



City of Surprise **ARIZONA**

Development Impact Fee Report

Revised Draft | April 10, 2014

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Abbreviations and Acronyms

2007 Fire Plan – Fire planning evaluation completed for the city in 2007

ADWR – Arizona Department of Water Resources

AMA – Active Management Area

ARS – Arizona Revised Statutes

AWS – Assured Water Supply

AWWA – American Water Works Association

CAP – Central Arizona Project

CIP – Capital Improvements Plan

City – The City of Surprise

DIFs, Impact Fees, or Development Fees – Development Impact Fees

EDPCO – Elliott D. Pollack and Company

EDU – Equivalent Development Unit

EMS – Emergency Medical Services

ENR-CCI – Engineering News Record Construction Cost Index

Fee Report – Development Impact Fee Report

FY – Fiscal Year

GMA – Groundwater Management Act

GO – General Obligation Bonds

GPD – Gallons per Day

HazMat – Hazardous Materials

IIP – Infrastructure Improvements Plan

ITE – Institute of Transportation Engineers

LOS – Level of Service

LUA – Land Use Assumptions

MGD – Million Gallons per Day

MPC – Municipal Property Corporation

NPS – Necessary Public Services

RCN – Replacement Cost New

RFC – Raftelis Financial Consultants

SB – Senate Bill

SFR – Single-Family Residential

SPA – Special Planning Area

VMT – Vehicle Miles Traveled

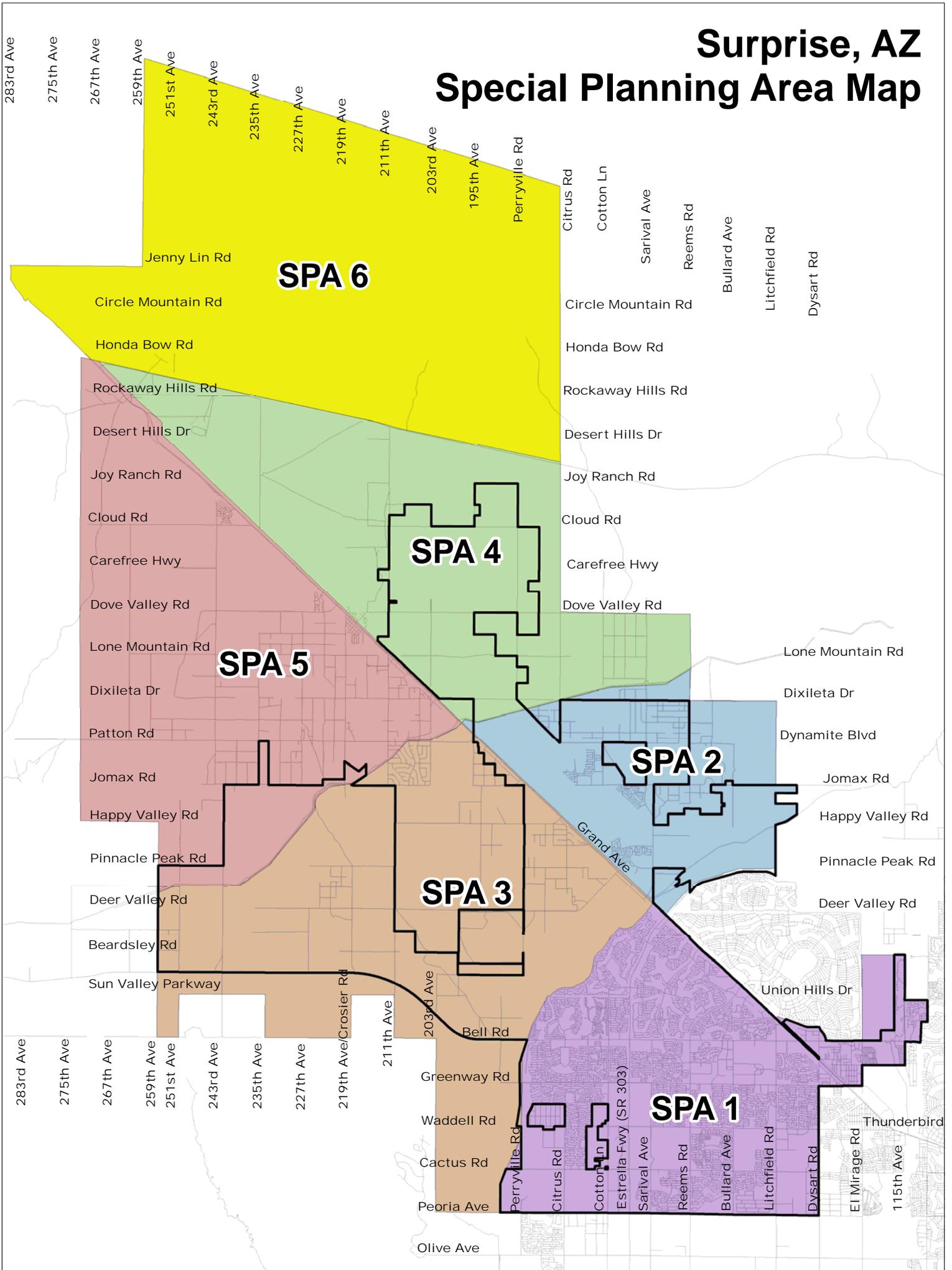
VTE – Vehicle Trip Ends

WRF – Water Reclamation Facility

WSF – Water Supply Facility

WWTP – Wastewater Treatment Plant

Surprise, AZ Special Planning Area Map



Executive Summary

The City of Surprise (City) retained the team of Raftelis Financial Consultants, Inc.¹ (RFC or Raftelis) and Elliott D. Pollack and Company (EDPCO) to complete an update of the City's development impact fees for compliance with the requirements of Arizona Revised Statutes (ARS) § 9-463.05 effective August 1, 2014.

Under the updated requirements of ARS § 9-463.05 a development impact fee study is segmented into three major components as follows:

1. Land Use Assumptions (LUA) identify the current and projected service units by service area. The City LUA is summarized in one report dated March 11, 2014. This report outlines the projected growth in residential population and housing units and non-residential employment and square feet.
2. Infrastructure Improvements Plan (IIP) identifies the current and future facilities to serve the projected growth in service units identified within the LUA. The City IIP is summarized as a separate report also dated March 11, 2014.
3. Development Impact Fee report (Fee Report), the subject of this document, outlines the proposed development impact fee by fee category and service area based on the eligible facilities and service units identified in the separate Final LUA and Final IIP Reports dated March 11, 2014. The Fee Report incorporates capital funding analyses, offset calculations and cash flow projections for the proposed development impact fees.

To ensure that new development contributes its proportionate share towards the cost of public facilities, the City of Surprise (City) has enacted development impact fees for a variety of fee categories. The fees were most recently updated in December 2011 for compliance with ARS § 9-463.05 which was adopted earlier in 2011. The purpose of the overall study is to update the following City's development impact fee categories:²

- Fire and Emergency Medical Services (EMS)
- 163rd Avenue Roadway
- Water System
- Water Resources
- Wastewater System

The draft development impact fees are proposed to be effective August 1, 2014.

¹ The City initially retained Red Oak Consulting, an ARCADIS group, to complete this study and the contract was subsequently assigned to RFC in July 2013.

² The City is maintaining existing Fire and EMS, Police, General Government and Parks and Recreation Development Impact Fees to repay outstanding debt obligations.

Table 1 summarizes the draft residential and non-residential Fire and EMS development impact fees to be assessed City-wide.

Table 1
Draft Fire and EMS Development Impact Fees

Development Type	Impact Fee	Assessment
Single-Family Residential	\$680	Housing Unit
Multi-Family Residential	499	Housing Unit
Retail	779	1,000 square feet
Office	1,247	1,000 square feet
Public	1,247	1,000 square feet
Industrial	519	1,000 square feet

Table 2 summarizes the draft residential and non-residential 163rd Avenue Roadway development impact fees to be assessed within the 163rd Avenue Roadway service area.

Table 2
Draft 163rd Avenue Roadway Development Impact Fees

Development Type	Impact Fee	Assessment
Single-Family Residential	\$299	Housing Unit
Multi-Family Residential	209	Housing Unit
Retail	3,958	1,000 square feet
Office	240	1,000 square feet
Public	304	1,000 square feet
Industrial	150	1,000 square feet

Tables 3 through 8 summarize the draft 3/4-inch and less water system, water resource and wastewater system development impact fees calculated for separate Special Planning Area (SPA) 1 and SPA 2. A map of the current SPAs is included before the Executive Summary. The water system, water resource and wastewater system SPA 1 and SPA 2 service areas are identified within the Final IIP as detailed within this report and Appendices C, D and E. Water system, water resource and wastewater system development impact fees will be increased for 1-inch and higher meter sizes based on the American Water Works Association (AWWA) meter capacity relationships. Within SPA 2, Wastewater System Development Impact Fees outlined in Appendix E are calculated with two separate components. The first component recovers treatment, disposal and other miscellaneous facilities serving development in SPA 2. The second component recovers sewer line facilities serving other developments in SPA 2. Some developments that are served by facilities from both components are assessed the combined fee summarized in Table 8. Other developments may benefit from one of the two fee components and will be assessed one of the two fee components detailed in Appendix E.

The City's fiscal year (FY) starts July 1 and is completed on June 30 with references to each fiscal year within this document using the final six months. For example, FY 2014 refers to the period of July 1, 2013 through June 30, 2014.

**Table 3
Draft SPA 1 Water System Development Impact Fees**

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$1,393
1"	1.67	2,322
1.5"	3.33	4,644
2"	5.33	7,431
3"	10.00	13,933
4"	16.67	23,222
6"	33.33	46,444
8"	53.33	74,310

**Table 4
Draft SPA 2 Water System Development Impact Fees**

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$1,544
1"	1.67	2,574
1.5"	3.33	5,148
2"	5.33	8,237
3"	10.00	15,445
4"	16.67	25,742
6"	33.33	51,483
8"	53.33	82,373

**Table 5
Draft SPA 1 Water Resource Development Impact Fees**

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$714
1"	1.67	1,191
1.5"	3.33	2,381
2"	5.33	3,810
3"	10.00	7,144
4"	16.67	11,906
6"	33.33	23,812
8"	53.33	38,099

Table 6
Draft SPA 2 Water Resource Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$873
1"	1.67	1,456
1.5"	3.33	2,911
2"	5.33	4,658
3"	10.00	8,734
4"	16.67	14,556
6"	33.33	29,112
8"	53.33	46,579

Table 7
Draft SPA 1 Wastewater System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$3,265
1"	1.67	5,442
1.5"	3.33	10,884
2"	5.33	17,414
3"	10.00	32,651
4"	16.67	54,418
6"	33.33	108,836
8"	53.33	174,138

Table 8
Draft SPA 2 Total Wastewater System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$3,361
1"	1.67	5,601
1.5"	3.33	11,202
2"	5.33	17,923
3"	10.00	33,606
4"	16.67	56,010
6"	33.33	112,019
8"	53.33	179,231

Introduction and Overview

The City of Surprise (City) retained the team of Raftelis Financial Consultants, Inc.³ (RFC or Raftelis) and Elliott D. Pollack and Company (EDPCO) to complete an update of the City's development impact fees for compliance with the requirements of Arizona Revised Statutes (ARS) § 9-463.05 effective August 1, 2014.

Under the updated requirements of ARS § 9-463.05 a development impact fee study is segmented into three major components as follows:

1. Land Use Assumptions (LUA) identify the current and projected service units by service area. The City LUA is summarized in one report dated March 11, 2014. This report outlines the projected growth in residential population and housing units and non-residential employment and square feet.
2. Infrastructure Improvements Plan (IIP) identifies the current and future facilities to serve the projected growth in service units identified within the LUA. The City IIP is summarized as a separate report also dated March 11, 2014.
3. Development Impact Fee report (Fee Report), the subject of this document, outlines the proposed development impact fee by fee category and service area based on the eligible facilities and service units identified in the separate Final LUA and Final IIP Reports dated March 11, 2014. The Fee Report incorporates capital funding analyses, offset calculations and cash flow projections for the proposed development impact fees.

To ensure that new development contributes its proportionate share towards the cost of public facilities, the City of Surprise (City) has enacted development impact fees for a variety of fee categories⁴. The fees were most recently updated in November 2011 with recreation and public building fee categories eliminated as a result of ARS § 9-463.05 which was adopted earlier in 2011. The purpose of the overall study is to update the following City's development impact fee categories:

- Fire and Emergency Medical Services (EMS)
- 163rd Avenue Roadway
- Water System
- Water Resources
- Wastewater System

Appendix F includes a summary of the City's current utility and non-utility development impact fees. The draft development impact fees discussed in this report are proposed to be effective

³ The City initially retained Red Oak Consulting, an ARCADIS group to complete this study and the contract was subsequently assigned to RFC in July 2013.

⁴ The City's library and park development impact fees will be discontinued by August 1, 2014.

August 1, 2014. Table 9 summarizes the City’s current single-family residential non-utility development impact fees.

**Table 9
Current Non-Utility Development Impact Fees**

Development Impact Fee	Single Family Residential
Fire & EMS	\$688
Police	371
Library	133
Parks & Recreation	785
General Government	661
Public Works	109
Non-Utility (City-Wide)	2,747
Non-Utility (City-Wide)	2,747
Roads of Regional Significance (1)	5,715
Total	8,462
Non-Utility (City-Wide)	2,747
Roads of Regional Significance (1)	5,396
Total	8,143

(1) Roads of Regional Significance development impact fee of \$5,715 is assessed in SPAs 2, 4 and 6 and \$5,396 is assessed in SPAs 3 and 5.

Table 10 summarizes the City’s current SPA 1 and SPA 2 water system (drinking), water resource and wastewater development impact fees that apply to 3/4-inch water meter connections.

**Table 10
Current Utility Development Impact Fees**

Development Impact Fee	3/4-inch Water Meter - SPA 1	3/4-inch Water Meter - SPA 2
Water Resource	\$2,100	\$796
Water System - Drinking	3,895	3,895
Wastewater	3,853	3,039
Total	\$9,848	\$7,730

Methodologies

There are a variety of methods that can serve as a rational basis for computing non-utility and utility development impact fees. The most common include:

- System Buy-In
- Plan-Based Incremental
- Plan Based Average
- Hybrid Method

The **System Buy-in** method uses a historical perspective. The original costs of the system's fixed assets are identified and escalated to current value using a nationally recognized index. System value equals the escalated original cost less developer contributions. The development fee is the quotient of the system equity divided by the system capacity.

The **Plan-Based Incremental** method is a forward-looking and considers only future growth-related capital projects and acquisitions. The development impact fee is the quotient of the growth-related cost of proposed projects for a specified time frame divided by the number of units to be served or the increase in capacity provided by those projects.

The **Plan-Based Average** method is similar to the **Plan-Based Incremental** method. However, the plan based average approach considers future growth-related projects that benefit new and current development. The development fee is the quotient of the cost of proposed projects for a specified time frame divided by the total capacity served in the calculation year.

The **Hybrid** method combines the **System Buy-in** and **Incremental** methods. The development fee is the quotient of the sum of the current system equity and future growth-related capital costs divided by of the sum of existing system capacity and the increase in capacity provided by the future growth-related projects.

The City evaluated the facilities required to provide necessary public services for new growth detailed in the Final LUA and Final IIP Report. In developing the costs in the IIP, the City considered what was needed so the burden of providing services to new development did not lower the service level for existing citizens or charge new development exclusively to increase the level of service provided to existing residents. The City may increase the level of service for current and future residents; however, the development impact fee will reflect only the portion of the facility benefiting new development with funding for the increased level of service portion of the improvement benefiting current development funded by alternative sources.

As discussed within the Final LUA and IIP Report, the demand for facilities is quantified using a common unit of measurement, called a "service unit." A service unit is a standardized measure of the consumption, use, generation or discharge attributable to an individual unit of development calculated using generally accepted engineering or planning standards. The service units and resulting Equivalent Development Unit (EDU) vary by development impact fee category. One EDU represents the average demand for services generated by a single-family home.

In all fee categories, projects are based on facility needs to serve future development. There are existing and future facilities that will benefit future development. To recognize the proportion of the costs benefiting development over the study period, project costs allocated to new growth

over the study period have been adjusted to exclude the portion of future facilities serving current development. For example, the 163rd Avenue Roadway facilities replace currently constructed roadway facilities while expanding facilities to the benefit of new development and the fee calculations recognize the proportional cost of future facilities benefiting new development. Funding for the portion of facilities benefiting current development will need to be funded from another source which may include current general fund revenues and/or debt summarized by fee category and included in the appendices.

City of Surprise Development Agreements

The City has entered into a variety of development agreements and amendments to the agreements over the past thirty years. These agreements outline responsibilities and obligations for both the City and the other contracting parties to the agreements. Many agreements incorporate future development impact fees assessed by the City as the mechanism to reimburse developers for funding or oversizing facilities recovered through the assessed development impact fee. Current and future obligations defined below are identified within the development agreements.

Current Obligations: Infrastructure has been constructed and accepted by the City, and actual costs subject to reimbursement have been provided to the City. Some reimbursement and/or credit may have been provided and additional costs remain to be reimbursed and/or credited through future development impact fees.

Future Obligations: Infrastructure subject to reimbursement and/or credit have not been completed and/or accepted by the City and the City does not have actual costs related to the constructed facilities. These future obligations may involve developments that have been partially developed and/or where some infrastructure has been constructed, but not all of the requirements have been met in order for the City to reimburse eligible costs with assessed development impact fees. Costs estimates for the infrastructure to be completed may be provided and reimbursements will be based on actual costs provided after the City has accepted the infrastructure. The IIP will need to be updated in order for future obligations to be eligible for development impact fee reimbursement per the requirements of ARS §9-463.05.

For many of the agreements, the facilities were constructed and accepted by the City with reimbursement obligations that are fully satisfied. In these cases, the City may continue to assess and keep development impact fees related to the constructed facilities serving current and future development. Other agreements include current obligations for infrastructure constructed and accepted by the City that are active with remaining obligations. The IIP includes only those facilities tied to current obligations or those where the infrastructure has been constructed; the City has accepted the infrastructure and has costs within the City's fixed assets as the basis for reimbursements.

Future obligations related to facilities that either have not been constructed and/or the City has not accepted and may be privately owned and operated are excluded from this IIP. These future

facilities will need to be incorporated in updates to the IIP prior to the inclusion as development impact fee eligible projects and before the City may use development impact fees to reimburse the eligible facility costs.

Reflecting projected development within various master planned communities throughout the City, revenue projections and cash flow analyses presented in this Fee Report incorporate development impact fee reimbursements and/or credits.

Fire and EMS Development Impact Fee

The draft Fire and EMS development impact fees will be assessed City-wide. Table 11 summarizes draft Fire and EMS development impact fees by type of development.

Table 11
Draft Fire and EMS Development Impact Fees

Development Type	Impact Fee	Assessment
Single-Family Residential	\$680	Housing Unit
Multi-Family Residential	499	Housing Unit
Retail	779	1,000 square feet
Office	1,247	1,000 square feet
Public	1,247	1,000 square feet
Industrial	519	1,000 square feet

Single-family and multi-family residential developments are assessed fees per housing unit while non-residential development categories are assessed per 1,000 square feet of development. Draft fees are proposed to be effective August 1, 2014.

The City’s Fire and EMS development impact fee was calculated using the incremental approach that considers:

- Current cost of future growth-related IIP projects.
- Increase reflecting net present value (NPV) of interest of growth-related portion of projected debt issues.

Table 12 summarizes the calculated Fire and EMS development impact fees per residential and non-residential service units. The eligible costs are allocated between residential and non-residential types of development based on calls for service from the four-year period of FY 2010 through FY 2013. Service units reflect existing and projected residents and employees detailed in the Final LUA and Final IIP Reports. The capacity of planned facilities will be exceeded in FY 2022 and the projected FY 2022 service units are used to calculate the separate residential and non-residential costs per service unit. A single-family residential dwelling unit is equal to one EDU. The residential cost per service unit is translated into a fee per dwelling unit based on persons per dwelling unit for single-family and multi-family residential development types.

Non-residential costs per service unit are translated into a fee per 1,000 square feet based on employees per 1,000 square feet that varies retail, office, public and industrial types of development.

Table 12
Fire and EMS
Development Impact Fee Calculation

Description	Calls for Service (1)	Allocation	Allocated Costs
Residential	25,576	73.0%	\$13,796,403
Non-Residential	9,441	27.0%	5,092,737
Total	35,017	100.0%	\$18,889,140
Residential	Units	Fiscal Year	
Allocated portion of facilities			\$13,796,403
Capacity of Facilities	Population	2022	60,853
Cost per Unit	Population		\$226.72
Non-Residential			
Allocated portion of facilities			\$5,092,737
Capacity of Facilities	Employees	2022	16,339
Cost per Unit	Employees		\$311.69

(1) FY 2009-10 through FY 2012-13.

The components of the calculated Fire and EMS development impact fee and associated cash flow projection is discussed in the following sections.

Infrastructure Improvements Plan Projects

The total cost of two proposed fire stations is \$15.0 million anticipated to be constructed from FY 2015 through FY 2018 as detailed in the Final IIP Report and summarized in Appendix A to this report. Both fire stations are allocated fully to future development (growth) benefiting future residents and employees. Based on the timing of the projects, an annual capital project inflation rate of 3%, compounded annually, is applied to project cost estimates and illustrated in the cash flow and supporting worksheet also provided in Appendix A.

Cash Flow

A cash flow analysis has been compiled to summarize the sources and uses and funding requirements of new Fire and EMS development impact fee fund included in Appendix A. The sections below outline projects and cash flow uses of IIP projects, development agreement reimbursements, debt issuance and reserve requirements, debt service funded through development impact fee revenues, interest income, and debt proceeds. For current development, the funding sources incorporate general fund revenues and/or debt instead of development impact fees. This section summarizes the assumptions and projections outlined in Appendix A.

The new Fire and EMS development impact fee fund has a fund balance of \$0 as of June 30, 2013.

Debt Proceeds, Issuance Costs and Debt Service

Table 13 summarizes the projected debt and resulting NPV of interest cost future development's portion of Fire and EMS IIP facilities.

Table 13
New Fire and EMS Development Impact Fee Fund Debt Issues

Fiscal Year	Bond Issues	
	Principal	NPV of Interest Payments
2014	\$0	\$0
2015	0	0
2016	4,500,000	1,862,355
2017	0	0
2018	5,000,000	2,069,284
2019	0	0
2020	0	0
2021	0	0
2022	0	0
2023	0	0
Total	<u>\$9,500,000</u>	<u>\$3,931,639</u>

Debt projections reflect availability of revenues generated from development impact fees balanced against the timing of the project and availability of cash to partially fund anticipated projects. Assumptions regarding the term, interest rate, debt service requirement and issuance expenses are also summarized in Appendix A.

NPV of Future Growth-Related Debt Interest

The NPV of future interest payments associated with future development's portion of debt funded Fire and EMS IIP facilities is projected to be approximately \$3.9 million. The NPV interest reflects today's value associated with funding the growth-related facilities and is eligible for inclusion as assessed development impact fees are anticipated to repay the growth-related debt service. The annual debt service and NPV associated with projected debt issues are detailed in Appendix A.

Revenue Projections

Projected Fire and EMS development impact fee revenues are based on the draft fees by development type, indexed for inflation, applied to projected development for the following development types:

- Single-family residential
- Multi-family residential
- Retail
- Public
- Industrial
- Admin / Medical Office

Residential developments are assessed fees per housing unit while non-residential development categories are assessed per 1,000 square feet of development. Appendix A summarizes the projected development impact fee revenues by type of development.

163rd Avenue Roadway Development Impact Fee

The draft 163rd Avenue Roadway development impact fees will be assessed to a service area identified in Figure 2 of the Final IIP⁵.

Table 14 summarizes draft 163rd Avenue Roadway development impact fees by type of development.

Table 14
Draft 163rd Avenue Roadway Development Impact Fees

Development Type	Impact Fee	Assessment
Single-Family Residential	\$299	Housing Unit
Multi-Family Residential	209	Housing Unit
Retail	3,958	1,000 square feet
Office	240	1,000 square feet
Public	304	1,000 square feet
Industrial	150	1,000 square feet

Single-family and multi-family residential developments are assessed fees per housing unit while non-residential development categories are assessed per 1,000 square feet of development. 163rd Draft fees are proposed to be effective August 1, 2014.

The City's 163rd Avenue Roadway development impact fee was calculated using the plan-based average approach that considers:

⁵ The 163rd Avenue Roadway development impact fee service area includes properties north of the Central Arizona Project canal. These properties are included because the 163rd Avenue serves as the main connection between east and west roads e.g., (Dove Valley), connecting them to Grand Avenue / Highway 60. In addition these properties will ultimately connect to the extended 163rd Avenue once a bridge over the Central Arizona Project canal is constructed. The project to complete the bridge is not included in the current IIP as it may be constructed beyond the 10-year period and is anticipated to be included in future updates to the City's IIP.

- Current cost of future growth-related IIP projects.
- Debt adjustments include:
 - Increase reflecting the NPV of future interest of growth-related portion of projected debt issues.
 - Reduction reflecting the NPV of non-growth portion of annual total debt service associated with projected debt issues repaid by tax-based revenues.

Appendix B summarizes the calculated 163rd Avenue Roadway development impact fees per service unit. Service units reflect vehicle miles traveled (VMT) by development type. VMT is used to apportion the total future vehicle mile capacity of the proposed improvements among projected development within the service area as outlined in the Final IIP Report. Since the 163rd Avenue Roadway service units are represented as a ratio per dwelling unit and per 1,000 square feet or the same basis as the fee is assessed, it is not necessary to convert service units to an EDU for fee assessment. However, EDUs for the different types of development may be calculated based on the ratio of the adjusted average day VMTs for the type of development compared to the adjusted average day VMTs of a single-family residential housing unit. The capacity of the 163rd Avenue Roadway facilities will be exceeded in FY 2040 and the projected FY 2040 service units are used to calculate a cost per service unit. The cost per VMT is translated into a cost per development unit that varies for different types of developments previously discussed in the Final IIP Report and documented in Appendix B.

The components of the calculated 163rd Avenue Roadway development impact fee and associated cash flow projection is discussed in the following sections.

Infrastructure Improvements Plan Projects

The total cost of the proposed 163rd Avenue Roadway is \$24.8 million anticipated to be constructed in two phases as detailed in the Final IIP Report and summarized in Appendix B. Phase 1 is anticipated to cost \$11.3 million and be completed in FY 2017. Phase 2 is anticipated to cost \$13.3 million and be completed in FY 2021. The project components are allocated between future development (growth) and current development (non-growth) based on the current (30%) and future (70%) capacity added by both phases. The allocated costs of Phases 1 and 2 to new development is approximately \$17.3 million reflecting 70% of the total costs as summarized in Appendix B. Based on the timing of the projects, an annual capital project inflation rate of 3%, compounded annually, is applied to project cost estimates and illustrated in the cash flow and supporting worksheet also provided in Appendix B.

Cash Flow

A cash flow analysis has been compiled to summarize the sources and uses of both 163rd Avenue Roadway development impact fee fund and the funding of the requirements of current development funded from general fund revenues. Appendix B details the cash flow analysis. The sections below outline projects and cash flow uses of IIP projects, repayment of loans from the general fund, debt issuance and reserve requirements, debt service funded through

development impact fee revenues, loans from the general fund, interest income, and debt proceeds. For current development, the funding sources exclude development impact fees and instead incorporate general fund revenues. This section summarizes the assumptions and projections outlined in Appendix B.

The SPA 2, 4, 6 Roads of Regional Significance development impact fee fund has a fund balance of approximately \$2.1 million as of June 30, 2013 available to fund future eligible 163rd Avenue Roadway facilities.

Debt Proceeds, Issuance Costs and Debt Service

Table 15 summarizes the projected debt and resulting NPV of interest cost future development’s portion of 163rd Avenue Roadway IIP facilities. Debt projections reflect available funding sources balanced against the timing of the project and availability of cash to partially fund anticipated projects.

Table 15
163rd Avenue Roadway Development Impact Fee Fund Debt Issues

Fiscal Year	Bond Issues	
	Principal	NPV of Interest Payments
2014	\$0	\$0
2015	0	0
2016	8,500,000	3,517,780
2017	0	0
2018	0	0
2019	0	0
2020	500,000	206,931
2021	11,000,000	4,552,426
2022	0	0
2023	0	0
Total	\$20,000,000	\$8,277,136

Debt is also anticipated to fund the current development or non-growth portion of 163rd Avenue Roadway IIP projects summarized in Appendix B. Table 16 summarizes the projected debt and resulting NPV of principal and interest debt service cost of current development’s portion of 163rd Avenue Roadway facilities. Assumptions regarding the term, interest rate, debt service requirement and issuance expenses are summarized in Appendix F.

Table 16
163rd Avenue Roadway Development Impact Fee Non-Growth Debt Issues

Fiscal Year	Bond Issues	
	Principal	NPV of P&I Payments
2014	\$0	\$0
2015	0	0
2016	3,750,000	3,660,718
2017	0	0
2018	0	0
2019	0	0
2020	200,000	195,244
2021	5,000,000	4,880,953
2022	0	0
2023	0	0
Total	\$8,950,000	\$8,736,915

NPV of Future Growth-Related Debt Interest

The NPV of future interest payments associated with future development’s portion of debt funded 163rd Avenue Roadway IIP facilities is projected to be approximately \$8.3 million. The NPV interest reflects today’s value current value associated with funding the growth-related facilities and is eligible for inclusion as assessed development impact fees are anticipated to repay the growth-related debt service. The annual debt service and NPV associated with projected debt issues are detailed in Appendix B.

Offsets

Debt projected to fund non-growth portion of 163rd Avenue Roadway IIP facilities generate offsets or reductions to the draft fee since future general fund revenues generated from taxes assessed to current and future development will be used to repay current development’s portion of the issued GO debt. The offset is calculated based on the NPV of future principal and interest payments of approximately \$8.7 million divided by the projected service units (residential and non-residential VMTs) at FY 2040. The annual debt service and NPV associated with projected debt issues are detailed in Appendix B.

The City has an excess tax rate (construction sales tax) that is 1.5% above the average tax rate. The revenues associated with the excess rate are segmented with the first \$1,250,000 to the General Fund and any excess revenues dedicated to the transportation improvement fund for transportation related capital projects as summarized in Appendix A of the Final IIP Report. An offset for the excess tax rate was not included as the offset for the non-growth portion of 163rd Avenue Roadway facilities already addresses the use of revenues towards the repayment of annual debt service associated with these necessary public services.

Revenue Projections

Projected 163rd Avenue Roadway development impact fee revenues are based on the draft fee by development type, indexed for inflation, applied to projected development in SPAs 2 and 4 for the following development types⁶:

- Single-family residential
- Multi-family residential
- Retail
- Public
- Industrial
- Admin / Medical Office

Residential developments are assessed fees per housing unit while non-residential development categories are assessed per 1,000 square feet of development. Appendix B summarizes the projected development impact fee revenues by type of development.

Water System Development Impact Fee

The draft Water System development impact fees will be assessed within SPA 1 and SPA 2 service areas where City water service is provided.⁷ The draft fees were calculated separately for the two service areas. Tables 17 and 18 summarize draft SPA 1 and SPA 2 water system development impact fees.

Table 17
Draft SPA 1 Water System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$1,393
1"	1.67	2,322
1.5"	3.33	4,644
2"	5.33	7,431
3"	10.00	13,933
4"	16.67	23,222
6"	33.33	46,444
8"	53.33	74,310

⁶ Projected growth in SPA 4 is anticipated to occur within 163rd Avenue Roadway Development Impact Fee Service Area.

⁷ Areas of SPAs 1 and 2 served by other water providers will be governed by fees and charges assessed by those providers and not subject to the City's current or draft water system or water resource development impact fees.

Table 18
Draft SPA 2 Water System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$1,544
1"	1.67	2,574
1.5"	3.33	5,148
2"	5.33	8,237
3"	10.00	15,445
4"	16.67	25,742
6"	33.33	51,483
8"	53.33	82,373

Water System development impact fees are assessed by meter size and increased for 1-inch and higher meter sizes based on the AWWA meter capacity relationships. Draft fees are proposed to be effective August 1, 2014.

The Water development impact fees for each service area were calculated using the hybrid approach that considers:

- Replacement value of constructed and eligible water facilities.
- Current cost of future growth-related IIP projects.
- Increase reflecting NPV of interest of growth-related portion of projected debt issues.
 - Applies only to the SPA 2 Water System Development Impact Fee.

Appendix C details the calculated Water System development impact fees per service unit for the SPA 1 and SPA 2 service areas. Water System development impact fees reflect two separate unit cost calculations; common to all facilities and SPA specific facilities. Service units reflect existing water EDUs for common to all facilities and current and projected well capacity in millions of gallons per day (MGD) as detailed in the Final IIP Report. An EDU represents the equivalent demand of a single-family residential dwelling unit with a 3/4-inch water meter. The cost per connection and cost per service unit (MGD) is translated into a cost per 3/4-inch water meter or EDU based on the peak day water use per EDU. Water facilities are designed to meet the demands of peak day water use and this use influences the necessary capacity.

The components of the calculated Water System development impact fee and associated cash flow projection is discussed in the following sections.

Eligible Assets Replacement Value

The replacement value of eligible Water System facilities as detailed in the Final IIP Report and segmented for fee recovery as follows:

- Common to all assets of \$1.5 million.
- SPA 1 water facilities of \$58.2 million.

- SPA 2 water facilities of \$7.1 million.

The asset value includes existing water supply, treatment, transmission and storage and excludes distribution facilities of 10-inches and smaller constructed by developers and dedicated to the City. The smaller diameter water lines are excluded as similar facilities will be required to be constructed and dedicated to the City not eligible for development impact fee recovery.

Outstanding Debt

The City does not have outstanding water debt repaid through development impact fees.

Infrastructure Improvements Plan Projects

The total cost of planned IIP eligible facilities over the six-year planning period from FY 2014 through FY 2019 is detailed in the Final IIP Report and summarized in Appendix C. Appendix C details a single growth-related project in SPA 2 and no growth-related facilities required in SPA 1. Based on the timing of the projects, an annual capital project inflation rate of 3%, compounded annually, is applied to project cost estimates and illustrated in the cash flow and supporting worksheet provided in Appendix C.

Cash Flow

A cash flow analysis has been compiled for the separate SPA 1 and SPA 2 service areas that summarize the sources and uses of the Water System development impact fee funds. Appendix C summarizes the results of the cash flow. The sections below outline projects and cash flow uses of IIP projects, developer agreement reimbursements, operating fund loan repayments, debt issuance and reserve requirements, debt service funded through development impact fee revenues, operating fund loans, interest income, and debt proceeds. This section summarizes the assumptions and projections outlined in Appendix C.

The SPA 1 and SPA 2 Water System development impact fee fund have balances of approximately \$3.6 million (SPA 1) and (\$10,505) (SPA 2) as of June 30, 2013.

Debt Proceeds, Issuance Costs and Debt Service

\$16.5 million in debt is projected for the SPA 2 Water System development impact fee fund for the growth-related portion of Water System IIP facilities. There are no debt issues projected in the SPA 1 Water System development impact fee fund. Assumptions regarding the term, interest rate, debt service requirement and issuance expenses are also summarized in Appendix F.

NPV of Future Growth-Related Debt Interest

The NPV of future interest payments associated with future development's portion of debt funded SPA 2 Water System IIP facilities is projected to be approximately \$0.7 million. The NPV interest reflects today's value associated with funding the growth-related facilities and is eligible for inclusion as assessed development impact fees are anticipated to repay the growth-

related debt service. The annual debt service and NPV associated with projected debt issues are detailed in Appendix C.

Revenue Projections

Projected Water System development impact fee revenues are based on the draft SPA 1 and SPA 2 fees per EDU, indexed for inflation, applied to projected EDUs within SPA 1 and SPA 2 over the six-year period. Draft fees are proposed to be effective August 1, 2014 or one month into the fiscal year and retained within the service area. FY 2013-14 revenues projected based on EDU growth by SPA and current SPA 1 and SPA 2 water system development impact fees.

Water System development impact fee revenue projections reflect three types of development impact fee assessments.

- Revenue.
- Reimbursement / Credit.
- Waived.

Fee assessed to specific developments within SPA 1 and SPA 2 may be used to reimburse costs of constructed facilities included in the development impact fee recovery. Within other developments which may be served by private water facilities anticipated to be dedicated to the City, development impact fees are tracked by the City and credited against the cost of facilities which are anticipated to be dedicated to the City. Lastly, development impact fees assessed within Old Towne Surprise are waived. The totals by year are summarized within Appendix D.

Loans From Operations

Within the SPA 2 cash flow, the uses of funds may not directly match projected growth and timing of new development. Debt may be issued to fund a portion of the upfront costs as previously discussed. The timing of the facility requirements and future debt service may create cash shortfalls which are met from loans from the operating funds. These loans are repaid as development impact fee revenue exceeds annual expenditure requirements and may have remaining balances at the end of the study period.

Water Resource Development Impact Fee

The draft Water Resource Development impact fees will be assessed within SPA 1 and SPA 2 service areas where City water service is provided.⁸ The draft fees were calculated separately for the two service areas. Tables 19 and 20 summarize draft SPA 1 and SPA 2 water resource development impact fees.

⁸ Areas of SPAs 1 and 2 served by other water providers will be governed by fees and charges assessed by those providers and not subject to the City's current or draft water system or water resource development impact fees.

Table 19
Draft SPA 1 Water Resource Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$714
1"	1.67	1,191
1.5"	3.33	2,381
2"	5.33	3,810
3"	10.00	7,144
4"	16.67	11,906
6"	33.33	23,812
8"	53.33	38,099

Table 20
Draft SPA 2 Water Resource Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$873
1"	1.67	1,456
1.5"	3.33	2,911
2"	5.33	4,658
3"	10.00	8,734
4"	16.67	14,556
6"	33.33	29,112
8"	53.33	46,579

Water Resource development impact fees are assessed by meter size and increased for 1-inch and higher meter sizes based on the AWWA meter capacity relationships. Draft fees are proposed to be effective August 1, 2014.

The Water resource impact fees for each service area were calculated using the hybrid approach that considers:

- Replacement value of constructed and eligible backbone water facilities.
- Current cost of future growth-related IIP projects.

Appendix D details the calculated Water Resource development impact fees per service unit for the SPA 1 and SPA 2 service areas. Water Resource development impact fees reflect two separate unit cost calculations; common to all facilities and SPA specific facilities. Service units reflect existing EDUs for common to all facilities and current and projected well capacity in millions of gallons per day (MGD) as detailed in the Final IIP Report. The cost per connection and cost per service unit (MGD) is translated into a cost per 3/4-inch water meter or EDU based on the peak day water use per EDU. An EDU represents the equivalent demand of a single-

family residential dwelling unit with a 3/4-inch water meter. Water facilities are designed to meet the demands of peak day water use and this use influences the necessary capacity.

The components of the calculated Water Resource development impact fee and associated cash flow projection is discussed in the following sections.

Eligible Assets Replacement Value

The replacement value of eligible Water System facilities as detailed in the Final IIP Report and segmented for fee recovery as follows:

- Common to all assets of \$6.6 million.
- SPA 1 water wells of \$13.9 million.
- SPA 2 water wells of \$3.1 million.

The asset values include current Central Arizona Project, recharge, well facility assets and excludes facilities incorporated in the water system development impact fee.

Outstanding Debt

The City does not have outstanding water debt repaid through development impact fees.

Infrastructure Improvements Plan Projects

The total cost of planned IIP eligible facilities over the six-year planning period from FY 2014 through FY 2019 is detailed in the Final IIP Report and summarized in Appendix D. Appendix D details a single growth-related project in SPA 1 and no growth-related facilities required in SPA 2. Based on the timing of the projects, an annual capital project inflation rate of 3%, compounded annually, is applied to project cost estimates and illustrated in the cash flow and supporting worksheet provided in Appendix C.

Cash Flow

A cash flow analysis has been compiled for the separate SPA 1 and SPA 2 service areas that summarize the sources and uses of the Water System development impact fee funds. Appendix D summarizes the results of the cash flow. The sections below outline projects and cash flow uses of IIP projects, developer agreement reimbursements, and operating fund loan repayments funded through development impact fee revenues, operating fund loans, and interest income. This section summarizes the assumptions and projections outlined in Appendix D.

The SPA 1 and SPA 2 Water Resource development impact fee fund have balances of approximately \$3.7 million (SPA 1) and \$350,225 (SPA 2) as of June 30, 2013. Debt is not projected to be required to fund identified SPA 1 and SPA 2 Water Resource Development Impact Fee IIP eligible facilities.

Revenue Projections

Projected Water Resource development impact fee revenues are based on the draft SPA 1 and SPA 2 fees per EDU, indexed for inflation, applied to projected EDUs within SPA 1 and SPA 2 over the six-year period. Draft fees are proposed to be effective August 1, 2014 or one month into the fiscal year. Revenues are retained within the service area. FY 2013-14 revenues projected based on current SPA 1 and SPA 2 water resource development impact fees.

Water Resource development impact fee revenue projections also reflect three types of development impact fee assessments.

- Revenue.
- Reimbursement / Credit.
- Waived.

Fee assessed to specific developments within SPA 1 and SPA 2 may be used to reimburse costs of constructed facilities included in the development impact fee recovery. Within other developments which may be served by private water facilities anticipated to be dedicated to the City, development impact fees are tracked by the City and credited against the cost of facilities which are anticipated to be dedicated to the City. Lastly, development impact fees assessed within Old Towne Surprise are waived. The totals by year are summarized within Appendix D.

Wastewater System Development Impact Fee

The draft Wastewater System development impact fees will be assessed within SPA 1 and SPA 2 service areas where City service is provided. Tables 21 and 22 summarize SPA 1 and SPA 2 wastewater system development impact fees.

Table 21
Draft SPA 1 Wastewater System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$3,265
1"	1.67	5,442
1.5"	3.33	10,884
2"	5.33	17,414
3"	10.00	32,651
4"	16.67	54,418
6"	33.33	108,836
8"	53.33	174,138

Table 22
Draft SPA 2 Total Wastewater System Development Impact Fees

Meter Size	Service Units	Impact Fee
3/4" and Less	1.00	\$3,361
1"	1.67	5,601
1.5"	3.33	11,202
2"	5.33	17,923
3"	10.00	33,606
4"	16.67	56,010
6"	33.33	112,019
8"	53.33	179,231

Within SPA 2, Wastewater System Development Impact Fees outlined in Appendix E are calculated with two separate components. The first component recovers treatment, disposal and other miscellaneous facilities serving development in SPA 2. The second component recovers sewer line facilities serving other developments in SPA 2. Some developments that are served by facilities from both components are assessed the combined fee summarized in Table 22. Other developments may benefit from one of the two fee components and will be assessed one of the two fee components detailed in Appendix E.

Wastewater System development impact fees are assessed by water meter size and increased for 1-inch and higher meter sizes based on the AWWA meter capacity relationships. Draft fees are proposed to be effective August 1, 2014.

The Wastewater System development impact fees for each service area were calculated using the hybrid approach that considers:

- Replacement value of constructed and eligible wastewater facilities.
- Current cost of future growth-related IIP projects.
- Debt adjustments include:
 - Increase reflecting NPV of remaining interest of growth-related portion of outstanding debt issues.

Appendix E details the calculated Wastewater System development impact fees per service unit for SPA 1 and SPA 2 service areas. Wastewater System development impact fees reflect the unit cost of capacity of the current treatment capacity in MGD as detailed in the Final IIP Report and summarized in Appendix E calculations. The cost per service unit (MGD) is translated into a cost per 3/4-inch water meter or EDU based on the EDU gallon per day wastewater design criteria. An EDU represents the equivalent demand of a single-family residential dwelling unit with a 3/4-inch water meter. Wastewater facilities are designed to meet the demands of EDU wastewater influent.

The components of the calculated Wastewater System development impact fee and associated cash flow projection is discussed in the following sections.

Eligible Assets Replacement Value

The replacement value of eligible Wastewater System facilities as detailed in the Final IIP Report and segmented for fee recovery as follows:

- Common to all assets of \$1.5 million.
- SPA 1 eligible facilities of \$225.6 million.
- SPA 2 eligible facilities of \$31.7 million.

The asset value include existing sewer lines greater than 10-inches, lift stations, treatment, administrative and other miscellaneous assets and exclude collection facilities of 10-inches and smaller constructed by developers and dedicated to the City. The smaller diameter sewer lines are excluded as similar facilities will be required to be constructed and dedicated to the City not eligible for development impact fee recovery.

Outstanding Debt

The City has two outstanding SPA 1 wastewater debt issues and debt service repaid through development impact fees as detailed in Appendix E.

Net Present Value of Future Interest Payments

The NPV of future interest payments associated with future development's portion of debt funded SPA 1 Wastewater System facilities is approximately \$22.6 million. The outstanding wastewater debt is allocated fully to development impact fees for repayment. The NPV interest reflects today's value current value associated with funding the growth-related facilities and is eligible for inclusion as assessed development impact fees are anticipated to repay the growth-related debt service. There is no outstanding debt associated with SPA 2 Wastewater System facilities.

Infrastructure Improvements Plan Projects

The total cost of planned IIP eligible facilities over the six-year planning period from FY 2014 through FY 2019 is detailed in the Final IIP Report and summarized Appendix E. Appendix C details two growth-related sewer line projects in SPA 1 totaling \$2.8 million and no growth-related facilities required in SPA 2. Based on the timing of the projects, an annual capital project inflation rate of 3%, compounded annually, is applied to project cost estimates and illustrated in the cash flow and supporting worksheet provided in Appendix E.

Cash Flow

A cash flow analysis has been compiled for the SPA 1 and SPA 2 service areas that summarize the sources and uses of separate Wastewater System development impact fee subfunds.

Appendix E summarizes the results of the cash flow analysis. The sections below outline projects and cash flow uses of IIP projects, growth-related portion of outstanding debt service (SPA 1), and operating subfund loan repayments funded through development impact fee revenues, operating subfund loans, and interest income. This section summarizes the assumptions and projections outlined in Appendix F.

The SPA 1 and SPA 2 Wastewater System development impact fee fund have balances of approximately a deficit of \$0.8 million (SPA 1) and \$316,447 (SPA 2) as of June 30, 2013. Debt is not projected to be required to fund identified SPA 1 and SPA 2 Wastewater System Development Impact Fee IIP eligible facilities.

Revenue Projections

Projected Wastewater System development impact fee revenues are based on the draft fee per EDU by service area, indexed for inflation, applied to projected EDUs over the six-year period. Draft fees are proposed to be effective August 1, 2014 or one month into the fiscal year. Revenues are retained within the SPA specific service area. FY 2013-14 revenues are projected based of EDU growth and current SPA 1 and SPA 2 Wastewater System development impact fees.

Wastewater development impact fee revenue projections also reflect three types of development impact fee assessments.

- Revenue.
- Reimbursement / Credit.
- Waived.

Fee assessed to specific developments within SPA 1 and SPA 2 may be used to reimburse costs of constructed facilities included in the development impact fee recovery. Within other developments which may be served by private water facilities anticipated to be dedicated to the City, development impact fees are tracked by the City and credited against the cost of facilities which are anticipated to be dedicated to the City. Lastly, development impact fees assessed within Old Towne Surprise are waived. The totals by year are summarized within Appendix D.

Loans From Operations

Within the SPA 1 service area, the uses of funds may not directly match projected growth and timing of new development. Debt may be issued to fund a portion of the upfront costs as previously discussed. The timing of the facility requirements and future debt service may create cash shortfalls which are met from loans from the operating funds. These loans are repaid as development impact fee revenue exceeds annual expenditure requirements and may have remaining balances at the end of the study period. No loans are projected to be required in the SPA 2 Wastewater System development impact fee fund.