2026	367,565.50	5.000%	18,845.67	386,411.17	405,256.84
01/01/2027	-	-	9,656.53	9,656.53	-
07/01/2027	386,261.25	5.000%	9,656.53	395,917.78	405,574.31
Total	**$2,817,061.50**	**-**	**$773,369.12**	**$3,590,430.62**	**-**

Public Facilities Municipal Property Corporation
Revenue Bonds, Series 20017
[Fire Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	151,450.00	151,450.00	-
07/01/2019	-	-	151,450.00	151,450.00	302,900.00
01/01/2020	-	-	151,450.00	151,450.00	-
07/01/2020	-	-	151,450.00	151,450.00	302,900.00
01/01/2021	-	-	151,450.00	151,450.00	-
07/01/2021	-	-	151,450.00	151,450.00	302,900.00
01/01/2022	-	-	151,450.00	151,450.00	-
07/01/2022	960,000.00	4.000%	151,450.00	1,111,450.00	1,262,900.00
01/01/2023	-	-	132,250.00	132,250.00	-
07/01/2023	1,000,000.00	4.000%	132,250.00	1,132,250.00	1,264,500.00
01/01/2024	-	-	112,250.00	112,250.00	-
07/01/2024	1,040,000.00	5.000%	112,250.00	1,152,250.00	1,264,500.00
01/01/2025	-	-	86,250.00	86,250.00	-
07/01/2025	1,095,000.00	5.000%	86,250.00	1,181,250.00	1,267,500.00
01/01/2026	-	-	58,875.00	58,875.00	-
07/01/2026	1,150,000.00	5.000%	58,875.00	1,208,875.00	1,267,750.00
01/01/2027	-	-	30,125.00	30,125.00	-
07/01/2027	1,205,000.00	5.000%	30,125.00	1,235,125.00	1,265,250.00
Total	**$6,450,000.00**	**-**	**$2,051,100.00**	**$8,501,100.00**	**-**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2011
[Fire Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	10,228.40	10,228.40	-
07/01/2019	147,929.60	4.000%	10,228.40	158,158.00	168,386.40
01/01/2020	-	-	7,269.81	7,269.81	-
07/01/2020	154,044.80	4.500%	7,269.81	161,314.61	168,584.42
01/01/2021	-	-	3,803.80	3,803.80	-
07/01/2021	160,160.00	4.750%	3,803.80	163,963.80	167,767.60
Total	**$462,134.40**	**-**	**$42,604.02**	**$504,738.42**	**-**

Public Facilities Municipal Property Corporation
Revenue Bonds, Series 2009
[Fire Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	5,921.78	5,921.78	-
07/01/2019	249,393.75	4.749%	5,921.78	255,315.53	261,237.31
Total	**$249,393.75**	**-**	**$11,843.56**	**$261,237.31**	**-**

Public Facilities Municipal Property Corporation
Combined Debt Service
[Police Portion]

Date	Principal	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-
01/01/2019	-	166,915.79	166,915.79	-
07/01/2019	2,134,681.80	166,915.79	2,301,597.59	2,468,513.38
01/01/2020	-	119,656.48	119,656.48	-
07/01/2020	2,221,354.50	119,656.48	2,341,010.98	2,460,667.46
01/01/2021	-	67,284.58	67,284.58	-
07/01/2021	2,528,187.60	67,284.58	2,595,472.18	2,662,756.76
01/01/2022	-	5,723.63	5,723.63	-
07/01/2022	33,676.50	5,723.63	39,400.13	45,123.76
01/01/2023	-	4,881.72	4,881.72	-
07/01/2023	35,325.00	4,881.72	40,206.72	45,088.44
01/01/2024	-	3,998.59	3,998.59	-
07/01/2024	37,130.50	3,998.59	41,129.09	45,127.68
01/01/2025	-	3,070.33	3,070.33	-
07/01/2025	38,936.00	3,070.33	42,006.33	45,076.66
01/01/2026	-	2,096.93	2,096.93	-
07/01/2026	40,898.50	2,096.93	42,995.43	45,092.36
01/01/2027	-	1,074.47	1,074.47	-
07/01/2027	42,978.75	1,074.47	44,053.22	45,127.69
Total	**$7,113,169.15**	**$749,405.04**	**$7,862,574.19**	**-**

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculations	7/01/2016
Average Life	4.205 Years
Average Coupon	4.7379397%

Par Amounts Of Selected Issues

Pub Fac MPC 2009 -Police	27,750.25
Pub Fac MPC 2011 -Police	3,794,358.30
Pub Fac MPC 2014 -Police	2,977,610.10
Pub Fac MPC 2017 Ref -Police	313,450.50
TOTAL	**7,113,169.15**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2017
[Police Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	7,836.26	7,836.26	-
07/01/2019	7,889.25	5.000%	7,836.26	15,725.51	23,561.77
01/01/2020	-	-	7,639.03	7,639.03	-
07/01/2020	37,366.00	5.000%	7,639.03	45,005.03	52,644.06
01/01/2021	-	-	6,704.88	6,704.88	-
07/01/2021	39,250.00	5.000%	6,704.88	45,954.88	52,659.76
01/01/2022	-	-	5,723.63	5,723.63	-
07/01/2022	33,676.50	5.000%	5,723.63	39,400.13	45,123.76
01/01/2023	-	-	4,881.72	4,881.72	-
07/01/2023	35,325.00	5.000%	4,881.72	40,206.72	45,088.44
01/01/2024	-	-	3,998.59	3,998.59	-
07/01/2024	37,130.50	5.000%	3,998.59	41,129.09	45,127.68
01/01/2025	-	-	3,070.33	3,070.33	-
07/01/2025	38,936.00	5.000%	3,070.33	42,006.33	45,076.66
01/01/2026	-	-	2,096.93	2,096.93	-
07/01/2026	40,898.50	5.000%	2,096.93	42,995.43	45,092.36
01/01/2027	-	-	1,074.47	1,074.47	-
07/01/2027	42,978.75	5.000%	1,074.47	44,053.22	45,127.69
Total	**$313,450.50**	**-**	**$86,051.68**	**$399,502.18**	**-**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2014
[Police Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	74,440.25	74,440.25	-
07/01/2019	884,465.10	5.000%	74,440.25	958,905.35	1,033,345.60
01/01/2020	-	-	52,328.63	52,328.63	-
07/01/2020	919,202.40	5.000%	52,328.63	971,531.03	1,023,859.66
01/01/2021	-	-	29,348.57	29,348.57	-
07/01/2021	1,173,942.60	5.000%	29,348.57	1,203,291.17	1,232,639.74
Total	**$2,977,610.10**	**-**	**$312,234.90**	**$3,289,845.00**	**-**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2011
[Police Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	83,980.36	83,980.36	-
07/01/2019	1,214,577.20	4.000%	83,980.36	1,298,557.56	1,382,537.92
01/01/2020	-	-	59,688.82	59,688.82	-
07/01/2020	1,264,786.10	4.500%	59,688.82	1,324,474.92	1,384,163.74
01/01/2021	-	-	31,231.13	31,231.13	-
07/01/2021	1,314,995.00	4.750%	31,231.13	1,346,226.13	1,377,457.26
Total	**$3,794,358.30**	**-**	**$349,800.62**	**$4,144,158.92**	**-**

Public Facilities Municipal Property Corporation
Revenue Bonds, Series 2009
[Police Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	658.92	658.92	-
07/01/2019	27,750.25	4.749%	658.92	28,409.17	29,068.09
Total	**$27,750.25**	**-**	**$1,317.84**	**$29,068.09**	**-**

Public Facilities Municipal Property Corporation
Combined Debt Service Schedules
[Parks Portion]

Date	Principal	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-
01/01/2019	-	647,542.91	647,542.91	-
07/01/2019	3,574,707.05	647,542.91	4,222,249.96	4,869,792.87
01/01/2020	-	560,372.69	560,372.69	-
07/01/2020	3,735,749.20	560,372.69	4,296,121.89	4,856,494.58
01/01/2021	-	466,978.96	466,978.96	-
07/01/2021	4,236,650.30	466,978.96	4,703,629.26	5,170,608.22
01/01/2022	-	361,062.70	361,062.70	-
07/01/2022	2,124,408.00	361,062.70	2,485,470.70	2,846,533.40
01/01/2023	-	307,952.50	307,952.50	-
07/01/2023	2,228,400.00	307,952.50	2,536,352.50	2,844,305.00
01/01/2024	-	252,242.50	252,242.50	-
07/01/2024	2,342,296.00	252,242.50	2,594,538.50	2,846,781.00
01/01/2025	-	193,685.10	193,685.10	-
07/01/2025	2,456,192.00	193,685.10	2,649,877.10	2,843,562.20
01/01/2026	-	132,280.30	132,280.30	-
07/01/2026	2,579,992.00	132,280.30	2,712,272.30	2,844,552.60
01/01/2027	-	67,780.50	67,780.50	-
07/01/2027	2,711,220.00	67,780.50	2,779,000.50	2,846,781.00
Total	**$25,989,614.55**	**$5,979,796.32**	**$31,969,410.87**	**-**

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculations	7/01/2016
Average Life	6.605 Years
Average Coupon	4.9923194%

Par Amounts Of Selected Issues

Pub Fac MPC 2009 -Parks	1,750,532.00
Pub Fac MPC 2014 -Parks	4,465,746.55
Pub Fac MPC 2017 Ref -Parks	19,773,336.00
TOTAL	**25,989,614.55**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2017
[Parks Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	494,333.40	494,333.40	-
07/01/2019	497,676.00	5.000%	494,333.40	992,009.40	1,486,342.80
01/01/2020	-	-	481,891.50	481,891.50	-
07/01/2020	2,357,152.00	5.000%	481,891.50	2,839,043.50	3,320,935.00
01/01/2021	-	-	422,962.70	422,962.70	-
07/01/2021	2,476,000.00	5.000%	422,962.70	2,898,962.70	3,321,925.40
01/01/2022	-	-	361,062.70	361,062.70	-
07/01/2022	2,124,408.00	5.000%	361,062.70	2,485,470.70	2,846,533.40
01/01/2023	-	-	307,952.50	307,952.50	-
07/01/2023	2,228,400.00	5.000%	307,952.50	2,536,352.50	2,844,305.00
01/01/2024	-	-	252,242.50	252,242.50	-
07/01/2024	2,342,296.00	5.000%	252,242.50	2,594,538.50	2,846,781.00
01/01/2025	-	-	193,685.10	193,685.10	-
07/01/2025	2,456,192.00	5.000%	193,685.10	2,649,877.10	2,843,562.20
01/01/2026	-	-	132,280.30	132,280.30	-
07/01/2026	2,579,992.00	5.000%	132,280.30	2,712,272.30	2,844,552.60
01/01/2027	-	-	67,780.50	67,780.50	-
07/01/2027	2,711,220.00	5.000%	67,780.50	2,779,000.50	2,846,781.00
Total	**$19,773,336.00**	**-**	**$5,428,382.40**	**$25,201,718.40**	**-**

Public Facilities Municipal Property Corporation

Revenue Refunding Bonds, Series 2014
[Parks Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	111,643.66	111,643.66	-
07/01/2019	1,326,499.05	5.000%	111,643.66	1,438,142.71	1,549,786.37
01/01/2020	-	-	78,481.19	78,481.19	-
07/01/2020	1,378,597.20	5.000%	78,481.19	1,457,078.39	1,535,559.58
01/01/2021	-	-	44,016.26	44,016.26	-
07/01/2021	1,760,650.30	5.000%	44,016.26	1,804,666.56	1,848,682.82
Total	**$4,465,746.55**	**-**	**$468,282.22**	**$4,934,028.77**	**-**

Public Facilities Municipal Property Corporation
Revenue Bonds, Series 2009
[Parks Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	41,565.85	41,565.85	-
07/01/2019	1,750,532.00	4.749%	41,565.85	1,792,097.85	1,833,663.70
Total	**$1,750,532.00**	**-**	**$83,131.70**	**$1,833,663.70**	**-**

Water Resources Municipal Property Corporation
Combined Debt Service

Date	Principal	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-
01/01/2019	-	3,103,581.25	3,103,581.25	-
07/01/2019	7,225,000.00	3,103,581.25	10,328,581.25	13,432,162.50
01/01/2020	-	2,932,656.25	2,932,656.25	-
07/01/2020	7,560,000.00	2,932,656.25	10,492,656.25	13,425,312.50
01/01/2021	-	2,743,656.25	2,743,656.25	-
07/01/2021	7,950,000.00	2,743,656.25	10,693,656.25	13,437,312.50
01/01/2022	-	2,544,906.25	2,544,906.25	-
07/01/2022	8,340,000.00	2,544,906.25	10,884,906.25	13,429,812.50
01/01/2023	-	2,336,406.25	2,336,406.25	-
07/01/2023	8,780,000.00	2,336,406.25	11,116,406.25	13,452,812.50
01/01/2024	-	2,116,906.25	2,116,906.25	-
07/01/2024	9,200,000.00	2,116,906.25	11,316,906.25	13,433,812.50
01/01/2025	-	1,886,906.25	1,886,906.25	-
07/01/2025	9,655,000.00	1,886,906.25	11,541,906.25	13,428,812.50
01/01/2026	-	1,645,531.25	1,645,531.25	-
07/01/2026	10,155,000.00	1,645,531.25	11,800,531.25	13,446,062.50
01/01/2027	-	1,428,931.25	1,428,931.25	-
07/01/2027	10,575,000.00	1,428,931.25	12,003,931.25	13,432,862.50
01/01/2028	-	1,164,556.25	1,164,556.25	-
07/01/2028	11,105,000.00	1,164,556.25	12,269,556.25	13,434,112.50
01/01/2029	-	998,650.00	998,650.00	-
07/01/2029	11,445,000.00	998,650.00	12,443,650.00	13,442,300.00
01/01/2030	-	795,675.00	795,675.00	-
07/01/2030	11,835,000.00	795,675.00	12,630,675.00	13,426,350.00
01/01/2031	-	542,550.00	542,550.00	-
07/01/2031	10,285,000.00	542,550.00	10,827,550.00	11,370,100.00
01/01/2032	-	319,600.00	319,600.00	-
07/01/2032	2,950,000.00	319,600.00	3,269,600.00	3,589,200.00
01/01/2033	-	260,600.00	260,600.00	-
07/01/2033	3,070,000.00	260,600.00	3,330,600.00	3,591,200.00
01/01/2034	-	199,200.00	199,200.00	-
07/01/2034	3,190,000.00	199,200.00	3,389,200.00	3,588,400.00
01/01/2035	-	135,400.00	135,400.00	-
07/01/2035	3,320,000.00	135,400.00	3,455,400.00	3,590,800.00
01/01/2036	-	69,000.00	69,000.00	-
07/01/2036	3,450,000.00	69,000.00	3,519,000.00	3,588,000.00
Total	**$140,090,000.00**	**$50,449,425.00**	**$190,539,425.00**	**-**

Town of Gilbert, Arizona

[illegible]

[illegible]

Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	**$37,460,000.00**	**-**	**$13,235,485.83**	**$50,695,485.83**	**-**

Yield Statistics

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

IRS Form 8038

[illegible]	[illegible]
[illegible]	[illegible]

$115,940,000
Senior Lien Water and Wastewater Utility System Revenue and Revenue Refunding Bonds, Series 2016

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	2,262,406.25	2,262,406.25	-
07/01/2019	5,285,000.00	5.000%	2,262,406.25	7,547,406.25	9,809,812.50
01/01/2020	-	-	2,130,281.25	2,130,281.25	-
07/01/2020	5,545,000.00	5.000%	2,130,281.25	7,675,281.25	9,805,562.50
01/01/2021	-	-	1,991,656.25	1,991,656.25	-
07/01/2021	5,835,000.00	5.000%	1,991,656.25	7,826,656.25	9,818,312.50
01/01/2022	-	-	1,845,781.25	1,845,781.25	-
07/01/2022	6,115,000.00	5.000%	1,845,781.25	7,960,781.25	9,806,562.50
01/01/2023	-	-	1,692,906.25	1,692,906.25	-
07/01/2023	6,445,000.00	5.000%	1,692,906.25	8,137,906.25	9,830,812.50
01/01/2024	-	-	1,531,781.25	1,531,781.25	-
07/01/2024	6,750,000.00	5.000%	1,531,781.25	8,281,781.25	9,813,562.50
01/01/2025	-	-	1,363,031.25	1,363,031.25	-
07/01/2025	7,080,000.00	5.000%	1,363,031.25	8,443,031.25	9,806,062.50
01/01/2026	-	-	1,186,031.25	1,186,031.25	-
07/01/2026	7,455,000.00	4.000%	1,186,031.25	8,641,031.25	9,827,062.50
01/01/2027	-	-	1,036,931.25	1,036,931.25	-
07/01/2027	7,740,000.00	5.000%	1,036,931.25	8,776,931.25	9,813,862.50
01/01/2028	-	-	843,431.25	843,431.25	-
07/01/2028	8,125,000.00	2.250%	843,431.25	8,968,431.25	9,811,862.50
01/01/2029	-	-	752,025.00	752,025.00	-
07/01/2029	8,315,000.00	3.000%	752,025.00	9,067,025.00	9,819,050.00
01/01/2030	-	-	627,300.00	627,300.00	-
07/01/2030	8,550,000.00	4.000%	627,300.00	9,177,300.00	9,804,600.00
01/01/2031	-	-	456,300.00	456,300.00	-
07/01/2031	6,835,000.00	4.000%	456,300.00	7,291,300.00	7,747,600.00
01/01/2032	-	-	319,600.00	319,600.00	-
07/01/2032	2,950,000.00	4.000%	319,600.00	3,269,600.00	3,589,200.00
01/01/2033	-	-	260,600.00	260,600.00	-
07/01/2033	3,070,000.00	4.000%	260,600.00	3,330,600.00	3,591,200.00
01/01/2034	-	-	199,200.00	199,200.00	-
07/01/2034	3,190,000.00	4.000%	199,200.00	3,389,200.00	3,588,400.00
01/01/2035	-	-	135,400.00	135,400.00	-
07/01/2035	3,320,000.00	4.000%	135,400.00	3,455,400.00	3,590,800.00
01/01/2036	-	-	69,000.00	69,000.00	-
07/01/2036	3,450,000.00	4.000%	69,000.00	3,519,000.00	3,588,000.00
Total	**$106,055,000.00**	**-**	**$37,407,325.00**	**$143,462,325.00**	**-**

Public Facilities Municipal Property Corporation
Combined Debt Service
[General SDF Portion]

Date	Principal	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-
01/01/2019	-	140,881.00	140,881.00	-
07/01/2019	1,763,347.75	140,881.00	1,904,228.75	2,045,109.75
01/01/2020	-	99,303.77	99,303.77	-
07/01/2020	1,833,637.60	99,303.77	1,932,941.37	2,032,245.14
01/01/2021	-	54,767.88	54,767.88	-
07/01/2021	2,217,852.10	54,767.88	2,272,619.98	2,327,387.86
Total	**$5,814,837.45**	**$589,905.30**	**$6,404,742.75**	**-**

Yield Statistics

Base date for Avg. Life & Avg. Coupon Calculations	7/01/2016
Average Life	4.078 Years
Average Coupon	4.8639469%

Par Amounts Of Selected Issues

Pub Fac MPC 2011 -General SDF	1,566,051.60
Pub Fac MPC 2014 -General SDF	4,248,785.85
TOTAL	**5,814,837.45**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2014
[General SDF Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	106,219.65	106,219.65	-
07/01/2019	1,262,053.35	5.000%	106,219.65	1,368,273.00	1,474,492.65
01/01/2020	-	-	74,668.31	74,668.31	-
07/01/2020	1,311,620.40	5.000%	74,668.31	1,386,288.71	1,460,957.02
01/01/2021	-	-	41,877.80	41,877.80	-
07/01/2021	1,675,112.10	5.000%	41,877.80	1,716,989.90	1,758,867.70
Total	**$4,248,785.85**	**-**	**$445,531.52**	**$4,694,317.37**	**-**

Public Facilities Municipal Property Corporation
Revenue Refunding Bonds, Series 2011
[General SDF Portion]

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
07/01/2018	-	-	-	-	-
01/01/2019	-	-	34,661.35	34,661.35	-
07/01/2019	501,294.40	4.000%	34,661.35	535,955.75	570,617.10
01/01/2020	-	-	24,635.46	24,635.46	-
07/01/2020	522,017.20	4.500%	24,635.46	546,652.66	571,288.12
01/01/2021	-	-	12,890.08	12,890.08	-
07/01/2021	542,740.00	4.750%	12,890.08	555,630.08	568,520.16
Total	**$1,566,051.60**	**-**	**$144,373.78**	**$1,710,425.38**	**-**

APPENDIX B:

NON-RESIDENTIAL LAND USE CLASSIFICATIONS

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Town of Gilbert
Development Categorized Under Proposed Land Use Type

Industrial	Commercial	Office and Other
Airport and Aircraft	Amusement Park	Administrative Office
Cement Plants	Art Gallery	Animal Hospltal/Kennel/Pound
Custom Manufacturing	Athletic Club	Bank
Hazardous Waste Facility	Automobile Dealer	Chapel
Incineration of Garbage or Organic Matter	Automobile Body Shop	Church
Light Assembly	Automobile Repair Facility	Communications Building/Center
General Manufacturing	Bar/Tavern	Community Center .
Slaughterhouse	Barber Shop	Convalescent Hospital/Home
Medical Marijuana	Beauty Shop	Credit Union
Metal Refining/Smelting	Boutiques	Daycare
Oil Refinery	Bowling Alley	Educational - Elementart School
Recycling Facility	Car Wash - public	Educational - Jr. High School
Salvage and Wrecking	Department Store	Educational - Above Grade 12
Tanneries	Drug Store	Educational - High School
Warehousing and Storage	Fast Food Restaurant	Financial Institution
	Fitness Club	Fire Station
	Gas Station Canopy Struct.	Group care facility (> than 10 occupants)
	Gasoline Fueling Station	Hospital - Full Service
	Golf Course	Medical Clinic
	Golf Course (miniature)	Municipal Office
	Golf Course pro shop	Museum
	Grocery Store	Police Station
	Hair Salon	Professional Office
	Health Club	Recreation Center
	Hotel	Rectory
	Mall Complex	Seminary
	Machine Shop - retail pub	Synagogue
	Motel	Televislon/Radlo Station
	Movie Theater	Waste Water Treatment Plant
	Print Shop Retail/Public	Water Treatment Plant
	Resort	
	Restaurant	
	Retail Shop	
	Retail Strip Center	
	Skating Rink	

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APPENDIX C:

DERIVATION OF FUNCTIONAL POPULATION

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Functional Population

Raftelis uses the 'functional population' basis as a means of allocating service units for the general government SDFs. The functional population can be defined as a measure of the equivalent population to be served by governmental facilities. The functional population works well when specific measures may not be available, or data is unreliable. In addition, the functional population method can result in more stable fees over time. More traditional methods such as population or square feet are more one-dimensional and do not consider other factors that drive demands for service. The functional population concept is to capture the weighted demands of residents who work in and outside of the Town, who do not work, and those jobs that are filled by those who live in the Town and those that are commuters. Each of these groups place a different demand for facilities on a daily basis and the demands are dependent on the amount of time spent in the Town. Measuring that demand by assigning hours to each of these groups weights the impact both residents and non-residential facilities place on a facility. Table C-1 shows the derivation of the functional population used in this study.

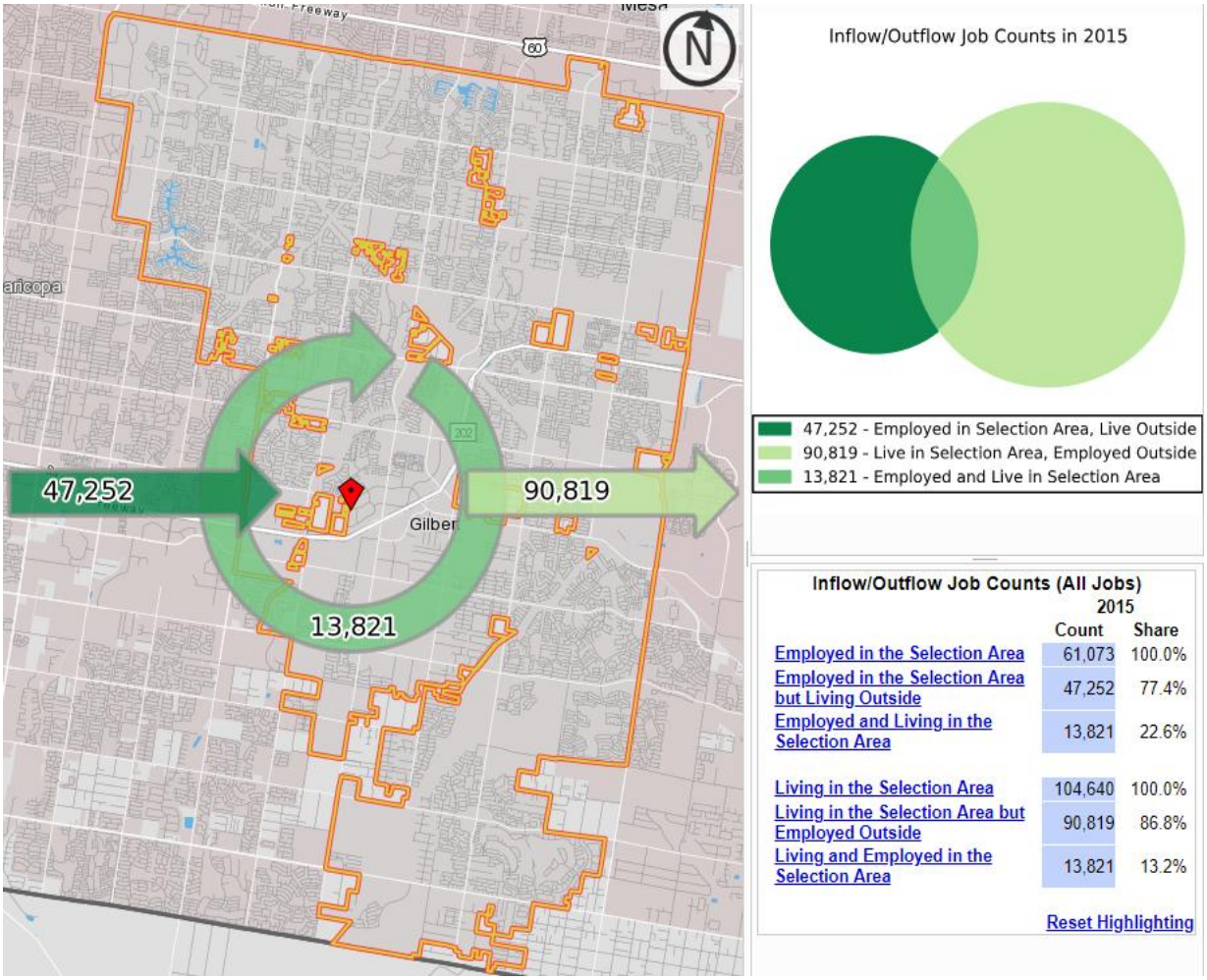
Table C-1: Functional Population

Year	%	Population	Demand Hours	Weighted Units
Residential				
Population [1]	232,399			
Residents Not Working	55%	127,759	20	2,555,180
Residents Working	45%	104,640		
Work in Town	13%	13,821	14	193,494
Work outside of Town	87%	90,891	14	1,271,466
Residential Subtotal				**4,020,140**
Non-residential				
Residents Not Working	55%	127,759	4	511,036
		Jobs		
Jobs Located in the Town [2]		61,073		
Work in Town	23%	13,821	10	138,210
Work outside of Town	77%	47,252	10	472,520
Non-residential Subtotal				**1,121,766**
Total				**5,141,906**
Residential Share				78%
Non-residential Share				22%

[1] 2015 U.S. Census Bureau population estimate
[2] Inflow/Outflow Analysis, OnTheMap web application, U.S. Census Bureau for all jobs.

Figure C-1 on the following page shows the data from the OnTheMap web application used in the above calculation.

Figure C-1: OnTheMap Census Data



Inflow/Outflow Job Counts (All Jobs)

	2015 Count	Share
Employed in the Selection Area	61,073	100.0%
Employed in the Selection Area but Living Outside	47,252	77.4%
Employed and Living in the Selection Area	13,821	22.6%
Living in the Selection Area	104,640	100.0%
Living in the Selection Area but Employed Outside	90,819	86.8%
Living and Employed in the Selection Area	13,821	13.2%

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APPENDIX D:

FORECAST OF REVENUES OTHER THAN FEES

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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 Town's construction contracting tax rate and the general privilege tax rates are 1.5% so there is no excess construction taxable revenue that needs to be considered as contributions. The required forecast of non-development fee revenue that might be used for growth-related capital costs is shown in Figure D-1. Values were taken from the FY 2017 CAFR, page 144.

Table D-1
Forecast of Revenues Other Than Fees

	Historical			Projected					
Independent Variables	2015	2016	2017	2018	2019	2020	2021	2022	2023
Population	246,299	249,199	252,099	254,999	260,481	265,755	270,817	275,669	280,311
MAG Jobs	83,240	84,843	86,446	88,049	89,652	91,253	93,417	95,581	97,745
Population plus MAG Jobs	329,539	334,042	338,545	343,048	350,133	357,008	364,234	371,250	378,056
Forecast of Revenues Using Trend Analysis:									
Highway User Taxes	$12,900,529	$13,588,215	$15,847,097	$17,058,515	$19,376,573	$21,625,924	$23,990,115	$26,285,598	$28,512,374
Net Available Water and Sewer Revenue	$23,021,777	$22,539,958	$24,867,387	$25,321,984	$26,773,921	$28,182,823	$29,663,655	$31,101,452	$32,496,214
Forecast of Revenues Using Town Data:									
Sales Taxes					$87,000,000	$90,915,000	$93,642,000	$96,451,000	$99,345,000
Construction Sales Tax					5,000,000	4,750,000	5,275,000	3,847,000	3,462,000
Total Sales Tax					$92,000,000	$95,665,000	$98,917,000	$100,298,000	$102,807,000
State Shared Revenue - Income Tax					$ 29,200,000	$ 30,076,000	$ 30,978,000	$ 31,907,000	$ 32,864,000
State Shared Revenue - Sales Tax					23,600,000	34,485,000	25,403,000	26,356,000	27,343,000
Total State Shared Revenue					$ 52,800,000	$ 64,561,000	$ 56,381,000	$ 58,263,000	$ 60,207,000
Property Taxes Levied for Debt Service					$22,276,800	$22,279,550	$22,280,550	$19,187,800	$19,198,800