



## Water, Wastewater & Solid Waste Expansion Fee Study



# Report



September 7, 2007

## **Executive Summary**

Raftelis Financial Consulting PA (“RFC”) is pleased to submit this Expansion Fee Report (“Report”) that presents the results of the fiscal year (“FY”) 2008 Water and Wastewater Expansion Fee Update (“FY 2008 Update”). The purpose of the Report is to summarize the key findings and recommendations related to the RFC analysis for updating and modifying the water, water resource, wastewater, and solid waste expansion fees. The City of Peoria must construct and/or acquire necessary additional infrastructure, improvements, real property, engineering and other services, other capital costs, and associated appurtenances (equipment, vehicles, etc.) to provide these public services to development. The schedules of the Expansion Fee Model are included as Appendix A, while a detailed Infrastructure Improvements Plan for each of the public services associated with the expansions fees updated as part of this FY 2008 Update is included in Appendix B.

In April 2007, Senate Bill 1423 (“SB1423”) was approved to amend Arizona Revised Statutes §9-463.05. As part of this amendment, municipalities are required to adopt or amend an Infrastructure Improvements Plan (“IIP”) prior to assessing a new or modified expansion fee.

The Report is organized into five main sections describing the analysis used to update the City’s expansion fees for water, water resource, wastewater, and solid waste. Specifically, this Report has been organized into the following sections:

1. Introduction
2. Arizona Revised Statutes §9-463.05
3. Infrastructure Improvements Plan
4. Updated Utility Expansion Fees
5. Updated Solid Waste Expansion Fees
6. Other Recommendations

The Report presents the updated utility expansion fees for new customers locating outside the City’s Communities Facilities District (“non-CFD”) water and wastewater service areas, and for those new customers locating in the Community Facilities District (“CFD”) service area west of the Agua Fria River.

As Summary Schedule E-1 below demonstrates, the updated water expansion fee has increased by less than 1.0%, the updated water resource fee has increased less than 1.0%, and the updated wastewater expansion fee has decreased by (5.0%). The non-CFD customers located west of the Agua Fria River will pay the same water and wastewater expansion fees as all other non-CFD customers. However, the customers located within the CFD will pay expansion fees designed to recover only those costs related to water and wastewater improvements that will

directly benefit these customers but are not funded through the CFD, including the administrative component that all new customers will pay for additional water and wastewater administrative facilities required to serve growth. As Summary Schedule E-1 below indicates, the water expansion fee assessed to CFD has increased by 54.3% and the wastewater expansion fee assessed to CFD customers has increased by 18.7%.

Summary Schedule E-1: Existing and Updated Utility Expansion Fees

	On SRP Project	Off SRF Project	Agua Fria West	
			CFD	non-CFD
<b>Existing Expansion Fees</b>				
Water Expansion Fees	\$ 3,289	\$ 3,289	\$ 468	\$ 3,289
Water Resource Fees		616	616	616
Wastewater Expansion Fees	2,024	2,024	182	2,024
Total Existing Expansion Fees	\$ 5,313	\$ 5,929	\$ 1,266	\$ 5,929
<b>Updated Expansion Fees</b>				
Water System Expansion Fees	\$ 3,269	\$ 3,269	\$ 722	\$ 3,269
% Change	-0.6%	-0.6%	54.3%	-0.6%
Water Resource Fees		\$ 621	\$ 621	\$ 621
% Change		0.8%	0.8%	0.8%
Wastewater Expansion Fees	\$ 1,923	\$ 1,923	\$ 216	\$ 1,923
% Change	-5.0%	-5.0%	18.7%	-5.0%
Total Proposed Expansion Fees	\$ 5,192	\$ 5,813	\$ 1,559	\$ 5,813
% Change	-2.3%	-2.0%	23.1%	-2.0%

Summary Schedule E-2 on the following page presents the water, water resource, and wastewater expansion fees that will be assessed to customers by meter size. All residential customers will be assessed the expansion fees based on an equivalent dwelling unit (¾" meter), even if their home requires a 1" meter.

Summary Schedule E-2: Updated Utility Expansion Fees Assessed By Meter Size

Expansion Fees							
Meter Size	Conversion Ratio (1)	Water Expansion Fee	CFD Water Expansion Fee	Water Resource Fee	Sewer Expansion Fee	CFD Sewer Expansion Fee	Water Reuse Irrigation Fee
¾"	1.00	\$3,269	\$722	\$621	\$1,923	\$216	\$264
1"	1.67	5,283	1,029	1,037	3,067	216	264
1 1/2"	3.33	10,271	1,790	2,068	5,901	216	264
2"	5.33	16,281	2,706	3,310	9,315	216	264
3"	10.67	32,328	5,151	6,626	18,430	216	264
4"	16.67	50,358	7,899	10,352	28,672	216	264
6" D&C	33.33	100,421	15,530	20,698	57,111	216	264
6" Turbine	41.67	125,483	19,349	25,877	71,347	216	264
8" Compound	53.33	160,521	24,690	33,118	91,251	216	264

(1) Meter conversion ratios are provided in the American Water Works Association Manual 6 (M-6).

As Summary Schedule E-2 indicates, as part of this study RFC recommends the City also assess the water administrative expansion fee to development that will

use treated effluent from water reclamation facilities as non-drinking irrigation water (reuse water). This administrative component would represent the only expansion cost recovered from these reuse water customers (typically golf courses), who also will benefit from the administrative facilities and planning studies the City must provide in serving new development.

In addition to utility expansion fees, this Report serves to update the solid waste expansion fees assessed to residential development. The solid waste expansion fee is calculated to recover the capital costs of the improvements and equipment the City must construct or acquire for the benefit of development and in order to provide the appropriate level of solid waste services to new residential customers. Based on the updated calculation, the solid waste expansion fee per single-family residential unit is **\$300**, a decrease of (3.5%) and the solid waste expansion fee per multi-family residential unit is **\$206**, an increase of 13.1%.

Summary Schedule E-3 compares the existing single-family residential unit and multi-family residential unit solid waste expansion fees with the updated solid waste expansion fees.

Summary Schedule E-3: Existing and Updated Solid Waste Expansion Fees

Residential Customers	Existing	Updated	Percent Change
Single-Family Residential Unit	\$311	\$300	-3.50%
Multi-Family Residential Unit	\$182	\$206	13.10%

Based on the recently Arizona Revised Statutes §9-463.05 and the evolving nature of the utility systems, the City may want to consider:

- Introducing a System Buy-In Component to the calculation of the utility expansion fees. As the City continues to develop and construct water and wastewater facilities and capacities to serve development, future water and wastewater CIP and IIPs for may not reflect the appropriate amount of facilities and capacities necessary to serve anticipated development at a level of service consistent with the current level of service provided to existing water customers.
- Recovering relevant interest expense on debt issues required to fund projects included in the IIPs through the expansion fees as Senate Bill 1423 allows the costs of financing improvements benefiting development to be recovered through the expansion fees.
- Including improvements in the IIP and expansion fee calculations that provide capacities and infrastructure capacity to serve build-out development and demands.

- Adjusting the expansion fees based on the Engineering News Records (“ENR”) Construction Cost Index (“CCI”) to adjust the development impact fees for water, wastewater, water resources and solid waste.
- Evaluating the frequency of modifying or updating the expansion fees based on the magnitude of changes anticipated as part of the CIP and IIP planning processes.

## **1. Introduction**

This fiscal year (“FY”) 2008 Update represents the fifth update of the City of Peoria’s (“City”) water, water, and wastewater expansion fees, and the second solid waste expansion fee update provided by RFC. Continued steady growth and development in Peoria and evolving capital planning processes has required the City to address future demand for water and wastewater capacities, water resource supply, and solid waste capital equipment and vehicles. Accordingly, the City has incorporated the practice of reviewing these expansion fees on a biennial basis.

In general, expansion fees are defined as “One-time capital recovery charges assessed against new development as a way to recover a proportional share of the cost of capital facilities constructed to provide public service capacity for new customers.”<sup>1</sup> These types of fees are typically used in areas experiencing high growth where recovering expansion related costs through rates would place an inequitable burden on existing customers.

Since 1999, RFC has biennially updated the City’s water, water resource, and wastewater (collectively referred to as “utility”) expansion fees based on the *Marginal-Incremental Cost Methodology* which focuses on the cost of adding additional facilities to serve new customers. It is most appropriate in high-growth areas, in situations where existing facilities do not have available capacity to serve new customers, and the cost for new capacity can be tied to an approved Capital Improvements Plan (“CIP”) or master plan. The current development profile of the City of Peoria makes the Marginal-Incremental Cost Methodology suitable for establishing expansion fees. Specifically, the City’s current CIP and Infrastructure Improvements Plan comprise an appropriate amount of capital facilities necessary to serve anticipated development at a level of service consistent with the current level of service provided to existing customers benefiting from these public services.

On April, 24 2007, Governor Janet Napolitano approved Senate Bill 1423 (“SB1423”) amending Arizona Revised Statutes §9-463.05 relating to municipal development fees. Based on this legislation, the current approach and documentation used to determine and biennially update the City’s utility and solid waste expansion fees are generally consistent with the requirements of the amended §9-463.05. However, the revised legislation does specify additional requirements and/or modifications related to the adoption of an Infrastructure Improvements Plan (“IIP”) related to the public services recovered through each expansion fee, credits for public services included in the IIP that are provided by developers, specific information to be included in the public written Report, and the public notice periods and fee adoption process.

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<sup>1</sup> Source: Comprehensive Guide to Water and Wastewater Finance and Pricing - Third Edition, George A. Raftelis

To address the additional requirements of amended Arizona Statute §9-463.05, this Expansion Fee Report (“Report”) identifies:

- The methodology for calculating the amount of each expansion fee;
- The relationship between each expansion fee and its related Infrastructure Improvements Plan;
- The approach of assessing each expansion fee to new development; and,
- Annual indices that may be used to automatically adjust the expansion fees in those years that City does not perform a formal update or modification to the expansion fee calculations.

In addition, the Report describes each of the IIPs related to water, water resource, wastewater, and solid waste (also referred to as public services). These descriptions include a forecast of the costs of infrastructure, improvements, real property, and other capital costs required to meet future demands for these public services. Based on amended §9-463.05, an IIP may be adopted concurrently with this Report, and the City may provide the public notices and hearings required to adopt the IIPs together with the notices and hearings required to adopt the expansion fees. As such, it is the intent of the City and the purpose of this Report to incorporate the necessary information to adopt the IIPs and the expansion fees concurrently.

Since project initiation, RFC has worked closely with City staff in developing an understanding of the City’s water, wastewater, and solid waste service areas, the pricing objectives for both user charges and expansion fees, and the current expansion fee structure. Based on this understanding, RFC has updated the expansion fees based on the following understandings:

- Update the expansion fees in a manner consistent with the requirements of the Rational Nexus test, amended state statutes §9-463.05, and industry guidelines.
- Calculate each of the utility and solid waste expansion fees based on the industry accepted *Marginal-Incremental Cost Methodology* since the City’s fiscal year (“FY”) 2008 Capital Improvement Plan (“CIP”) and each of the IIPs include substantial capital improvements necessary to serve development and provide additional capacity and equipment.
- Include actual construction costs already incurred by the City and the remaining amounts budgeted in the IIP for those relevant water, water resource, wastewater, and solid waste projects included in the IIP that are necessary to serve development and were initiated in prior years.

- Update the water resource fee to recover the unique costs associated with the City's various water supply sources. This water resource fee was established in our 1999 study for the "Off-Project" service area based on the restrictions associated with the City's major water sources.
- Update the seasonal demand factor that is used to determine the per equivalent dwelling unit ("EDU") water expansion and water resource fees based on residential billing information.
- Provide appropriate credits against payment of a portion of the expansion fees to recognize dedication of improvements and infrastructure provided by developers based on the type of facilities dedicated and the unit costs for that component of the expansion fee.
- Update the population and other demographic data used to determine the solid waste expansion fee per single-family residential ("SFR") dwelling and multi-family residential ("MFR") dwelling.

These points of understanding are developed and discussed in more detail in the following sections and exhibits of this Report.

## **2. Arizona Revised Statutes §9-463.05**

The City of Peoria and other municipalities in Arizona may assess expansion fees to offset capital costs associated with providing necessary public services to a development if the fees result in a beneficial use to the development and the monies received are used for used only for an authorized purpose.

On April, 24 2007, Governor Janet Napolitano approved Senate Bill 1423 (“SB1423”) amending Arizona Revised Statutes §9-463.05. The purpose of SB1423 was to permit a municipality to modify an already established development fee (also known as expansion fees) while establishing certain new provisions and modifying other existing provisions related to assessing or modifying the expansion fees. Specifically, these additional and modified provisions require and/or permit municipalities to:

- Use all monies received from any expansion fee identified in an IIP to provide the same category of necessary public service for which the expansion fee was assessed.
- Adopt or amend an IIP prior to assessing a new or modified expansion fee.
  - The IIP estimates future necessary public services (capacity, improvements, infrastructure, facilities, etc) required to serve new development and the basis for the estimate.
  - The IIP forecasts the costs of capacity, improvements, infrastructure, facilities, etc. that will be associated with meeting the future needs and demands for public services and estimate the time required to finance and provide these services.
  - The IIP may be the City’s Capital Improvements Plan (“CIP”).
- Adjust expansion fees automatically by a nationally recognized index applicable to the cost of the public services recovered through the expansion fees on an annual basis without a public hearing.
- Make a written expansion fee report available to the public at least sixty (60) days prior to the formal public hearing to adopting a new or modified expansion fee. The report must identify the methodology of calculating the expansion fee, explain the relationship between the fee and the IIP, and identify any indices used for, and the timing of, automatic fee adjustments.
- Adopt or amend an IIP concurrent with the expansion fee report and expansion fee adoption process.
- Provide credit toward the payment of an expansion fee for those necessary public services included in the IIP and recovered through the expansion fee to the extent that similar public services have been provided by the developer.

- Modify an existing expansion fee if it complies with the State requirements related to adopting or amending the appropriate IIP and providing appropriate public notice and a public hearing.
- Make the IIP and related documentation available to the public at least sixty (60) days prior to the formal public hearing to adopt or amend the IIP.
- Adopt or amend an IIP through a formal public hearing at least thirty (30) days prior to assessing a new or modified expansion fee.
- Amend an IIP without a public hearing if the modifications address only elements of the necessary public services included in the existing IIP and if public notice of the amendments and modifications is provided at least fourteen (14) days prior to their effective date.

Based on this revised legislation and the rational nexus test applied by courts, the approach the City has used to determine and biennially modify (update) its utility and solid waste expansion fees is compliant with the amendments to Arizona Revised Statutes §9-463.05. However, this Report has been developed in order to address the additional and modified provisions of the revised legislation. Specifically, this Report identifies the methodology of calculating each expansion fee, explains the relationship between each fee and its associated IIP, and identifies indices used for automatic fee adjustments in those years the City elects not to modify an expansion fee. Furthermore, since the legislation permits adoption of the IIPs concurrent with the Report and expansion fee adoption process, we have included discussions of the water IIP, water resource IIP, wastewater IIP, and solid waste IIP in Section 3 of this Report. Detailed IIP schedules estimating the magnitude and timing of capital costs necessary to serve new development are included in Appendix B.

### **3. INFRASTRUCTURE IMPROVEMENTS PLANS**

As mentioned above, prior to assessing a new or modified development fee for public services the City must adopt or amend an Infrastructure Improvements Plan. Furthermore, the City may adopt an IIP concurrently with the adoption of the expansion fees determined to recover the costs of providing the public services included in the IIP. The City has developed separate IIPs for each of the public services relating to the expansion fees updated as part of this Report. As such, this section includes a description of the necessary infrastructure and improvements required to meet the demands of new development for the following public services provided by the City of Peoria.

- Water Services
- Water Resources
- Wastewater Services
- Solid Waste Services

#### A. FY 2008 through FY 2017 Water Infrastructure Improvements Plan

The water IIP, included as Schedule B – 1 in Appendix B, includes all water improvements scheduled to be constructed and placed into service from FY 2007 through FY 2017 and required to provide additional infrastructure, facilities, and capacities to serve demand resulting from anticipated future development.

Certain projects included in the water IIP will benefit both development and existing customers, such as the new Utility Billing System (UT00160) and the Municipal Operations Center (PW00300). Although the total cost of these projects benefiting water customers are included and identified in the water IIP, only the portion or percentage of each project that will benefit development is included in the calculation of the water expansion fees. The proportion associated with development is also identified in the IIP. Certain other projects, such as the Utility Billing System, Butler Drive Water Reclamation Facility (“WRF”), and Jomax WRF projects, have been allocated to both water and wastewater to recognize that these projects benefit both water and wastewater customers. In addition, certain projects initiated in, or completed in FY 2007 have been included in the water IIP as these projects provide infrastructure, improvements, and capacity for the benefit of development.

To provide water services to its customers, the City of Peoria’s water system includes water treatment, water storage, and water transmission facilities and infrastructure. In addition, the City must also provide certain administrative infrastructure and programs to appropriately serve and support its water customers. Due to the recent and anticipated continued development in the City, the City’s current CIP and IIP include an appropriate amount of treatment, storage,

transmission, and administrative facilities to serve anticipated development at a level of service consistent with the current level of service provided to existing water customers. Each component of the facilities included in the IIP and recovered through the water expansion fee is described below.

**Water Treatment Facilities Component**

The water treatment facilities component consists of potable water treatment facilities, well facilities, and water reclamation facilities. The potable treatment facilities are required to treat surface water provided by through the City's Central Arizona Project ("CAP") and other water resource alternatives. The potable treatment projects include the Greenway Re-rating (UT00023), Pyramid Peak Water Treatment Plant ("WTP") - Phase II (UT00037), and Twin Buttes 5 MGD WTP (UT00172). Table 1 below details the additional 15.07 MGD of potable water treatment capacity provided through these projects for the benefit of new development within the City's water service area.

Table 1

Potable Treatment Facilities	Capacity Benefiting Development (MGD)	Water IIP Cost for Development (millions)
Greenway Re-rating	8.00	\$5.0
Pyramid Peak WTP <sup>(1)</sup>	2.07	\$4.1
Twin Buttes <sup>(2)</sup>	<u>5.00</u>	<u>\$62.1</u>
<b>Subtotal</b>	<b>15.07</b>	<b>\$71.3</b>

(1) The 2.07 MGD of additional capacity represents the City of Peoria's portion of the recent expansion to the Glendale Pyramid Peak Water Treatment Plant ("WTP").

(2) Represents the City's portion of the anticipated 5.00 MGD Twin Buttes WTP located on the CAP canal west of the Agua Fria River.

The well facilities are required to recover ground water during peak and drought periods. Wells (UT00117) consist of drilling five (5) new wells during the IIP planning period. As the Table 2 below indicates, each of the five new wells will provide 1.00 MGD of additional capacity for the benefit of new development within the City's water service area.

Table2

Well Facilities	Capacity Benefiting Development (MGD)	Water IIP Cost for Development (millions)
Wells	5.00	\$10.5

The City recently embraced an approach to providing water and wastewater services that focuses on developing wastewater reclamation facilities ("WRF") and related infrastructure that provide a dual benefit to both wastewater and water

customers. These WRFs will be used to treat domestic wastewater and provide effluent that will either be used as non-drinking irrigation water (reuse water) or pumped into underground storage and recovery facilities to ultimately provide additional ground water resources that can be recovered and treated through well facilities.

As a result, a portion of the costs for these facilities can be considered to benefit new water customers. As such, they have been included in the Water IIP and are recovered through the treatment component of the water expansion fee in an effort to appropriately reflect the dual benefits these facilities provide.<sup>2</sup> The water reclamation projects include the Butler Drive WRF (UT00031), Butler Drive WRF Expansion (UT00225), Jomax WRF (UT00173), and Jomax WRF Expansion (UT00237). Table 3 below details the additional 14.81 MGD of water reclamation capacity provided through these projects for the benefit of new development within the City's water service area.

Table 3

<b>WRF Facilities Benefiting Water</b>	<b>Capacity Benefiting Development (MGD)</b>	<b>Water IIP Cost for Development (millions)<sup>(1)</sup></b>
Butler Drive WRF (Phase 1 & 2)	13.00	\$64.4
Jomax WRF (Phase 1 & 2)	<u>1.81</u>	<u>\$10.5</u>
<b>Subtotal</b>	<b><u>14.81</u></b>	<b><u>\$74.9</u></b>

(1) The water IIP costs for the Butler Drive WRF and Jomax WRF do not represent the total costs of these facilities. A portion of these facilities is included in and recovered through the wastewater IIP.

Based on the capacity to be added through the potable water treatment, well, and reclaimed treatment, the total capacity added through water treatment facilities components is 34.88 which is detailed in Table 4 below.

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<sup>2</sup> In general, the costs of the water reclamation facilities are allocated 50:50 between the water and wastewater infrastructure improvements plans and expansion fees. However, the total capacities of the WRF are allocated to both water and wastewater to reflect the full capacities that benefit the water and wastewater customers. The exception to this is the Butler Drive WRF, which includes certain costs and capacities that relate to replacing wastewater treatment capacity currently provided by the City of Tolleson Wastewater Treatment Facility.

Table 4

<b>Water Treatment Facilities Component</b>	<b>Capacity Benefiting Development (MGD)</b>	<b>Water IIP Cost for Development (millions)</b>
Potable Water Treatment	15.07	\$70.3
Well Facilities	5.00	\$11.7
WRF Benefiting Water	<u>14.81</u>	<u>\$74.9</u>
<b>Subtotal</b>	<b><u>34.88</u></b>	<b><u>\$155.7</u></b>

*Water Storage Facilities Component*

The water storage facilities component consists of water storage reservoirs and underground storage & recharge facilities that will be constructed for the purpose of recharging treated effluent from the Butler Drive WRF mentioned above. The storage reservoir projects include the Reservoir at Greenway WTP (UT00175) providing 5.00 million gallon (MG) of additional storage capacity that will enable the Greenway WTP to better manage daily peaks and the Humbug Reservoir (UT00118) providing 6.00 MG of storage capacity in the northern part of the City near Lake Pleasant.

The underground storage & recharge facilities projects include the Butler Recharge Wells (UT00248) and New River/Agua Fria Underground Storage (UT00149). The Butler Recharge Wells will enable the 13.00 MGD Butler Drive WRF to deliver treated effluent directly to the aquifer while the New River/Agua Fria USP project will serve to store and recharge the treated effluent. Although the New River/Agua Fria USP project was completed in FY 2007, this project is included in the IIP and water expansion fee since it will benefit development once the Butler Recharge Wells and Butler Drive WRF are complete and become operational. Ultimately, these underground storage & recharge facilities will provide for the recharge and recovery of 13.00 MGD.

Table 5 below details the additional 24.00 MGD of water storage capacity provided through these projects for the benefit of new development within the City's water service area.

Table 5

<b>Water Storage Facilities Component</b>	<b>Capacity Benefiting Development (MGD)</b>	<b>Water IIP Cost for Development (millions)</b>
Water Storage Reservoirs	11.00	\$9.0
Underground Storage & Recharge <sup>(1)</sup>	<u>13.00</u>	<u>\$4.3</u>
<b>Subtotal</b>	<b><u>24.00</u></b>	<b><u>\$13.3</u></b>

(1) The water IIP costs for the underground storage & recharge facilities do not represent the total costs of these facilities. A portion of these facilities is included in and recovered through the wastewater IIP.

*Water Transmission Line Component*

The water transmission line component consists of all water transmission lines constructed by the City of Peoria for the benefit of development. This excludes local distribution lines that are typically contributed or dedicated by developers. In general, water lines less than or equal to 16-inches in diameter are typically contributed by the developer and have been excluded from the IIP. In some situations, developers may agree to contribute larger transmission lines in those areas the City has not anticipated for development during the IIP period. These contributed transmission lines benefit development and are included in the water IIP but are excluded from the calculation of the water expansion fee.

The water transmission line component includes various projects to extend 24-inch transmission lines and extend 30 and 36-inch transmission lines. In addition, several water transmission line projects and three booster station projects are required to connect and loop the system in order to convey and deliver water to different parts of the system and enhance the City’s ability to meet peak demand in different areas of the City. The water transmission line component also includes the Agua Fria West Water Lines (UT00170) project that provides major water lines west of the Agua Fria River and the Vistancia development. Although the Vistancia development is funding its portion of these lines, the City must oversize these lines to meet the needs of other planned and anticipated developments in that area. Therefore, only the cost of over sizing the lines is included in the IIP and the water expansion fee calculation.

Table 6 below details the additional water transmission lines provided through these projects to support the potable treatment capacity and convey the potable water for the benefit of new development within the City’s water service area.

Table 6

<b>Water Transmission Line Facilities Component</b>	<b>Capacity Benefiting Development (MGD)<sup>(1)</sup></b>	<b>Water IIP Cost for Development (millions)</b>
24-inch Transmission Lines	N/A	\$19.7
30/36-inch Transmission Lines	N/A	\$40.4
Other Water Transmission <sup>(2)</sup>	N/A	\$6.2
Booster Pumping Stations	N/A	<u>\$7.9</u>
<b>Subtotal</b>	<b><u>25.07</u></b>	<b><u>\$74.2</u></b>

(1) Water transmission line capacity benefiting development represents the 8.0 Greenway WTP Re-rating capacity, the City of Peoria's portion of the 2.07 Pyramid Peak WTP expansion, and the 5.0 MGD of additional ground water well capacity to be added. Finally, although the City's portion of the Twin Buttes WTP is 5.0 MGD, the water transmission lines are sized to accommodate the total 10.0 MGD of the Twin Buttes WTP.

(2) Includes Agua Fria West Water Lines (UT00170)

*Communities Facilities District Facilities & Infrastructure Component*

It should also be noted that the three booster station projects that will convey and deliver water to different parts of the system will benefit development within the CFD. As such, these booster station projects which include Zone 2/3 Booster Station (UT00136), Agua Fria West In-line Booster – Phase I (UT00245), and Agua Fria West In-line Booster – Phase II (UT00246) are also included in the water expansion fee for the CFD area.

Table 7 below details the capacity provided through the booster station projects that will benefit development within the City's water service area.

Table 7

<b>Water CFD Facilities &amp; Infrastructure Component</b>	<b>Capacity Benefiting CFD Development (MGD)</b>	<b>Water IIP Cost for Development (millions)</b>
Zone 2/3 Booster Station	2.00	\$3.1
Agua Fria West In-line Booster 1	4.00	\$3.8
Agua Fria West In-line Booster 2	2.00	<u>\$1.0</u>
<b>Subtotal</b>	<b><u>8.00</u></b>	<b><u>\$4.9</u></b>

Although these costs are broken out separately to determine the facilities and infrastructure component of the CFD water expansion fee, these facilities are also included in the water IIP and recovered through the water expansion fees assessed to development outside the CFD area. It should be noted that segregating the costs and capacities of these projects allows the City to recover the unit (cost per gallon) cost that benefits development within the CFD area.

B. FY 2008 through FY 2017 Water Resource Infrastructure Improvements Plan

The water resource IIP included as Schedule B – 2 in Appendix B, includes all water resource acquisitions and projects scheduled from FY 2007 through FY 2017 and required to provide additional water resources to address demand resulting from anticipated future development.

The Arizona Groundwater Management Act (“GMA”) and Assured Water Supply (“AWS”) were enacted into Arizona law to address groundwater overdraft problems experienced throughout the State and other areas of the Southwestern United States. Under the GMA, in order for development to occur a developer must demonstrate to the Arizona Department of Water Resources (“ADWR”) that an assured or adequate supply of water exists for the area to be developed. To demonstrate an assured water supply, the developer can obtain its own AWS designation or have its development served by an AWS designated water system. The AWS certification is designed to encourage participating water systems to reduce their reliance on groundwater. The City applied for and received an AWS designation in 1998 by demonstrating a sufficient water supply to meet 100 years projected demand for the existing population, committed demand, and incremental growth.

As part of demonstrating an assured water supply, the City of Peoria’s has developed a program as part of its Water Resources Master Plan to acquire surface water allocations adequate to meet the anticipated demands of future development. These surface water acquisitions consist of Non-Indian Agricultural Central Arizona Project (“CAP”) Water Reallocations and CAP Water Rights. In addition to these surface water right acquisitions, the IIP also includes the periodic costs to Update Water Resources Master Plan (UT00113) that total \$720,000 during the water resources IIP period. The water resources included in the IIP and recovered through the water resource expansion fee are described below.

*Water Resource Acquisitions*

The water resource acquisitions consist of Non-Indian Agricultural CAP Water Reallocations (UT00234) and CAP Water Rights (UT00234). Both projects provide for the purchase of additional water supplies to address the future shortage of renewable water resources as identified in the Water Resources Master Plan and assist the City in maintaining its designation as an Assured Water Supplier by the ADWR. The CAP Water Rights project incorporates the acquisition of Gila River Indian Lease water and CAP Water Reallocations. The water acquisitions will be used for those areas of the City located outside the SRP On-Project member lands.

Table 8 below details the capacity provided through the water resources acquisitions that will benefit new development within the City’s water service area.

Table 8

Water Resource Acquisitions	Benefiting Development		Water Resource IIP Cost for Development
	(Acre-Feet) <sup>(1)</sup>	MGD	(millions)
Non-Indian Ag CAP Reallocation	3,333	2.98	\$5.0
CAP Water Rights			
Gila River Indian Lease	7,000	6.25	\$9.0
CAP Water Reallocation	<u>5,527</u>	<u>4.93</u>	<u>\$3.6</u>
<b>Total Water Resource Acq.</b>	<b><u>15,860</u></b>	<b><u>14.16</u></b>	<b><u>\$17.6</u></b>

(1) An acre-foot of water is equivalent to 325,851 gallons.

As part of its acquisition of the 5,527 acre-feet of CAP Water Reallocation, the City must pay annual take-or pay charges on each acre-foot regardless of whether the City actually takes delivery of the water supply. However, since these annual charges are recovered through the City’s annual water rates, a credit is provided for those charges. Although the charges are included in the water resource IIP and the water resource expansion fee calculation, these costs are completely offset by the credit provided.

C. FY 2008 through FY 2017 Wastewater Infrastructure Improvements Plan

The wastewater IIP, included as Schedule B – 3 in Appendix B, includes all wastewater improvements scheduled to be constructed and placed into service from FY 2007 through FY 2017 and required to provide additional infrastructure, facilities, and capacities to serve demand resulting from anticipated future development.

Certain projects included in the wastewater IIP will benefit both development and existing customers, such as the new Utility Billing System (UT00160), Municipal Operations Center (PW00300), and the wastewater portion of the Butler Drive WRF (UT00031 & UT00225). Although the total cost of these projects benefiting wastewater customers are included and identified in the wastewater IIP, the portion or percentage of each project that will benefit development is included in the calculation of the wastewater expansion fees and is also identified in the IIP. Certain other projects, such as the Utility Billing System, Butler Drive WRF, and Jomax WRF projects, have been allocated to both water and wastewater to recognize that these projects benefit both water and wastewater customers. In addition, certain projects initiated in, or completed in FY 2007 have been included

in the wastewater IIP as these projects provide infrastructure, and capacity for the benefit of development.

To provide wastewater services to its customers, the City of Peoria's wastewater system includes wastewater treatment, underground storage & recharge, and wastewater trunk line facilities and infrastructure. In addition, the City must also provide certain administrative infrastructure and programs to appropriately serve and support its wastewater customers. Due to the recent and anticipated continued development in the City, the City's current CIP and IIP include an appropriate amount of treatment, underground storage & recharge, trunk lines, and administrative facilities to serve anticipated development at a level of service consistent with the current level of service provided to existing wastewater customers. Each component of these facilities included in the IIP and recovered through the wastewater expansion fee is described below.

#### *Wastewater Treatment Facilities Component*

The wastewater treatment facilities component consists of the portion of water reclamation facilities that benefits the wastewater system. The City recently embraced an approach to providing water and wastewater services that focuses on developing wastewater reclamation facilities and related infrastructure that provide a dual benefit to both wastewater and water customers. These WRF will be used to treat domestic wastewater and provide effluent that will be used as non-drinking irrigation water (reuse water) and/or pumped into underground storage and recovery facilities to ultimately provide additional ground water resources that can be recovered and treated through well facilities.

As a result, a portion of the costs for these facilities can also be considered to benefit new water customers and have been included in the water IIP and are recovered through the treatment component of the water expansion fee.<sup>3</sup> The remaining portion of the costs for these facilities will benefit wastewater customers and have been included in the wastewater IIP. The water reclamation projects that provide a dual benefit to water and wastewater customers include the Butler Drive WRF (UT00031), Butler Drive WRF Expansion (UT00225), Jomax WRF (UT00173), and Jomax WRF Expansion (UT00237).

In addition, the costs and capacities of the Beardsley WRF Phase III (UT00124) and Beardsley WRF Phase IV (UT00213) are also included in the wastewater treatment facilities component. Since the Beardsley WRF expansions do not provide the same type of dual benefit as the other WRFs, the entire costs and

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<sup>3</sup> In general, the costs of the water reclamation facilities are allocated 50:50 between the water and wastewater infrastructure improvements plans and expansion fees. However, the total capacities of the WRF are allocated to both water and wastewater to reflect the full capacities that benefit the water and wastewater customers. The exception to this is the Butler Drive WRF, which includes certain costs and capacities that relate to replacing wastewater treatment capacity currently provided by the City of Tolleson Wastewater Treatment Facility.

capacities associated with the Beardsley WRF expansions are allocated to the wastewater IIP and expansion fee. The overall additional capacity that will be gained as a water resource as a result of these expansions is minimal and does not warrant an allocation of costs to the water expansion fee.

Table 9 below details the additional 15.81 MGD of water reclamation capacity provided through these projects for the benefit of new development within the City’s wastewater service area.

Table 9

<b>WRF Facilities Benefiting Wastewater</b>	<b>Capacity Benefiting Development (MGD)</b>	<b>Wastewater IIP Cost for Development (millions)</b>
Butler Drive WRF (Phase 1 & 2) <sup>(1)</sup>	6.00	\$29.8
Jomax WRF (Phase 1 & 2)	1.81	\$10.5
Beardsley WRF (Phase 3 & 4) <sup>(2)</sup>	<u>8.00</u>	<u>\$58.4</u>
<b>Subtotal</b>	<b><u>15.81</u></b>	<b><u>\$98.8</u></b>

(1) The total capacity to of the Butler Drive WRF projects is 13.0 MGD. However, a portion of the 13.0 MGD will be required to treat the 7.0 MGD of City of Peoria wastewater flows treated by the City of Tolleson wastewater treatment facility. As such, only the 6.0 MGD of capacity and the related portion of capital costs benefiting new development will be recovered through the wastewater expansion fee. The total cost of the Butler Drive WRF benefiting wastewater is approximately \$68.4 million, so the portion of costs benefiting existing customers is approximately \$38.6 million.

(2) Includes the costs of Beardsley WRF - Monitor Wells and Miscellaneous Upgrades (UT00196).

### *Underground Storage & Recharge Facilities Component*

The underground storage and recharge facilities will be constructed for the purpose of recharging of treating effluent provided through the Butler Drive WRF mentioned above. The underground storage and recharge facilities projects include the Butler Recharge Wells (UT00248) and New River/Agua Fria Underground Storage (UT00149). Since the underground storage & recharge facilities also benefit wastewater customers by serving to remove and otherwise make beneficial use of the effluent associated with the wastewater treated at the Butler Drive WRF, these projects are included in the wastewater IIP and wastewater expansion fee since they will benefit development. Ultimately, these underground storage and recharge facilities will provide for removal of the total 13.00 MGD of wastewater treatment capacity at the Butler Drive WRF.

Table 10 below details the additional 13.00 MGD of underground storage & recharge capacity provided through these projects for the benefit of new development throughout the City’s wastewater service area.

Table 10

Underground Storage & Recharge Facilities	Capacity Benefiting Development (MGD)	Wastewater IIP Cost for Development (millions)
Underground Storage & Recharge <sup>(1)</sup>	13.00	\$4.3

(1) The wastewater IIP costs for the underground storage & recharge facilities do not represent the total costs of these facilities. A portion of these facilities is included in and recovered through the water IIP.

### *Wastewater Trunk Line Component*

The wastewater trunk line component consists of all wastewater trunk lines constructed by the City of Peoria for the benefit of development. This excludes local collection lines that are typically contributed or dedicated by developers. In general, wastewater trunk lines less than 18-inches in diameter are typically contributed by the developer and have been excluded from the IIP. In some situations, developers may agree to contribute larger trunk lines in those areas the City has not anticipated for development during the CIP period. These contributed trunk lines benefit development and are included in the wastewater IIP but are excluded from the calculation of the water expansion fee. For example, the Tierra Del Rio offsite 24 inch Sewer Lines (UT00156) and Tierra Del Rio offsite 24-inch Sewer Lines (UT00157) are anticipated to be contributed by a developer and have been included in the IIP, but excluded from the wastewater expansion fee calculation.

The wastewater trunk line component includes various projects to extend 24-inch and larger trunk lines and several wastewater trunk line projects required to connect and loop the wastewater conveyance system in different areas of the City. The wastewater trunk line component also includes the Agua Fria West Wastewater Lines (UT00171) project that provides major wastewater trunk lines west of the Agua Fria River and the Vistancia development. Although the Vistancia development is funding its portion of these lines, the City must oversize these lines to meet the needs of other planned and anticipated developments in that area. Therefore, only the costs of the line oversize are included in the IIP and the wastewater expansion fee calculation.

Table 11 below details the additional wastewater trunk lines provided through these projects to support the treatment capacity and convey the effluent for the benefit of new development within the City's water service area.

Table 11

Wastewater Trunk Line Component	Capacity Benefiting Development (MGD) <sup>(1)</sup>	Wastewater IIP Cost for Development (millions)
Wastewater Trunk Lines <sup>(2)</sup>	15.81	\$16.4

(1) Capacity benefiting development represents the total capacity of the WRF to be added for the benefit of development during the IIP period. This excludes the 7.0 MGD of capacity at the Butler Drive WRF that will replace the flows currently treated through the Tolleson wastewater treatment facility.

(2) Includes Agua Fria West Wastewater Lines (UT00171).

D. FY 2008 through FY 2017 Solid Waste Infrastructure Improvements Plan

The solid waste IIP, included as Schedule B – 4 in Appendix B, includes all solid waste infrastructure and capital equipment scheduled to be purchased or constructed, and placed into service from FY 2007 through FY 2017. These improvements are necessary to provide additional equipment, vehicles, and solid waste capacities to serve demand resulting from anticipated future development.

Certain projects included in the solid waste IIP will benefit both new development and existing customers, such as the new Utility Billing System (UT00160) and Municipal Operations Center (PW00300). Although the total cost of these projects benefiting solid waste customers are included and identified in the solid waste IIP, the portion or percentage of each project that will benefit development is included in the calculation of the solid waste expansion fees and is also identified in the IIP. Certain other projects, such as the Utility Billing System have also been allocated to water and wastewater to recognize that these projects benefit water, wastewater, and solid waste customers. In addition, certain projects initiated in or completed in FY 2007 have been included in the solid waste IIP as these projects provide infrastructure, and capacity for the benefit of development.

To provide solid waste services to its customers, the City of Peoria’s solid waste department incorporates the use of collection equipment and apparatus such as containers and trucks. In addition, the City must also provide certain administrative infrastructure and programs to appropriately serve and support its solid waste customers. Due to the recent and anticipated continued development in the City, the City’s current CIP and IIP include an appropriate amount containers, trunks, and administrative facilities to serve its new customers. Each component is included in the IIP and recovered through the solid waste expansion fee is described in Table 12 below.

Table 12

<b>Collection Component</b>	<b>Equipment Necessary for Development</b>	<b>Solid Waste IIP Cost for Development (millions)</b>
Sanitation Trucks	10.77 <sup>(1)</sup>	\$2.3
Recycling Containers	25,837 <sup>(2)</sup>	\$1.2
Sanitation Containers	25,837 <sup>(2)</sup>	<u>\$1.2</u>
<b>Total Collection</b>	N/A	<b>\$4.7</b>
<b>Administrative Component</b>	<b>Development Units Benefiting</b>	<b>Solid Waste IIP Cost for Development (millions)</b>
Utility Billing System	25,837 <sup>(2)</sup>	<b>\$1.1</b>
Municipal Operations Center	25,837 <sup>(2)</sup>	<b>\$1.8</b>
North Municipal Facility Feasibility	25,837 <sup>(2)</sup>	<u><b>\$0.1</b></u>
<b>Total Administrative</b>		<b>\$2.9</b>
<b>Total Solid Waste</b>		<u><b>\$7.7</b></u>

(1) The City anticipates purchasing a new sanitation truck to serve each additional increment of 2,400 residential units. The City anticipates the cost for each new sanitation truck at \$218,000. Based on the total number of equivalent single-family units (25,837) to be added during the planning period, it is anticipated the City will need to purchase 10.77 sanitation trucks.

(2) Represents the total number of equivalent single-family residential units to be added during the IIP planning period. This estimate is based on City planning projections for single-family and multi-family residential building permits during the period, and the persons per household relationship between single-family (2.77) and multi-family (1.90).

#### **4. Updated Utility Expansion Fees**

In performing the FY 2008 Update, RFC has again used a Marginal-Incremental Approach, the same methodology used in developing the fees previously. Although a brief discussion of the Rational Nexus and the Marginal-Incremental Approach is provided below, this Section focuses on summarizing the methodology used to determine each of the fees, explains the relationship between each of the fees and its related IIP, documents the approach to assessing the fees to development, and identifies the indices that will be used for automatic annual adjustments to the fees.

##### *Rational Nexus*

In general, properly developed expansion fees must comply with the Rational Nexus test established in court cases. The Rational Nexus test requires that: 1) the need for expansion fees is a result of new growth; 2) the amount of the fee does not exceed the reasonable cost to provide capacity to accommodate growth; and 3) the funds collected must be adequately earmarked for the sufficient benefit of new customers required to pay the fee. The development of appropriate expansion fees is an important component in the overall strategy for pricing utility and solid waste services and represents a major challenge for public utilities.

##### *Marginal-Incremental Cost Methodology*

The Marginal-Incremental Cost Methodology specifically focuses on the cost of adding additional facilities to serve new customers. It is most appropriate in a situation where existing facilities do not have available capacity to serve to new customers and the cost for new capacity can be tied to an approved CIP/IIP. This method includes the calculation of an adjustment or credit for relevant principal payments related to the new assets that will be recovered through future utility rates. This credit is designed to consider the contributions in user fees that will be made in the future by the utility and solid waste rate payers towards the capital costs of the necessary public services covered through the expansion fees. In other words, this credit addresses the issue of double payment by new customers for the same unit of capacity through the expansion fee and through user rates and charges. The City of Peoria has the type of profile that makes the Marginal-Incremental Cost Methodology suitable for establishing expansion fees.

##### *Water Expansion Fee*

Overall, the water expansion fee has decreased from \$3,289 in the FY 2006 Update to \$3,269 in the FY 2008 Update, a decrease of less than 1.0%.

To provide water services to its customers, the City of Peoria's water system includes water treatment, water storage, and water transmission facilities and

infrastructure. In addition, the City must also provide certain administrative infrastructure and programs to appropriately serve and support its water customers. Since the City provides expansion fee credits in the form of offsets or reimbursements to developers that contribute certain facilities and/or infrastructure, the water expansion fee has been developed based on the unit costs for each of the facilities components provided by the City of Peoria. This Report identifies the specific unit costs expressed in gallons per day (“gpd”) for each of the water facilities components provided by the City of Peoria. The calculation of each component is described below.

1. The water transmission line component recovers the costs associated with major water transmission lines (generally 24-inches or greater in diameter) that will transport the potable water produced by the groundwater well facilities and expansion related potable treatment facilities included in the water treatment component. As such, the 25.07 MGD limiting capacity factor for the water transmission line component includes the 5.00 MGD of well capacity associated with the groundwater wells project, the 10.00 MGD associated with the Twin Buttes WTP project, the 8.00 MGD associated with the Greenway re-rating, and the 2.07 MGD associated with Peoria’s share of the Pyramid Peak WTP expansion. This results in a net **\$2.70** per gpd unit cost of for the water transmission line component, which is determined based on the total cost of \$2.97 per gpd less the (\$0.27) gpd debt credit for the water transmission line projects the City anticipates funding through debt.
2. The water storage component recovers the costs associated with the two water storage reservoirs providing 11.00 MG of storage capacity and the New Agua Fria River underground storage & recharge projects that will serve to recharge the treated effluent at from the 13.00 MGD Butler Drive WRF. As such, the 24.00 MGD that serves as the limiting capacity factor for water storage facilities component. This results in a **\$0.55** per gpd unit cost. Since these facilities are not anticipated to be funded though debt, there is no debt credit for this component.
3. The water treatment component recovers costs associated with potable water treatment facilities and capacity through the Greenway WTP Re-rating for an additional 8.00 MGD, the City’s portion (2.07 MGD) of the Pyramid Peak WTP expansion, and 5.00 MGD Twin Buttes WTP. In addition, the groundwater wells project is included in this component as these groundwater wells will be used to provide 5.00 MGD of the additional potable water resources. Finally, the appropriate water related portion of the capital costs and capacities associated with the 13.00 MGD Butler Drive WRF and the 1.81 MGD Jomax WRF that will benefit development are included in the water treatment component. As such, the 34.88 MGD that serves as the limiting capacity factor for water storage facilities component. This results in a net **\$3.21** per gpd unit cost of for the water treatment component, which is determined based

on the total cost of \$4.62 per gpd less the (\$1.41) gpd debt credit for the water treatment projects the City anticipates funding through debt.

4. The water administrative component recovers the water utility's appropriate share of expansion related costs for the Beardsley Operations Building (UT00211), the Municipal Operations Center ("MOC") Renovation and the Development Services Building (PW99999), the new utility billing system, and updates the expansion fees and master plans during the planning period. It should be noted that portions of these administrative projects (except the expansion fee and master plan updates) are required to serve existing utility customers and other non-utility City functions. As a result, the City has estimated the portion of these administrative projects that will benefit new water utility customers added through anticipated development, and the calculation of the administrative component of the water expansion fee includes only these expansion related costs. The total \$7.8 million in expansion related capital administrative costs are allocated to new water customers based on the anticipated number of accounts (29,481 permits) to be added during the planning period. This allows these administrative costs to be allocated to all new water customers based on a similar methodology. This methodology results in an additional **\$264** per expansion fee for the administrative component. Since these administrative costs benefit all customer accounts equally, regardless of capacity, these costs are not determined based on per gpd unit cost and escalated by meter size.

#### *Water Units of Service*

To arrive at the water expansion fee per EDU, an estimated peak water usage factor of 465 gpd for a typical residential water customer ("EDU") of the City of Peoria water system is applied to the infrastructure components of the water expansion fee per gpd. This peak factor is based on the average water usage per single-family residential customer during the peak seasonal water usage month. The administrative component of \$264 is then added to the \$3,005 in infrastructure costs to arrive at the full \$3,269 water expansion fee per EDU. This expansion fee per EDU represents the expansion fee that will be assessed to all residential customers regardless of meter size since the 465 gpd usage factor represents the estimated peak water usage for all residential customers. Non-residential customers with  $\frac{3}{4}$ " meters will also be assessed the expansion fee per EDU.

Exhibit 1 on summarizes the calculation of the water expansion fee. For more detail on the calculation of the water expansion fee, see Schedule 1 – A and Schedule 1 – B in Appendix A.

**Exhibit -1****Calculation of Water Expansion Fee**

Water Expansion Components	Benefiting New Development		Per Unit (gpd)		
	Cost (millions)	Capacity (MGD)	Total Costs	Debt Credit	Net Cost
1. Water Transmission Lines	\$ 74.45	25.07	\$ 2.97	(\$0.27)	\$ 2.70
2. Water Storage	\$ 13.29	24.00	\$ 0.55	\$0.00	\$ 0.55
3. Water Treatment	\$ 161.08	34.88	\$ 4.62	(\$1.41)	\$ 3.21
<b>Total Trunk Facilities</b>	\$ 248.81	N/A	\$ 8.14	(\$1.68)	\$ 6.46
State Water Design Criteria Demand per EDU (gpd)					465
Water Infrastructure Expansion Fee per EDU				\$	3,005
Plus Water Administrative Expansion Fee per EDU <sup>1</sup>				\$	264
<b>Total Water Expansion Fee per EDU</b>				<b>\$</b>	<b>3,269</b>

(1) The administrative component of the water expansion fee is determined based on the number of new water accounts or customers anticipated to be added during the planning period. As such, the administrative component is determined based on different units of services than the infrastructure components of the water expansion fee, which are determined based on a gallon per day of capacity. The calculation of the administrative expansion fee component is discussed below.

The determination of the infrastructure components of the water expansion fee also include a total debt principal credit of (\$1.68) per gpd for the portion of costs for new facilities that will be recovered through water rates. This total debt credit consists of a credit associated with debt funded water transmission lines of (\$0.27) per gpd and a credit associated with the debt funded water treatment facilities of (\$1.41). The debt principal credits serves to ensure that customers are not charged twice for these capital costs through both their rates and the expansion fee.<sup>4</sup> This credit is designed to consider the contributions in user fees that will be made in the future by the water rate payers towards the capital costs of the necessary public services covered through the water expansion fees.

For non-residential customers with larger meters, the infrastructure component costs per EDU are escalated based upon the ratio of capacity that is provided by different meter sizes before the \$264 administrative component is added to the fee. Exhibit 7 on page 36 provides a summary of the water expansion fees that will be assessed to customers by meter size.

#### *Water Administrative Expansion Fee*

The water administrative component recovers the water utility's appropriate share of expansion related costs for the Beardsley Operations Building (UT00211), the Municipal Operations Center ("MOC") Renovation (PW00300), the Development

<sup>4</sup> The debt principal credit is determined based on those projects identified as revenue bond funded in the water utility CIP. These CIP schedules represent a planning period that is consistent with the IIP planning period and the funding sources and timing of project construction currently identified for the projects may be adjusted as events and circumstances change during the planning period.

Services Building (PW99999), the new utility billing system, and updates the expansion fees and master plans during the planning period,. It should be noted that portions of these administrative projects (except the expansion fee and master plan updates) are required to serve existing utility customers and other non-utility City functions. As a result, the City has estimated the portion of these administrative projects that will serve new water utility customers, and the calculation of the administrative component of the water expansion fee includes only these expansion related costs.

Since the CFD expansion fee excludes certain infrastructure components, these administrative costs were allocated to the administrative component instead of being recovered from one of the other infrastructure components so the CFD water expansion fee would reflect the appropriate costs. The total \$7.8 million in expansion related capital administrative costs are allocated to new water customers based on the anticipated number of accounts (29,481 permits) to be added during the planning period. This allows these administrative costs to be allocated to all new water customers based on a similar methodology and similar units of service (added permits). This methodology results in an additional \$264 per expansion fee for the administrative component. Since these administrative costs benefit all customer accounts equally, regardless of capacity, these costs are not escalated by meter size.

Exhibit 2 on depicts the calculation of the water administrative expansion fee component.

## Exhibit 2



### Calculation of Water Administrative Expansion Fee per EDU

<u>Water Expansion Projects</u>	Estimated Cost Benefiting Growth	
<i>Administrative</i>		
Wastewater Reuse Master Plan-UT00179	\$	365,490
Strategic Business/Technology Master Plan (NEW) - UT00232		252,500
Update Water Expansion Fees-UT00070		380,103
Update Water Infrastructure Master Plan - UT00112		863,625
Beardsley WRF - Operations Building - UT00211		2,847,513 (1)
SCADA Master Plan		125,000
SCADA Control Optimization		1,008,000
Municipal Operations Center (UT00300)		640,738
North Municipal Facility Feasibility Study		50,000
Development Services Building (PW99999)		401,304
Utility Billing System - UT00160		457,665
Data Network for Remote Utility Facilities		378,337
Total Administrative	\$	7,770,274
Number of new customers projected		29,481 (2)
<b>Recommended Administrative Water Expansion Fee</b>	<b>\$</b>	<b>264</b>

(1) The Beardsley Operations Building provides additional space for both water and wastewater vehicles, equipment, and personnel.

(2) Number of new customers based on anticipated building permits provided by City planning estimates.

The water administrative expansion fee represents a component of the total water expansion fee to be assessed to all new development occurring within the City of Peoria water service area. In addition, it is recommended that the City also assess this water administrative expansion fee to development that will use treated effluent from the WRF as non-drinking irrigation water (reuse water). This administrative component would represent the only costs recovered from these reuse water customers, who also will benefit from the administrative facilities and planning studies the City must provide in serving new development.

#### *CFD Water Expansion Fee*

The non-CFD customers located in the Agua Fria West service area will be assessed the same water expansion fees as the customers of the rest of the City's service area. However, the CFD customers will be assessed separate fees based solely on the water infrastructure costs that will not be funded through the CFD, and the water portion of the administrative expansion related capital costs component.

To accommodate the methodology of calculating the separate CFD expansion fees and ensure that the appropriate costs are captured, only those water infrastructure projects that will provide capacity or support capacity in the CFD are included in the calculation. Specifically, the CFD will fund all expansion related water infrastructure projects with the exception of the Zone 2/3 Booster Station (UT00136), Agua Fria West In-line Booster – Phase I (UT00245), and Agua Fria West In-line Booster – Phase II (UT00246). These IIP projects will support facilities in the CFD and convey and deliver water to different parts of the system will benefit development within the CFD. As such, these booster station projects which include are also included in the water expansion fee for the CFD area. As such, these project costs and related capacities are included in the calculation of the transmission line component of the non-CFD water expansion fees, and in the calculation of the calculation of the CFD water expansion fees.

It is anticipated that these projects will provide support for 8.00 MGD of capacity which will be recovered through CFD water expansion fee. The water infrastructure costs per EDU amounts to \$458 when the \$0.98 cost per gpd is applied to the 465 gpd peak residential water usage factor. In addition, the water portions of the administrative building, the MOC, and other administrative capital expansion costs will be recovered through the CFD water expansion fees. This administrative component is calculated based on the same methodology described for the non-CFD expansion fees, and results in an additional \$264 for the water CFD expansion fee. This amounts to a total CFD water expansion fee per EDU of \$722.

Exhibit 3 depicts the calculation of the infrastructure component of the CFD water expansion fee. CFD customers will be assessed the same water resource fee that all other Off-Project water customers must pay.

**Exhibit 3**

**Calculation of Water CFD Expansion Fee per EDU**

<u>Water Expansion Projects</u>	Estimated Cost Benefiting Growth	Capacity to Serve Growth (MGD)	Cost per Peak gpd	
<i>Water Transmission Line Component</i>				
Agua Fria In-Line Booster Station - 4 MG Phase I - UT00245	\$ 3,777,380			
Agua Fria In-Line Booster Station - 2 MG Phase II - UT 00246	961,520			
Zone 2/3 Booster Station-UT00136	3,136,080			
Total Water Transmission Line Component	\$ 7,874,980	8.00	\$ 0.98	(1)
Full Cost Water Expansion Fee (gpd)			\$ 0.98	
Less: NPV of Bond Principal Payments (per gpd)			\$0.00	
<b>Recommended Water Expansion Fee (gpd)</b>			<b>\$ 0.98</b>	
Seasonal Demand EDU Factor (gpd)			465	(2)
Subtotal CFD Water Expansion Fee per EDU			\$ 458	
Water Administrative Expansion Fee			\$ 264	(3)
<b>Recommended Water Expansion Fee Per EDU</b>			<b>\$ 722</b>	

(1) The capacity for these projects is based on the anticipated capacity to serve developments in Vistancia and other developments west of the Agua Fria River. This includes capacity for development within and outside the CFD since the facilities will serve the entire area.

(2) Represents the estimated average day water usage during the peak seasonal usage period for the typical single-family residential customer in Peoria.

(3) The administrative component of the water expansion fee is determined based on the number of new water accounts or customers anticipated to be added during the planning period. As such, the administrative component is determined based on different unit of services than the facilities components of the water expansion fee, which are determined based on a gallon per day of capacity. The calculation if the administrative expansion fee component is discussed below.

**Water Resource Fee**

Overall, the water resource fee has increased from \$616 per EDU to \$621 per EDU, an increase of less than 1.0%.

As part of demonstrating an assured water supply, the City of Peoria’s has developed a program as part of its Water Resources Master Plan to acquire surface water allocations adequate to meet the anticipated demands of future development. These surface water acquisitions consist of Non-Indian Agricultural CAP Water Reallocations and CAP Water Rights and are recovered through the water resource fee. In addition to these surface water right acquisitions, the water resource fee also recovers the periodic costs to update the Water Resources Master Plan during the water resource IIP period.

According to Attachment D Administrative Procedure on Development Fee Administrative Procedures, “Credit for the water resource fee will only be

applicable when an identified water supply is approved as part of a contractual agreement with the City and a transfer of that water supply has been completed”.

Exhibit 4 depicts the calculation of the FY 2008 Update to the water resource fee per EDU.

**Exhibit 4**



**Calculation of Water Resource Fee per EDU**

	Estimated Cost Benefiting Growth	Capacity to Serve Growth (MGD)	Cost per Peak gpd
<b>Water Resource Fee</b>			
<i>Water Resources Component</i>			
Update Water Resource Master Plan (UT00113)	\$ 720,000		
Non-Indian Ag Cap Water Reallocation (UT00234)	5,000,000	2.98	(1)
CAP Water Rights (UT00033)			
Gila River Indian Lease	9,749,205	4.93	(2)
CAP Water Reallocation	3,449,103	6.25	(3)
CAP Annual Take-or-Pay Charge	3,673,723		(4)
Total Water Resources Component	\$ 22,592,030	14.16	\$ 1.60 (5)
Less: NPV of Take-or-Pay charge recovered through rates			(0.26)
<b>Recommended Water Resource Fee (gpd)</b>			<b>\$ 1.34</b>
Seasonal Demand per EDU (gpd)			465 (6)
<b>Recommended Water Resource Fee per EDU</b>			<b>\$ 621</b>

- (1) Represents estimated dollars for the purchase of Non-Indian Ag. Cap Water from the Arizona Department of Water Resources. The estimated capacity associated with this purchase is 3,333 acre-feet.
- (2) Assumes the present value of 15 payments of \$900,000/year beginning in FY 2008 at discount rate of 4.37% which represents the City's average cost of debt. This water resource represents 5,527 acre-feet.
- (3) Represents the NPV of \$3,600,000 cost in FY 2008 at discount rate of 4.37% based on the City's average cost of debt. This water resource represents 7,000 Acre-Feet.
- (4) Based on a \$37/Acre-foot charge for 2008-2043 on the 5,527 acre-feet of reallocated CAP water.
- (5) Capacities for the water resource component are based on the total acre-feet of water provided through each water resource purchased and converted into million gallons per day.
- (6) Represents the estimated average day water usage during the peak seasonal usage period for the typical single-family residential customer in Peoria.

The water resource fee per EDU represents the water resource fee that will be assessed to all Off-Project residential customers regardless of meter size since the 465 gpd represents the estimated peak water usage for all residential customers. Non-residential customers with ¾” meters will also be assessed the expansion fee per EDU.

For Off-Project non-residential customers with larger meters, the water resource fee is escalated based upon the ratio of capacity that is provided by different meter sizes. Exhibit 7 on page 36 provides a summary of the water resource fees that will be assessed to customers by meter size.

Specific capacity, legal, institutional, and geographical restrictions associated with the City’s various water supply sources justify a separate water resource fee for

the Off-Project water service area. New customers locating in the On-Project service area will not pay a water resource fee as the City has no capital cost basis to recover from these customers. The Salt River Project (“SRP”) water allocation is restricted to those parcels of land used as collateral in the construction of the SRP infrastructure. According to SRP staff, property owners of On-Project land own the “rights” to the SRP water allocation associated with that land. As such, Attachment D Administrative Procedure on Development Fee Administrative Procedures states, “No water resource fee will be assessed on properties within the Salt River project service area.

### **Wastewater Expansion Fee**

Overall, the wastewater expansion fee has decreased from \$2,024 in the FY 2006 Update to \$1,923 in the FY 2008 Update, a decrease of (5.0%).

To provide wastewater services to its customers, the City of Peoria’s wastewater system includes wastewater treatment, underground storage & recharge, and wastewater trunk line facilities and infrastructure. In addition, the City must also provide certain administrative infrastructure and programs to appropriately serve and support its wastewater customers. Since the City provides expansion fee credits in the form of offsets or reimbursements to developers that contribute certain facilities and/or infrastructure, the wastewater expansion fee has been developed based on the unit costs for each of the facilities components provided by the City of Peoria. This Report identifies the specific unit costs expressed in gpd for each of the wastewater facilities components provided by the City of Peoria. The calculation of each component is described below.

1. The wastewater trunk line component recovers the costs associated with major wastewater trunk lines (generally 24-inches or greater in diameter) that will collect and convey the sewer flows to the City of Peoria wastewater treatment facilities including in the wastewater treatment component. As such, the 15.81 MGD limiting capacity factor for the wastewater trunk line component includes the 8.00 MGD of treatment capacity associated with the expansions to the Beardsley WRF, the 6.00 MGD of capacity benefiting development associated with the Butler Drive WRF, and the 1.81 MGD associated with the City of Peoria’s share of the Jomax WRF<sup>5</sup>. This results in a **\$0.83** per gpd unit cost of for the wastewater trunk line component. Since these facilities are not anticipated to be funded through debt, there is no debt credit for this component.

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<sup>5</sup> Although the Jomax WRF will be constructed to provide a wastewater treatment capacity of 5.00 MGD, the majority of the capacity (3.19 MGD or 64%) will be contributed by the Vistancia CFD. In addition, the wastewater trunk lines associated with the CFD capacity will also be provided by the Vistancia CFD and have been excluded from the wastewater trunk line component of the wastewater expansion fee.

2. The underground storage & recharge component recovers the costs associated with the wastewater portion of the New Agua Fria River underground storage and recharge projects that will benefit wastewater customers by serving to remove and otherwise make beneficial use of the effluent associated with the wastewater treated at the Butler Drive WRF. This project is included in the wastewater IIP and wastewater expansion fee since it will benefit new development and the 13.00 MGD that serves as the limiting capacity factor for underground storage & recharge component. This results in a \$0.33 per gpd unit cost. Since these facilities are not anticipated to be funded through debt, there is no debt credit for this component.
  
3. The wastewater treatment component recovers costs associated with wastewater treatment facilities and capacity through the Beardsley WRF, the 6.00 MGD of capacity benefiting development associated with the Butler Drive WRF, and the 1.81 MGD associated with the City of Peoria's share of the Jomax WRF. Although the Butler Drive WRF will be constructed to provide 13.00 MGD of wastewater treatment capacity, 7.00 MGD of this capacity will be necessary to replace the flows currently treated at the City of Tolleson wastewater treatment facility. Similarly, although the Jomax WRF will be constructed to provide a wastewater treatment capacity of 5.00 MGD, the majority of the capacity (3.19 MGD or 64%) will be contributed by the Vistancia CFD. As such, the 15.81 MGD that benefits development serves as the limiting capacity factor for the wastewater treatment component. This results in a net \$4.54 per gpd unit cost of for the wastewater treatment component, which is determined based on the total cost of \$6.38 per gpd less the (\$1.84) gpd debt credit for the wastewater treatment projects the City anticipates funding through debt.
  
4. The wastewater administrative component recovers the wastewater utility's appropriate share of expansion related costs for the Beardsley Operations Building (UT00211), the Municipal Operations Center ("MOC") Renovation and the Development Services Building (PW99999), the new utility billing system, and updates the expansion fees and master plans during the planning period. It should be noted that portions of these administrative projects (except the expansion fee and master plan updates) are required to serve existing utility customers and other non-utility City functions. As a result, the City has estimated the portion of these administrative projects that will benefit new wastewater utility customers added through anticipated development, and the calculation of the administrative component of the wastewater expansion fee includes only these expansion related costs. The total \$6.3 million in expansion related capital administrative costs are allocated to new wastewater customers based on the anticipated number of accounts (29,481 permits) to be added during the planning period. This allows these administrative costs to be allocated to all new wastewater customers based on a similar methodology. This methodology results in an additional \$216 per expansion fee for the

administrative component. Since these administrative costs benefit all customer accounts equally, regardless of capacity, these costs are not determined based on per gpd unit cost and escalated by meter size.

To arrive at the \$1,923 wastewater expansion fee per EDU, the wastewater infrastructure cost per gpd (after deducting the debt principal credit) is multiplied by the 300 gpd ADEQ design criteria for residential wastewater flows. The administrative component of \$216 is then added to the \$1,707 in infrastructure costs to arrive at the full \$1,905 wastewater expansion fee per EDU. This expansion fee per EDU represents the expansion fee that will be assessed to all residential customers regardless of meter size since the 300 gpd State design criteria for wastewater flow represents the average seasonal usage for all residential customers. Non-residential customers with  $\frac{3}{4}$ " meters will also be assessed the expansion fee per EDU.

For non-residential customers with larger meters, the infrastructure component costs per EDU are escalated based upon the ratio of capacity that is provided by different meter sizes before the administrative component is added to the fee. Exhibit 7 on page 37 provides a summary of the wastewater expansion fees that will be assessed by meter size.

Exhibit 5 on the next page depicts the calculation of the FY 2008 Update to the wastewater expansion fee.

**Exhibit 5**



**Calculation of Wastewater Expansion Fee per EDU**

Wastewater Expansion Components	Benefiting New Development		Per Unit (gpd)		
	Cost (millions)	Capacity (MGD)	Total Costs	Debt Credit	Net Cost
1. Wastewater Trunk Lines	\$ 13.13	15.81	\$ 0.83	\$0.00	\$ 0.83
2. Underground Storage & Recharge	\$ 4.25	13.00	\$ 0.33	\$0.00	\$ 0.33
3. Wastewater Treatment	<u>\$ 100.79</u>	15.81	<u>\$ 6.38</u>	<u>(\$1.84)</u>	<u>\$ 4.53</u>
<b>Total Trunk Facilities</b>	\$ 118.18	N/A	\$ 7.53	(\$1.84)	\$ 5.69
State Design Criteria for Flows per EDU (gpd)					300
Wastewater Infrastructure Expansion Fee per EDU				\$	1,707
Plus Wastewater Administrative Expansion Fee per EDU <sup>1</sup>				\$	216
<b>Total Wastewater Expansion Fee per EDU</b>				<u>\$</u>	<u>1,923</u>

(1) The administrative component of the wastewater expansion fee is determined based on the number of new wastewater accounts or customers anticipated to be added during the planning period. As such, the administrative component is determined based on different units of services than the infrastructure components of the wastewater expansion fee, which are determined based on a gallon per day of capacity. The calculation of the administrative expansion fee component is discussed below.

The determination of the infrastructure components of the wastewater expansion fee also include a total debt principal credit of (\$1.84) per gpd for the portion of costs for new facilities that will be recovered through water rates. This total debt (\$1.84) credit consists solely of the debt funded for wastewater treatment facilities. The debt principal credits serves to ensure that customers are not charged twice for these capital costs through both their rates and the expansion fee.<sup>6</sup> This credit is designed to consider the contributions in user fees that will be made in the future by the wastewater rate payers towards the capital costs of the necessary public services covered through the wastewater expansion fees.

For non-residential customers with larger meters, the infrastructure component costs per EDU are escalated based upon the ratio of capacity that is provided by different meter sizes before the \$216 administrative component is added to the fee. Exhibit 7 on page 37 provides a summary of the wastewater expansion fees that will be assessed to customers by meter size.

***Wastewater Administrative Expansion Fee***

The wastewater administrative component recovers the wastewater utility’s appropriate share of expansion related costs for the Beardsley Operations Building (UT00211), the Municipal Operations Center (“MOC”) Renovation (PW00300), the

<sup>6</sup> The debt principal credit is determined based on those projects identified as revenue bond funded in the wastewater utility CIP. These CIP schedules represent a planning period that is consistent with the IIP planning period and the funding sources and timing of project construction currently identified for the projects may be adjusted as events and circumstances change during the planning period.

Development Services Building (PW99999), the new utility billing system, and updates the expansion fees and master plans during the planning period. It should be noted that portions of these administrative projects (except the expansion fee and master plan updates) are required to serve existing utility customers and other non-utility City functions. As a result, the City has estimated the portion of these administrative projects that will serve new wastewater utility customers, and the calculation of the administrative component of the wastewater expansion fee includes only these expansion related costs.

Since the CFD expansion fee excludes certain infrastructure components, these administrative costs were allocated to the administrative component instead of being recovered from one of the other infrastructure components so the CFD wastewater expansion fee would reflect the appropriate costs. The total \$6.3 million in expansion related capital administrative costs are allocated to new wastewater customers based on the anticipated number of accounts (29,481 permits) to be added during the planning period. This allows these administrative costs to be allocated to all new wastewater customers based on a similar methodology and similar units of service (added permits). This methodology results in an additional \$216 per expansion fee for the administrative component. Since these administrative costs benefit all customer accounts equally, regardless of capacity, these costs are not escalated by meter size.

Exhibit 6 on depicts the calculation of the wastewater administrative expansion fee component.

**Exhibit 6**



**Calculation of Wastewater Administrative Expansion Fee**

<b>Wastewater Expansion Projects</b>	<b>Estimated Cost Benefiting Growth</b>	
<i>Administrative</i>		
Update & Develop New WW Expansion Fees - UT00029	\$	340,000
Update Wastewater Master Plan - UT00018		900,000
Strategic Business/Technology Master Plan (NEW) - UT00232		252,500
Wastewater Reuse Master Plan - UT00179		365,490
Beardsley WRF - Operations Building - UT00211	2,727,001	(1)
Municipal Operations Center (UT00300)		640,738
North Municipal Facility Feasibility Study		50,000
Development Services Building (PW99999)		261,550
Utility Billing System - UT00160		439,489
Data Network for Remote Utility Facilities		378,337
Total Administrative	\$	6,355,104
 Number of new customers projected		29,481 (2)
<b>Recommended Administrative Water Expansion Fee</b>	<b>\$</b>	<b>216</b>

(1) The Beardsley Operations Building provides additional space for both water and wastewater vehicles, equipment, and personnel.

(2) Number of new customers based on anticipated building permits provided by City planning estimates.

The wastewater administrative expansion fee represents a component of the total wastewater expansion fee to be assessed to all new development occurring within the City of Peoria water service area.

***CFD Wastewater Expansion Fee***

The non-CFD customers located in the Agua Fria West service area will be assessed the same wastewater expansion fees as the customers of the rest of the City's service area. However, the CFD customers will be assessed separate fees based solely on the wastewater infrastructure costs that will not be funded through the CFD, and the wastewater portion of the administrative expansion related capital costs component. Since no wastewater infrastructure included in the wastewater IIP will benefit development in the CFD, the CFD wastewater expansion fee consists solely of the **\$216** wastewater administrative expansion fee. Exhibit 6 above depicts the calculation of the wastewater administrative expansion fee component which represents the CFD wastewater expansion fee per EDU and non-residential customer.

Summary of Utility Expansion Fees

Exhibit 7 below provides a summary of the water expansion fees, water resource fees, water reuse irrigation, and wastewater expansion fees that will be assessed to customers by meter size. Again, all residential customers will be assessed the expansion fees assessed per EDU, or all ¾" and 1" meters.

**Exhibit 7**



**Summary of Utility Expansion Fees Assessed by Meter Size**

Expansion Fees							
Meter Size	Conversion Ratio (1)	Water Expansion Fee	CFD Water Expansion Fee	Water Resource Fee	Sewer Expansion Fee	CFD Sewer Expansion Fee	Water Reuse Irrigation Fee
¾"	1.00	\$3,269	\$722	\$621	\$1,923	\$216	\$264
1"	1.67	5,283	1,029	1,037	3,067	216	264
1 1/2"	3.33	10,271	1,790	2,068	5,901	216	264
2"	5.33	16,281	2,706	3,310	9,315	216	264
3"	10.67	32,328	5,151	6,626	18,430	216	264
4"	16.67	50,358	7,899	10,352	28,672	216	264
6" D&C	33.33	100,421	15,530	20,698	57,111	216	264
6" Turbine	41.67	125,483	19,349	25,877	71,347	216	264
8" Compound	53.33	160,521	24,690	33,118	91,251	216	264

(1) Meter conversion ratios are provided in the American Water Works Association Manual 6 (M-6).

## **5. Updated Solid Waste Expansion Fees**

To develop the solid waste expansion fees, the total costs associated with the facilities and equipment included in the solid waste IIP are first allocated among existing and new customers in order to ensure that only those facilities and equipment that benefit development are included in the solid waste expansion fee. This ensure that new customers only pay their appropriate share of the costs that will provide them with the same level of service that is current provided to the existing customers.

The solid waste expansion fee is calculated to recover the expansion related costs of the capital facilities, equipment and other items the City must purchase in order to provide the appropriate level of sanitation services to new residential customers. These items include:

- The utility billing system;
- Renovations to the Municipal Operations Center;
- Additional sanitation trucks; and,
- Additional sanitation containers.

The costs benefiting development are then allocated among the residential and commercial customer classes, since commercial establishments within the City may contract private sanitation providers and the City does not assess solid waste expansion fees to commercial development. However, all expansion related capital costs that will benefit any new commercial development have been excluded from the costs to be recovered from the residential customers to ensure that these customers do not pay more than their proportional share of the expansion related costs.

Once the expansion related residential costs are determined, these costs are divided by the anticipated increase in population over the 10-year solid waste IIP planning period (FY 2008 through 2017). This results in a solid waste expansion fee per person of \$108.00 which is then applied to the average single-family home size of 2.77 persons per household and the average multi-family home size of 1.90 persons per household.

As Exhibit 8 on the next page indicates, the calculation results in a solid waste expansion fee per single-family residential unit of **\$300** and a solid waste expansion fee per multi-family residential unit of **\$206**.

**Exhibit 8**

**Calculation of Solid Waste Expansion Fees**

<u>Solid Waste Expansion Related Projects &amp; Costs</u>	Estimated Costs			Increase in Population	Cost Per Person
	Total	Residential	Non Residential (8)		
Utility Billing System (1)	\$441,218	\$429,321	\$11,897		
Municipal Operations Center (2)	1,827,377	1,778,103	49,275		
North Municipal Facility Feasibility Study (3)	100,000	97,304	2,696		
Sanitation Truck Cost (4)	2,529,891	2,529,891	0		
Recycling Containers (5)	1,376,838	1,376,838	0		
Sanitation Containers (6)	1,209,361	1,209,361	0		
Total Solid Waste Expansion Costs	\$7,484,686				
Total Residential Costs		\$7,420,817		68,495	\$108.34
Total Non Residential Costs			\$63,869	N/A	N/A
Full Cost Single-Family Solid Waste Fee per Person					\$108.34
Less: NPV of Principal on Debt per Person (7)					\$0.00
<b>Recommended Single-Family Solid Waste Expansion Fee per Person</b>					<b>\$108</b>
Persons per Single-Family Household (8)					2.77
<b>Recommended Solid Waste Expansion Fee per Single-Family Residential Unit</b>					<b>\$300</b>
Persons per Multi-Family Household (9)					1.90
<b>Recommended Solid Waste Expansion Fee per Multi-Family Residential Unit</b>					<b>\$206</b>

- (1) Represents the growth related portion of the Sanitation share of the total \$3.0 million dollar utility billing system. Sanitation receives 1/3, or \$1.0 million of the total costs, while new sanitation customers receive approximately 40% of the \$1.0 million based on the projected number of new customers in relation to current customers. These costs are allocated to the sanitation customer classes based on the number of additional customer bills anticipated in each customer class.
- (2) Represents the growth related portion of the Sanitation share of the total \$15.6 million dollar MOC renovation. Sanitation receives \$5.1 million of the total costs, while new sanitation customers receive approximately 36% of the \$5.1 million based on the square footage of the facility currently used by sanitation in relation to the total additional square footage of the renovated facility to be used by sanitation. These costs are allocated to the sanitation customer classes based on the number of additional customer bills anticipated in each customer class.
- (3) Represents Sanitation's share of the feasibility study to construct a Northern Municipal Facility to house solid waste equipment and personnel serving future growth in Peoria.
- (4) Represents the total cost of new sanitation trucks providing service to new residential customers. The City anticipates purchasing a new sanitation truck to serve each additional increment of 2,400 residential units. The City anticipates the cost for each new sanitation truck at \$235,000. Based on the total number of equivalent single-family units to be added during the planning period, it is anticipated the City will need to purchase 10.77 sanitation trucks.
- (5) Represents the cost of new residential recycling containers for the anticipated increase in residential customers during the planning period from FY 2007 to FY 2017. The total costs are based on a weighted average cost of \$48.29 per container which consists of the \$48.90 per 90 gallon barrel (.47 cubic yards), \$44.80 per 60 gallon barrel (.31 cubic yards), and \$34.75 per gallon barrel (.16 cubic yards). The costs for each container are weighted by the current distribution of these containers used by residential customers in the City of Peoria.
- (6) Represents the cost of new residential solid waste containers for the anticipated increase in residential customers during the planning period from FY 2007 to FY 2017. The total costs are based on a weighted average cost of \$42.16 per container which consist of the \$40.37 per 96 gallon single-family barrel (.50 cubic yards) and the equivalent cost per cubic yard for the \$700.00 6 cubic yard metal container used for multi-family customers. The cost of these 6 cubic yard containers was converted to a cost per half yard (\$51.41) and the weighted average cost was determined based on the anticipated number of equivalent single-family units.
- (7) The costs of all projects included in the solid waste expansion fees are funded through reserves and do not require a proportional credit to offset the debt service payments recovered through sanitation rates or property taxes.
- (8) Based on City of Peoria Growth Trends Data.
- (9) Commercial customers locating within the City may contract private solid waste providers and are not assessed an expansion fee. Certain shared costs will benefit the commercial customers and have been allocated to the customer class to ensure that the residential customers are not assessed for more than their proportional share.

## **6. Other Considerations**

Due to the recent adoption of Senate Bill 1423 (“SB1423”) amending Arizona Revised Statutes §9-463.05, the City may want to consider evaluating certain alternative enhancements or features to the expansion fee methodologies and the process of updating the expansion fees. Specifically, the City may want to consider:

- Introducing a System Buy-In Component to the calculation of the utility expansion fees. As the City continues to develop and construct water and wastewater facilities and capacities to serve development, future water and wastewater CIP and IIPs for may not reflect the appropriate amount of facilities and capacities necessary to serve anticipated development at a level of service consistent with the current level of service provided to existing water customers. As such, the City may want to consider incorporating a system buy-in component to the water and wastewater expansion fees to ensure the fees appropriately reflect the City’s investment value in providing capacity for the benefit of development.
- Recovering relevant interest expense on debt issues required to fund projects included in the IIPs through the expansion fees. Senate Bill 1423 allows expansion fees to include the costs of financing improvements benefiting development. However, the City would need to consider the ability of the fees to fund the debt service associated with the IIP improvements, to ensure new customers are not paying for the interest expense through their user rates and the expansion fees.
- Including improvements in the IIP and expansion fee calculations that provide capacities and infrastructure capacity to serve build-out development and demands. This would more effectively ensure the expansion fees reflect the appropriate amount of facilities and capacities necessary to serve anticipated development.
- Adjusting the water, wastewater, water resources and solid waste expansion fees during those interim years the fees are not formally modified or updated. The 2007 legislation, allows for an automatic adjustment of the developments fees based on a nationally-recognized index such as the ENR CCI which is commonly used by the construction industry to measure changes in wage and material costs. The CCI is averaged over 20 major cities in the United States. Raftelis recommends applying the most current CCI annual index on March 1, 2009 and each succeeding March 1 until the fees are updated or revised.
- Evaluating the frequency of modifying or updating the expansion fees based on the magnitude of changes anticipated as part of the CIP and IIP planning processes.

It should also be noted that the calculation of the water, water resources, wastewater, and solid waste expansion fees includes an adjustment or credit for relevant principal payments related to the new assets that will be recovered through future utility rates. This credit is designed to consider the contributions in user fees that will be made in the future by the utility and solid waste rate payers towards the capital costs of the necessary public services covered through the expansion fees. Since the City's utility and solid waste rates and fees are designed to recover the direct costs of providing these public services, on-going capital needs for repairs & replacements, and debt service on outstanding debt issued for significant capital items, this debt credit ensures that capital costs of necessary public services included the future fees paid by property owners are deducted from the expansion fees.

## **Appendix A:**

# **Schedules from Expansion Fee Model**

**Schedule 1 - A**  
**Water Expansion Fee**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Water System Expansion Fee**

<b>Water Expansion Projects</b>	<b>Estimated Cost Benefiting Growth</b>	<b>Capacity to Serve Growth (MGD)</b>	<b>Cost per Peak gpd</b>	
<u>Water Transmission Line Component</u>				
24-inch Waterline - 79th/Greenway-Sports Complex-UT00034	\$ 1,687,990			
24-inch Waterline - 91st/Beardsley-Union Hills-UT00096	2,134,484			
24-inch Waterline - Beardsley/Lake Plsnt - 87 Ave-UT00145	5,424,438			
24-inch Waterline - Greenway Rd./ 91st Ave. - 79th Ave.	4,238,714			
24-inch Waterline - 91st / Union Hills - Greenway Road - UT00226	5,741,948			
30-inch Waterline - ElMirage/Jomax - Carefree HW (NEW) UT00228	7,261,541			
30-inch Waterline - Lake Plnt/Deer Valley-Rose Garden - UT00144	1,451,242			
36-inch Waterline - Lone Mountain Pkwy/Lake Pleasant-El Mirage - UT00233	9,281,374			
36-inch Waterline LkPlsnt/Dynamite-303	7,222,113			
36-inch Waterline - LPP/Carefree - Humbug Reserv.	10,151,093			
30/36" Waterline - El Mirage/Twin Buttes Reservoir - TB Road	5,026,630			
83rd Ave Re-alignment - UT00130	363,450			
303 Water Crossings	1,621,483			
West Agua Fria Water Lines-UT00170	4,964,950			
Agua Fria In-Line Booster Station - 4 MG Phase I - UT00245	3,777,380			
Agua Fria In-Line Booster Station - 2 MG Phase II - UT 00246	961,520			
Zone 2/3 Booster Station-UT00136	3,136,080			
<b>Total Water Transmission Line Component</b>	<b>\$ 74,446,430</b>	<b>25.07</b>	<b>\$ 2.97</b>	(1)
<u>Water Storage Facilities Component</u>				
5 Million Gallon Reservoir at Greenway WTP-UT00175	\$ 5,908,500			
6 Million Gallon Humbug Reservoir - UT00118	3,124,940			
New River / Agua Fria USP - UT00149	1,728,585			(2)
Butler Recharge Wells - UT00248	2,525,000			(3)
<b>Total Water Storage Facilities Component</b>	<b>\$ 13,287,025</b>	<b>24.00</b>	<b>\$ 0.55</b>	(4)
<u>Water Treatment Facilities Component</u>				
Wells-UT00117 (NEW WELLS)	\$ 10,456,570	5.00		
Greenway Re-rating from 16 to 24 MGD - UT00231	5,000,000	8.00		
Pyramid Peak Water Treatment Plant - Phase II-UT00037	4,121,847	2.07		
Twin Buttes 5 MGD WTP-UT00172	62,132,360	5.00		
Butler Drive Water Reclamation Facility (10 MGD)-UT00031	65,797,430	10.00		(5)
Butler Wastewater Reclamation Plant Expansion to 13 MGD - UT00225	3,025,000	3.00		(5)
Jomax Wastewater Reclamation Plant Expansion to 2.25 MGD-UT00173	4,841,486	0.81		(6)
Jomax Wastewater Reclamation Plant Expansion to 5MGD-UT00237	5,706,096	1.00		(6)
<b>Total Water Treatment Facilities Component</b>	<b>\$ 161,080,789</b>	<b>34.88</b>	<b>\$ 4.62</b>	
<b>Total Water System Expansion Projects</b>	<b>\$ 248,814,244</b>		<b>\$ 8.14</b>	
Full Cost Water Expansion Fee (gpd)			\$ 8.14	
Less: NPV of Bond Principal Payments (per gpd)			\$ (1.68)	
<b>Recommended Water Expansion Fee (gpd)</b>			<b>\$ 6.46</b>	
State Water Design Criteria Demand per EDU (gpd)			465	(7)
Subtotal Water Expansion Fee per EDU			\$ 3,005	
Water Administrative Expansion Fee			\$ 264	(8)
<b>Total Water Expansion Fee for 3/4" Meter</b>			<b>\$ 3,269</b>	

- (1) The expansion of water transmission infrastructure is required to support 25.07 MGD potable water capacity.
- (2) The New River / Agua Fria USP (UT00149) provides underground storage for water recharged from the Butler WRF. Although this project was completed in 2007, it will provide future water recharge storage capacity once the Butler WRF becomes available and will benefit new customers during the infrastructure improvements planning period.
- (3) Butler Recharge Wells (UT00248) provides recharge wells to recover Butler effluent that has been stored and recharged through the New River / Agua Fria underground storage facility.
- (4) The storage facilities and underground storage and recharge facilities support the total 24.00 MGD of capacity associated with potable water treatment facilities.
- (5) The costs associated with the Butler Reclamation Facility are allocated (50/50) between the water and wastewater expansion fees. Fifty percent of the total costs for the Butler Drive WRF costs and the entire 13.0 MGD of effluent that can be recharged and recovered as an alternative water source.
- (6) The costs associated with the City's portion of the Jomax Reclamation Facility are allocated (50/50) between water and wastewater expansion fees. Fifty percent of the City's portion of the costs for the Jomax WRF and the 1.81 MGD of capacity available to the serve customers not located in the Agua Fria West Communities Facilities District (CFD) are allocated to the water expansion fee since this facility will provide 1.81 MGD of effluent that can be recharged and recovered as an alternative water source for City use.
- (7) Represents the estimated average day water usage during the peak seasonal usage period for the typical single-family residential customer in Peoria.
- (8) From Schedule I-B, Calculation of Water Administrative Expansion Fee.

**Schedule 1 - B**  
**Water Expansion Fee**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Water Administrative System Expansion Fee**

<b>Water Expansion Projects</b>	<b>Estimated Cost Benefiting Growth</b>
<i>Administrative</i>	
Wastewater Reuse Master Plan-UT00179	\$ 365,490
Strategic Business/Technology Master Plan (NEW) - UT00232	252,500
Update Water Expansion Fees-UT00070	380,103
Update Water Infrastructure Master Plan - UT00112	863,625
Beardsley WRF - Operations Building - UT00211	2,847,513 (1)
SCADA Master Plan	125,000
SCADA Control Optimization	1,008,000
Municipal Operations Center (UT00300)	640,738
North Municipal Facility Feasibility Study	50,000
Development Services Building (PW99999)	401,304
Utility Billing System - UT00160	457,665
Data Network for Remote Utility Facilities	378,337
Total Administrative	\$ 7,770,274
Number of new customers projected	29,481 (2)
<b>Recommended Administrative Water Expansion Fee</b>	<b>\$ 264</b>

- (1) The Beardsley Operatings Building provides additional space for both water and wastewater vehicles, equipment, and personnel.
- (2) Number of new customers based on building permits provided by City Staff.

**Schedule 1 - C**  
**Water Expansion Fee for CFD**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Water System Expansion Fee**

Water Expansion Projects	Estimated Cost Benefiting Growth	Capacity to Serve Growth (MGD)	Cost per Peak gpd	
<i>Water Transmission Line Component</i>				
Agua Fria In-Line Booster Station - 4 MG Phase I - UT00245	\$ 3,777,380			
Agua Fria In-Line Booster Station - 2 MG Phase II - UT 00246	961,520			
Zone 2/3 Booster Station-UT00136	3,136,080			
Total Water Transmission Line Component	\$ 7,874,980	8.00	\$ 0.98	(1)
Full Cost Water Expansion Fee (gpd)			\$ 0.98	
Less: NPV of Bond Principal Payments (per gpd)			\$0.00	
<b>Recommended Water Expansion Fee (gpd)</b>			<b>\$ 0.98</b>	
Seasonal Demand EDU Factor (gpd)			465	(2)
Subtotal CFD Water Expansion Fee per EDU			\$ 458	
Water Administrative Expansion Fee			\$ 264	(3)
<b>Recommended Water Expansion Fee Per EDU</b>			<b>\$ 722</b>	

- (1) The capacity for these projects is based on the anticipated capacity to serve developments in Vistancia and other developments west of the Agua Fria River. This includes capacity for development within and outside the CFD since the facilities will serve the entire area.
- (2) Represents the estimated average day water usage during the peak seasonal usage period for the typical single-family residential customer in Peoria.
- (3) From Schedule 1-B, Calculation of Water Administrative Expansion Fee.

**Schedule 1 - D**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Water Resource Fee**

Estimated Cost Benefiting Growth	Capacity to Serve Growth (MGD)	Cost per Peak gpd
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**Water Resource Fee**

*Water Resources Component*

Update Water Resource Master Plan (UT00113)	\$ 720,000			
Non-Indian Ag Cap Water Reallocation (UT00234)	5,000,000	2.98		(1)
CAP Water Rights (UT00033)				
Gila River Indian Lease	9,749,205	4.93		(2)
CAP Water Reallocation	3,449,103	6.25		(3)
CAP Annual Take-or-Pay Charge	3,673,723			(4)
Total Water Resources Component	\$ 22,592,030	14.16	\$ 1.60	(5)
Less: NPV of Take-or-Pay charge recovered through rates			(0.26)	
<b>Recommended Water Resource Fee (gpd)</b>			<b>\$ 1.34</b>	
Seasonal Demand per EDU (gpd)			465	(6)
<b>Recommended Water Resource Fee per EDU</b>			<b>\$ 621</b>	

- (1) Represents estimated dollars for the purchase of Non-indian Ag. Cap Water from the Arizona Department of Water Resources. The estimated capacity associated with this purchase is 3,333 acre-feet.
- (2) Assumes the present value of 15 payments of \$900,000/year beginning in FY 2008 at discount rate of 4.37% which represents the City's average cost of debt. Represents 5,527 acre-feet.
- (3) NPV of \$3,600,000 cost in FY 2008 based on a average cost of water debt for the City of 4.37%. Represents 7,000 Acre-Feet.
- (4) Based on charges of \$37/Acre-foot for 2008-2043 on the 5,527 acre-feet of reallocated CAP water.
- (5) Capacities for the water resources component are based on the total acre-feet of water provided through each water resources purchased and converted into million gallons per day.
- (6) Represents the estimated average day water usage during the peak seasonal usage period for the typical single-family residential customer in Peoria.

**Schedule 2 - A**  
**Wastewater Expansion Fee**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Wastewater System Expansion Fee**

	Estimated Cost Benefiting Growth	Capacity to Serve Growth (MGD)	Cost per gpd	
<b>Wastewater Expansion Projects</b>				
<i>Trunk Line Components</i>				
21-inch Sewer - Lake Pleasant/Dynamite/Loop 303 - UT00151	\$ 4,887,390			
24-inch Sewer-D. Valley Rd/Lake Plst Rd to 91st Av-UT00103	2,558,679			
Misc. Local Wastewater Line Upgrades - UT00191	1,030,366			
Loop 303 Sewer Crossing Lines	1,621,483			
West Agua Fria Wastewater Lines - UT00171	3,032,255			
Total Trunk Line Components	\$ 13,130,173	15.81	\$ 0.83	(1)
<i>Underground Storage &amp; Recovery Component</i>				
New River / Agua Fria USP - UT00149	\$ 1,728,585			(2)
Butler Recharge Wells - UT00248	2,525,000			(3)
Total Underground Storage & Recovery Components	\$ 4,253,585	13.00	\$ 0.33	(4)
<i>Wastewater Treatment Facilities Components</i>				
Beardsley Water Reclamation Facility Phase III (Expansion to 6 MGD) - UT00124	\$ 10,543,000	2.00		(5)
Beardsley Water Reclamation Facility Phase IV (Expansion to 12 MGD) - UT00213	44,215,582	6.00		(5)
Beardsley WRF - Monitor Wells and Miscellaneous Upgrades	3,646,022			
Butler Drive Water Reclamation Facility (10 MGD) - UT00031	30,444,733	3.00		
Butler Wastewater Reclamation Plant Expansion to 13 MGD - UT00225	1,396,154	3.00		
Jomax Wastewater Reclamation Plant Expansion to 2.25 MGD - UT00173	4,841,486	0.81		
Jomax Wastewater Reclamation Plant Expansion 4 - 5MGD - UT00237	5,706,096	1.00		
Total Wastewater Treatment Facilities Components	\$ 100,793,072	15.81	\$ 6.38	
<b>Total Wastewater System Expansion Projects</b>	<b>\$ 118,176,830</b>		<b>\$ 7.53</b>	
Full Cost Wastewater Expansion Fee (gpd)			\$ 7.53	
Less: NPV of Bond Principal Payments (per gpd)			\$ (1.84)	(6)
<b>Recommended Wastewater Expansion Fee (gpd)</b>			<b>\$ 5.69</b>	
State Design Criteria for Flows per EDU (gpd)			300	
Subtotal Wastewater Expansion Fee per EDU			\$ 1,707	
Wastewater Administrative Expansion Fee			\$ 216	(7)
<b>Total Wastewater Expansion Fee for 3/4" Water Meter</b>			<b>\$ 1,923</b>	

- (1) The trunk line facilities provide collection capacity for the additional 15.81 MGD of wastewater treatment capacity.
- (2) The New River / Agua Fria USP (UT00149) provides underground storage for water recharged from the Butler WRF. Although this project was completed in 2007, it will provide future disposal and beneficial use of effluent once the Butler WRF becomes available and will benefit new customers during the infrastructure improvements planning period. Fifty percent of the costs for this facility are recovered through the wastewater expansion fee as this project provides for the ultimate disposal of wastewater and recharge of the future effluent associated with the 13.0 MGD Butler Drive WRF.
- (3) Butler Recharge Wells (UT00248) provides recharge wells to recover Butler effluent that has been stored and recharged through the New River / Agua Fria underground storage facility. Fifty percent of the costs for this facility are recovered through the wastewater expansion fee as this project provides for the ultimate disposal of wastewater and recharge of the future effluent associated with the 13.0 MGD Butler Road WRF.
- (4) Since UT00149 and UT00248 provides for the ultimate disposal of wastewater and recharge of the future effluent associated with the 13.0 MGD Butler Road WRF, the capacity associated with both is 13.0 MGD.
- (5) Since the Beardsley WRF does not provide the same type of dual benefit as the other WRFs, the entire costs associated with the Beardsley Plant expansion to 8.0 MGD are allocated to the wastewater expansion fee. The overall capacity that will be gained as a water resource as a result of this expansion is minimal and does not warrant an allocation of costs to the water expansion fee.
- (6) From Schedule 5, Calculation of Wastewater Bond Principal Payment Offsets.
- (7) From Schedule 2-B, Calculation of Wastewater Administrative Expansion Fee.

**Schedule 2 - B**  
**Wastewater Expansion Fee**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Calculation of Wastewater Administrative System Expansion Fee**

<b>Wastewater Expansion Projects</b>	<b>Estimated Cost Benefiting Growth</b>	
<i>Administrative</i>		
Update & Develop New WW Expansion Fees - UT00029	\$	340,000
Update Wastewater Master Plan - UT00018		900,000
Strategic Business/Technology Master Plan (NEW) - UT00232		252,500
Wastewater Reuse Master Plan - UT00179		365,490
Beardsley WRF - Operations Building - UT00211		2,727,001 (1)
Municipal Operations Center (UT00300)		640,738
North Municipal Facility Feasibility Study		50,000
Development Services Building (PW99999)		261,550
Utility Billing System - UT00160		439,489
Data Network for Remote Utility Facilities		378,337
Total Administrative	\$	6,355,104
Number of new customers projected		29,481 (2)
<b>Recommended Administrative Water Expansion Fee</b>	<b>\$</b>	<b>216</b>

- (1) The Beardsley Operatings Building provides additional space for both water and wastewater vehicles, equipment, and personnel.
- (2) Number of new customers based on building permits provided by City Staff.

**Schedule 3 - A**

**Solid Waste Expansion Fee**

**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**

**Calculation of Solid Waste System Expansion Fee**

<u>Solid Waste Expansion Related Projects &amp; Costs</u>	Estimated Costs			Increase in Population	Cost Per Person
	Total	Residential	Non Residential (8)		
Utility Billing System (1)	\$441,218	\$429,321	\$11,897		
Municipal Operations Center (2)	1,827,377	1,778,103	49,275		
North Municipal Facility Feasibility Study (3)	100,000	97,304	2,696		
Sanitation Truck Cost (4)	2,529,891	2,529,891	0		
Recycling Containers (5)	1,376,838	1,376,838	0		
Sanitation Containers (6)	1,209,361	1,209,361	0		
Total Solid Waste Expansion Costs	\$7,484,686				
Total Residential Costs		\$7,420,817		68,495	\$108.34
Total Non Residential Costs			\$63,869	N/A	N/A
Full Cost Single-Family Solid Waste Fee per Person					\$108.34
Less: NPV of Principal on Debt per Person (7)					\$0.00
<b>Recommended Single-Family Solid Waste Expansion Fee per Person</b>					<b>\$108</b>
Persons per Single-Family Household (8)					2.77
<b>Recommended Solid Waste Expansion Fee per Single-Family Residential Unit</b>					<b>\$300</b>
Persons per Multi-Family Household (9)					1.90
<b>Recommended Solid Waste Expansion Fee per Multi-Family Residential Unit</b>					<b>\$206</b>

- (1) Represents the growth related portion of the Sanitation share of the total \$3.0 million dollar utility billing system. Sanitation receives 1/3, or \$1.0 million of the total costs, while new sanitation customers receive approximately 40% of the \$1.0 million based on the projected number of new customers in relation to current customers. These costs are allocated to the sanitation customer classes based on the number of additional customer bills anticipated in each customer class.
- (2) Represents the growth related portion of the Sanitation share of the total \$15.6 million dollar MOC renovation. Sanitation receives \$5.1 million of the total costs, while new sanitation customers receive approximately 36% of the \$5.1 million based on the square footage of the facility currently used by sanitation in relation to the total additional square footage of the renovated facility to be used by sanitation. These costs are allocated to the sanitation customer classes based on the number of additional customer bills anticipated in each customer class.
- (3) Represents costs of a study to assess the feasibility of constructing a new northern municipal facility to serve the northern region of the City as that area begins to develop.
- (4) Represents the total cost of new sanitation trucks providing service to new residential customers. The City anticipates purchasing a new sanitation truck to serve each additional increment of 2,400 residential units. The City anticipates the cost for each new sanitation truck at \$235,000. Based on the total number of equivalent single-family units to be added during the planning period, it is anticipated the City will need to purchase 10.77 sanitation trucks.
- (5) Represents the cost of new residential recycling containers for the anticipated increase in residential customers during the planning period from FY 2007 to FY 2017. The total costs are based on a weighted average cost of \$48.29 per container which consist of the \$48.90 per 90 gallon barrel (.47 cubic yards), \$44.80 per 60 gallon barrel (.31 cubic yards), and \$34.75 per 30 gallon barrel (.16 cubic yards). The costs for each container is weighted by the current distribution of these containers used by residential customers in the City of Peoria. This weighted average cost is then increased by \$5.00 for an additional in home recycling bin that every EDU will be provided.
- (6) Represents the cost of new residential solid waste containers for the anticipated increase in residential customers during the planning period from FY 2007 to FY 2017. The total costs are based on a weighted average cost of \$46.81 per container which consist of the \$40.37 per 96 gallon single-family barrel (.50 cubic yards) and the equivalent cost per cubic yard for the \$700.00 6 cubic yard metal container used for multi-family customers. The cost of these 6 cubic yard containers was converted to a cost per half yard (\$51.41) and the weighted average cost was determined based on the anticipated number of equivalent single-family units.
- (7) The costs of all projects included in the solid waste expansion fees are funded through reserves and do not require a proportional credit to offset the debt service payments recovered through sanitation rates or property taxes.
- (8) Based on City of Peoria Growth Trends Data.
- (9) Commercial customers locating within the City may contract private solid waste providers and are not assessed an expansion fee. Certain shared costs will benefit the commercial customers and have been allocated to the customer class to ensure that the residential customers are not assessed for more than their proportional share.

**Schedule 3 - B**

**Solid Waste Expansion Fee**

**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**

**Projection of Sanitation Accounts and Population**

<b>Projection of Additional Units &amp; Population</b>	2004 (4)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
<b>Single-Family Residential Units (1)</b>		1,000	2,400	4,000	5,800	7,800	10,000	12,400	15,000	17,600	20,200	22,800	119,000
Forecasted Housing Permits		1,000	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,600	2,600	2,600	22,800
Population Projections		2,770	3,878	4,432	4,986	5,540	6,094	6,648	7,202	7,202	7,202	7,202	63,156
Average Household Size (2)	2.77												
<b>Multi-Family Residential (1)</b>		160	1,066	1,906	2,802	3,454	3,978	4,068	4,158	4,248	4,338	4,428	34,606
Forecasted Housing Permits		160	906	840	896	652	524	90	90	90	90	90	4,428
Multi-Family Population Projections		304	1,721	1,596	1,702	1,239	996	171	171	171	171	171	8,413
Average Household Size (2)	1.90												
Equivalent Residential Units	0	1,110	3,131	5,307	7,722	10,169	12,729	15,190	17,852	20,514	23,175	25,837	142,736
Forecasted Equivalent Residential Units (3)		1,110	2,021	2,176	2,414	2,447	2,560	2,462	2,662	2,662	2,662	2,662	25,837
Total Population	125,810	153,592	159,191	165,219	171,907	178,686	185,776	192,595	199,968	207,341	214,714	222,087	222,087
<b>Population Estimates</b>													
City of Peoria	125,810	153,592	159,191	165,219	171,907	178,686	185,776	192,595	199,968	207,341	214,714	222,087	
% Change		22.1%	3.6%	3.8%	4.0%	3.9%	4.0%	3.7%	3.8%	3.7%	3.6%	3.4%	
Change in Population		27,782	5,599	6,028	6,688	6,779	7,090	6,819	7,373	7,373	7,373	7,373	

- (1) Projected annual residential units are based on billing information and residential building permit forecasts provided by City staff.
- (2) Average household size for single-family and multi-family based on demographic data provided through the 2000 US Census.
- (3) Forecast of equivalent residential units is the number of single-family building permits plus the number of multi-family building units as converted into an equivalent single-family unit based on a similar household size.
- (4) Population and projections based on information provided by the US Census Bureau and information provided by the City of Peoria.

**Schedule 4**

**Peoria Water and Wastewater Expansion Fee Study**

**Calculation of Water Bond Principal Payments Offsets**

Debt to be Issued	1	2	3	4	5	6	7	8	9	10
	Fiscal Year Ending June 30, →									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Calculation of Annual Water Capital Costs to be Debt Financed</b>										
Total Annual Billed Water (1,000's of gallons)	7,867,563	8,260,941	8,673,988	9,107,688	9,563,072	10,041,226	10,543,287	11,070,451	11,623,974	12,205,173
Estimated Number of Total EDU's	46,355	48,673	51,106	53,661	56,345	59,162	62,120	65,226	68,487	71,911
<b>Water System Expansion Fee Offsets</b>										
Peak Water Consumption (gpd)	21,554,967	22,632,716	23,764,351	24,952,569	26,200,198	27,510,207	28,885,718	30,330,004	31,846,504	33,438,829
Water "System" Expansion Fee										
<i>Water Line Bond Funded Projects</i>										
00145 24" Waterline Beardsley/Lk Plsnt. - 87th Ave.	\$4,125,068		\$ 210,358	\$ 210,358	\$ 210,358	\$ 210,358	\$ 210,358	\$ 210,358	\$ 210,358	\$ 210,358
00228 30" Waterline-El Mirage/Lone Mtn. - TButtes Reserv.	\$4,146,521			\$ 211,452	\$ 211,452	\$ 211,452	\$ 211,452	\$ 211,452	\$ 211,452	\$ 211,452
00233 36" Waterline Dynamite Blvd/Lk Plsnt-El Mirage	\$5,800,000	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771	\$ 295,771
Total Water Line Bond Funded Project	<u>\$14,071,589</u>									
Estimated Annual Principal Payments on Bonds Issued in Fiscal Year (1)	\$ 295,771	\$ 295,771	\$ 506,129	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581
<i>Water Treatment Bond Funded Projects</i>										
00031 10 MGD Butler Wastewater Reclamation Plant	\$ 31,494,071	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040
00172 Twin Buttes Water Treatment Plant Expansion	\$ 43,803,400			\$ 2,233,754	\$ 2,233,754	\$ 2,233,754	\$ 2,233,754	\$ 2,233,754	\$ 2,233,754	\$ 2,233,754
Total Water Treatment Bond Funded Projects	<u>\$ 75,297,471</u>									
Estimated Annual Principal Payments and Re-allocation Capital Charges in Fiscal Year (1)	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795
Water "Resource" Expansion Fee										
<i>Water Resource System Projects</i>										
CAP Annual Take-or-Pay Charge (2)	\$ 3,673,723									
Total Water Resource System Projects	<u>\$ 3,673,723</u>									
Estimated Annual Principal Payments and Re-allocation Capital Charges in Fiscal Year (4)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Schedule 4 (Continued)**

**Peoria Water and Wastewater Expansion Fee Study**

**Calculation of Water Bond Principal Payments Offsets**

	Fiscal Year Ending June 30, →									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Calculation of Offset Per Peak GPD</b>										
<b>NPV</b>										
<i>Water Line Component Offset</i>										
Total Proposed Bond Principal Payments	\$ 295,771	\$ 295,771	\$ 506,129	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581	\$ 717,581
Bond Principal Payments (per gpd)	\$0.0137	\$0.0131	\$0.0213	\$0.0288	\$0.0274	\$0.0261	\$0.0248	\$0.0237	\$0.0225	\$0.0215
PV of Bond Principal Payments (per gpd)	\$0.0131	\$0.0120	\$0.0187	\$0.0242	\$0.0221	\$0.0202	\$0.0184	\$0.0168	\$0.0153	\$0.0140
NPV of Bond Principal Payments (per gpd)	<b>\$0.27</b>									
<i>Water Treatment Component Offset</i>										
Total Proposed Bond Principal Payments	\$ 1,606,040	\$ 1,606,040	\$ 1,606,040	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795	\$ 3,839,795
Bond Principal Payments (per gpd)	\$0.0745	\$0.0710	\$0.0676	\$0.1539	\$0.1466	\$0.1396	\$0.1329	\$0.1266	\$0.1206	\$0.1148
PV of Bond Principal Payments (per gpd)	\$0.0714	\$0.0651	\$0.0594	\$0.1297	\$0.1183	\$0.1080	\$0.0985	\$0.0899	\$0.0820	\$0.0748
NPV of Bond Principal Payments (per gpd)	<b>\$1.41</b>									
<i>Water Resource Fee Offset</i>										
Total Water Resource Take-or-Pay for CAP Water (2)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Payments through rates (per gpd)	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
PV of Payments through rates (per gpd)	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
NPV of Total Take-or-Pay Payments through rates (per gpd)	<b>\$0.00</b>									
<b>Financing Assumptions (3)</b>										
Estimated Net Effective Interest Rate (1998 Issue)	5.01%									
Estimated Issuance Cost	1.99%									
Weighted Average Cost of Debt	4.37%									

- (1) Assumes a level principal payment in each fiscal year of the 20-year life of the bond.
- (2) In order to receive an acre foot of water from the CAP, the City must pay a capital charge (take or pay) of \$37.00 per year for each acre foot allocated to the City. The City currently recovers this annual cost through water rates, therefore a "Capital Charge Offset" for this annual capital cost is calculated in order to eliminate any double payment of these costs by new water customers.
- (3) Estimated issuance cost is based on the City's 1998 Revenue Bond Issue and the average cost of capital is based on the costs of capital on existing City of Peoria debt issues.

**Schedule 5**  
**Peoria Water and Wastewater Expansion Fee Study**  
**Calculation of Wastewater Bond Principal Payment Offsets**

Debt to be Issued	Fiscal Year Ending June 30, →									
	1	2	3	4	5	6	7	8	9	10
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Calculation of Annual Wastewater Capital Cost to be Debt Financed</b>										
Total Annual Billed Wastewater (1,000's of gallons)	5,851,555	6,144,133	6,451,340	6,773,907	7,112,602	7,468,232	7,841,644	8,233,726	8,645,412	9,077,683
<b>Wastewater Expansion Fee Offset</b>										
Average Wastewater Flows	16,031,658	16,833,241	17,674,903	18,558,648	19,486,581	20,460,910	21,483,955	22,558,153	23,686,061	24,870,364
Wastewater "System" Expansion Fee										
Wastewater Transmission Component Bond Funded Projects										
00238 Butler Offsite Pipelines	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Wastewater Transmission Component Bond Funded Projects	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wastewater Treatment Component Bond Funded Projects										
00031 10 MGD Butler Wastewater Reclamation Plant (UT00031)	\$ 47,006,066	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074	\$ 2,397,074
00124 Beardsley Wastewater Treatment Plant Phase III	\$ 1,000,000	50,995	50,995	50,995	50,995	50,995	50,995	50,995	50,995	50,995
00213 Beardsley Wastewater Treatment Plant Phase IV	\$ 19,122,500								\$ 975,152	\$ 975,152
Total Wastewater Treatment Component Bond Funded Project	\$ 67,128,566									
Estimated Annual Principal Payments on Bonds Issued in Fiscal Year (1)	\$ 2,397,074	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 3,423,221	\$ 3,423,221

**Calculation of Offset Per Average GPD in Flows**

*Wastewater Transmission Component Offset*

Proposed Bond Principal Payments (2)	NPV									
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bond Principal Payments (per gpd)	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
PV of Bond Principal Payments (per gpd)	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
NPV of Bond Principal Payments (per gpd)	\$0.00									

*Wastewater Treatment Component Offset*

Proposed Bond Principal Payments (2)	\$ 2,397,074	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 2,448,069	\$ 3,423,221	\$ 3,423,221
Bond Principal Payments (per gpd)	\$0.1495	\$0.1454	\$0.1385	\$0.1319	\$0.1256	\$0.1196	\$0.1139	\$0.1085	\$0.1445	\$0.1376
PV of Bond Principal Payments (per gpd)	\$0.1448	\$0.1364	\$0.1258	\$0.1161	\$0.1071	\$0.0988	\$0.0911	\$0.0840	\$0.1084	\$0.1000
NPV of Bond Principal Payments (per gpd)	\$1.84									

**Financing Assumptions (3)**

Estimated Net Effective Interest Rate (1998 Issue)	5.01%
Estimated Issuance Cost	1.99%
Weighted Average Cost of Debt	3.25%

- (1) Assumes a level principal payment in each fiscal year of the 20-year life of the bond.
- (2) Represents principal portion of debt payments on 15-Year CIP wastewater projects, or portions of projects, that have been identified by staff as relating to expansion needs. The principal payments used to calculate the offsets continue out in time until the 20-year term of the bond is complete.
- (3) Estimated issuance cost is based on the City's 1998 Revenue Bond Issue and the average cost of capital is based on the costs of capital on existing City of Peoria debt issues.

**Schedule 6**

**Peoria Water and Wastewater Expansion Fee Study  
Projection of Equivalent Residential Units (ERUs)**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b><u>Water Customer Accounts</u></b>										
Beginning Dwelling Units (1)	44,296	46,953	49,634	52,510	55,362	58,262	60,944	63,842	66,741	69,639
Annual Additions										
Non-CFD	1,948	1,942	2,098	2,052	1,947	1,980	2,304	2,191	2,223	2,142
CFD	709	739	778	800	953	702	594	708	675	756
Acquired Customers	-	-	-	-	-	-	-	-	-	-
<b>Total End of Year</b>	<b>46,953</b>	<b>49,634</b>	<b>52,510</b>	<b>55,362</b>	<b>58,262</b>	<b>60,944</b>	<b>63,842</b>	<b>66,741</b>	<b>69,639</b>	<b>72,537</b>
Derived Growth Rate	3.1%	5.7%	5.8%	5.4%	5.2%	4.6%	4.8%	4.5%	4.3%	4.2%
<b><u>Wastewater Customer Accounts</u></b>										
Beginning Dwelling Units (1)	47,296	49,953	52,634	55,510	58,362	61,262	63,944	66,842	69,741	72,639
Annual Additions										
Non-CFD	1,948	1,942	2,098	2,052	1,947	1,980	2,304	2,191	2,223	2,142
CFD	709	739	778	800	953	702	594	708	675	756
Acquired Customers	-	-	-	-	-	-	-	-	-	-
<b>Total End of Year</b>	<b>49,953</b>	<b>52,634</b>	<b>55,510</b>	<b>58,362</b>	<b>61,262</b>	<b>63,944</b>	<b>66,842</b>	<b>69,741</b>	<b>72,639</b>	<b>75,537</b>
Derived Growth Rate	2.9%	5.4%	5.5%	5.1%	5.0%	4.4%	4.5%	4.3%	4.2%	4.0%
<b><u>Customer Accounts Adjusted by Meter Ratios (ERU) (2)</u></b>										
Non-CFD										
Single-Family	1,033	1,175	1,320	1,500	1,650	1,750	2,050	1,945	1,975	1,900
Non-Residential	4,750	3,981	4,039	2,866	1,542	1,194	1,319	1,277	1,288	1,257
Subtotal	5,783	5,156	5,359	4,366	3,192	2,944	3,369	3,222	3,263	3,157
Vistancia										
Single-Family	367	425	480	500	550	650	550	655	625	700
Non-Residential	1,776	1,630	1,547	1,558	2,092	270	229	276	260	291
Subtotal	2,143	2,055	2,027	2,058	2,642	920	779	931	885	991
City of Peoria										
Single-Family	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,600	2,600	2,600
Non-Residential	6,526	5,611	5,586	4,424	3,634	1,464	1,548	1,553	1,548	1,548
Total City of Peoria	7,926	7,211	7,386	6,424	5,834	3,864	4,148	4,153	4,148	4,148

(1) Customer account projections are based on building permit forecasts provided by City staff.

(2) Reflects the number of customer accounts converted to equivalent residential units based on the utilities current distribution of customer accounts by meter size. The conversion of customer with larger meters into ERU is based on the demand ratios of larger meters in relation to a 3/4" meter. These demand ratios were developed based on information provided in the AWWA Manual M-6.

**Schedule 7**

**Peoria Water and Wastewater Expansion Fee Study**

**Forecast of Expansion Fee Revenue**

2006 Fee Amount	Revenue Forecast									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017

**Expansion Fee Revenue Forecast**

Forecast of Additional ERU

Full Cost Water and Water Resource ERU	5,783	5,783	5,156	5,359	4,366	3,192	2,944	3,369	3,222	3,263
CFD Water and Water Resource ERU	2,143	2,143	2,055	2,027	2,058	2,642	920	779	931	885
Total Water ERU	7,926	7,926	7,211	7,386	6,424	5,834	3,864	4,148	4,153	4,148
Full Cost Wastewater ERU	5,783	5,783	5,156	5,359	4,366	3,192	2,944	3,369	3,222	3,263
CFD ERU	2,143	2,143	2,055	2,027	2,058	2,642	920	779	931	885
Total Wastewater ERU	7,926	7,926	7,211	7,386	6,424	5,834	3,864	4,148	4,153	4,148
Single-Family Solid Waste ERU	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,600	2,600	2,600
Multi-Family Solid Waste ERU	906	840	896	652	524	90	90	90	90	90
Total Solid Waste ERU	2,306	2,440	2,696	2,652	2,724	2,490	2,690	2,690	2,690	2,690

Water Expansion Fee Revenue

Full Cost Expansion Fee	\$ 3,269	\$ 18,904,627	\$ 18,904,627	\$ 16,854,964	\$ 17,518,571	\$ 14,272,454	\$ 10,434,648	\$ 9,623,936	\$ 11,013,261	\$ 10,532,718	\$ 10,666,747
CFD Expansion Fee	\$ 722	\$ 1,547,246	\$ 1,547,246	\$ 1,483,710	\$ 1,463,494	\$ 1,485,876	\$ 1,907,524	\$ 664,240	\$ 562,438	\$ 672,182	\$ 638,970
Total Water Expansion Fee		\$ 20,451,873	\$ 20,451,873	\$ 18,338,674	\$ 18,982,065	\$ 15,758,330	\$ 12,342,172	\$ 10,288,176	\$ 11,575,699	\$ 11,204,900	\$ 11,305,717

Water Resource Fee Revenue

	\$ 621	\$ 3,591,243	\$ 3,591,243	\$ 3,201,876	\$ 3,327,939	\$ 2,711,286	\$ 1,982,232	\$ 1,828,224	\$ 2,092,149	\$ 2,000,862	\$ 2,026,323
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Wastewater Expansion Fee Revenue

Full Cost Expansion Fee	\$ 1,923	\$ 11,120,709	\$ 11,120,709	\$ 9,914,988	\$ 10,305,357	\$ 8,395,818	\$ 6,138,216	\$ 5,661,312	\$ 6,478,587	\$ 6,195,906	\$ 6,274,749
CFD Expansion Fee	\$ 216	\$ 462,888	\$ 462,888	\$ 443,880	\$ 437,832	\$ 444,528	\$ 570,672	\$ 198,720	\$ 168,264	\$ 201,096	\$ 191,160
Total Wastewater Expansion Fee		\$ 11,583,597	\$ 11,583,597	\$ 10,358,868	\$ 10,743,189	\$ 8,840,346	\$ 6,708,888	\$ 5,860,032	\$ 6,646,851	\$ 6,397,002	\$ 6,465,909

Solid Waste Expansion Fee Revenue

Single-Family Solid Waste Expansion Fee	\$ 300	\$ 420,146	\$ 480,167	\$ 540,188	\$ 600,209	\$ 660,230	\$ 720,251	\$ 780,272	\$ 780,272	\$ 780,272	\$ 780,272
Multi-Family Solid Waste Expansion Fee	\$ 206	\$ 186,498	\$ 172,912	\$ 184,440	\$ 134,213	\$ 107,864	\$ 18,526	\$ 18,526	\$ 18,526	\$ 18,526	\$ 18,526
		\$ 606,645	\$ 653,080	\$ 724,628	\$ 734,422	\$ 768,094	\$ 738,777	\$ 798,798	\$ 798,798	\$ 798,798	\$ 798,798

**Appendix B:**  
**Detailed**  
**Infrastructure Improvements Plan**

**Water**

**Water Resources**

**Wastewater**

**Solid Waste**

**Schedule B - 1**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Water Infrastructure Improvements Plan**  
 (All costs shown in FY 2007 dollars)

Percent Expansion	Actual Expenditures Prior to 2007	From FY 2008-2017 Capital Improvement Program											Total			
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017				
<b>Water Transmission Line Component</b>																
00034	24-inch Waterline - 79th/Greenway-Sports Complex-UT00034	100%	126,039	1,561,951	0	0	0	0	0	0	0	0	0	0	0	1,687,990
00096	24-inch Waterline - 91st/Beardsley-Union Hills-UT00096	100%	88,641	22,461	0	2,023,382	0	0	0	0	0	0	0	0	0	2,134,484
00145	24-inch Waterline - Beardsley/Lake Plsnt - 87 Ave-UT00145	100%	104,731	194,639	0	0	5,125,068	0	0	0	0	0	0	0	0	5,424,438
00227	24-inch Waterline - Greenway Rd./ 91st Ave. - 79th Ave.	100%	0	0	0	0	0	362,283	3,876,431	0	0	0	0	0	0	4,238,714
00228	30-inch Waterline - ElMirage/Jomax - Carefree HW (NEW) UT00228	100%	0	0	0	0	615,020	6,646,521	0	0	0	0	0	0	0	7,261,541
00144	30-inch Waterline - Lake Plnt/Deer Valley-Rose Garden - UT00144	100%	92,597	1,358,645	0	0	0	0	0	0	0	0	0	0	0	1,451,242
00233	36-inch Waterline - Lone Mountain Pkwy/Lake Pleasant-El Mirage - UT00233	100%	0	545,400	4,367,987	4,367,987	0	0	0	0	0	0	0	0	0	9,281,374
00148	36-inch Waterline LkPlsnt/Dynamite-303	100%	0	0	0	0	0	0	597,931	3,312,091	3,312,091	0	0	0	0	7,222,113
00243	36-inch Waterline - LPP/Carefree - Humburg Reserv.	100%	0	0	0	0	0	0	0	0	0	0	851,876	9,299,217	10,151,093	
00130	83rd Ave Re-alignment - UT00130	100%	0	363,450	0	0	0	0	0	0	0	0	0	0	0	363,450
00245	Agua Fria In-Line Booster Station - 4 MG Phase I - UT00245	100%	0	228,620	522,800	3,025,960	0	0	0	0	0	0	0	0	0	3,777,380
00246	Agua Fria In-Line Booster Station - 2 MG Phase II - UT 00246	100%	0	0	0	0	0	80,000	881,520	0	0	0	0	0	0	961,520
00170	West Agua Fria Water Lines-UT00170	100%	0	0	1,720,500	1,589,000	814,000	841,450	0	0	0	0	0	0	0	4,964,950
00136	Zone 2/3 Booster Station-UT00136	100%	0	0	300,000	0	0	0	0	242,400	2,593,680	0	0	0	0	3,136,080
00226	24-inch Waterline - 91st / Union Hills - Greenway Road - UT00226	100%	0	0	0	0	0	0	490,765	5,251,183	0	0	0	0	0	5,741,948
00242	30/36" Waterline - El Mirage/Twin Buttes Reservoir - TB Road	100%	0	0	0	0	228,988	2,450,172	0	0	0	0	0	0	200,638	2,146,832
00249	303 Water Crossings	100%	0	0	1,621,483	0	0	0	0	0	0	0	0	0	0	1,621,483
<b>Water Storage Facilities Component</b>																
00175	5 Million Gallon Reservoir at Greenway WTP-UT00175	100%	0	0	0	0	0	0	0	505,000	5,403,500	0	0	0	0	5,908,500
00118	6 Million Gallon Humburg Reservoir - UT00118	100%	0	0	0	754,000	0	0	0	0	0	0	200,000	2,170,940	0	3,124,940
00149	New River / Agua Fria USP - UT00149	100%	1,265,068	463,517	0	0	0	0	0	0	0	0	0	0	0	1,728,585
00248	Butler Recharge Wells - UT00248	100%	0	0	0	0	0	252,500	757,500	757,500	757,500	0	0	0	0	2,525,000
<b>Water Treatment Facilities Component</b>																
00117	Wells-UT00117 (NEW WELLS)	100%	0	1,206,570	1,170,000	820,000	1,640,000	700,000	1,640,000	0	1,640,000	0	1,640,000	0	0	10,456,570
00231	Greenway Re-rating from 16 to 24 MGD - UT00231	100%	0	0	0	0	0	0	0	0	0	0	5,000,000	0	0	5,000,000
00037	Pyramid Peak Water Treatment Plant - Phase II-UT00037	100%	3,130,192	991,655	0	0	0	0	0	0	0	0	0	0	0	4,121,847
00172	Twin Buttes 5 MGD WTP-UT00172	100%	0	91,160	1,429,000	2,349,000	29,163,200	29,100,000	0	0	0	0	0	0	0	62,132,360
00031	Butler Drive Water Reclamation Facility (10 MGD)-UT00031	100%	3,016,174	19,851,478	34,273,705	8,656,074	0	0	0	0	0	0	0	0	0	65,797,430
00225	Butler Wastewater Reclamation Plant Expansion to 13 MGD - UT00225	100%	0	0	0	0	0	0	0	414,000	2,106,000	252,500	252,500	0	0	3,025,000
00173	Jomax Wastewater Reclamation Plant Expansion to 2.25 MGD-UT00173	100%	0	4,841,486	0	0	0	0	0	0	0	0	0	0	0	4,841,486
00237	Jomax Wastewater Reclamation Plant Expansion to 5MGD-UT00237	100%	0	0	0	0	0	0	0	0	0	0	518,736	5,187,360	0	5,706,096
<b>Administrative</b>																
00179	Wastewater Reuse Master Plan-UT00179	100%	115,490	0	0	0	125,000	0	0	0	0	125,000	0	0	0	365,490
00232	Strategic Business/Technology Master Plan (NEW) - UT00232	100%	0	52,500	75,000	0	0	0	62,500	0	0	0	0	0	62,500	252,500
00070	Update Water Expansion Fees-UT00070	100%	40,103	20,000	0	20,000	0	75,000	0	75,000	0	75,000	0	75,000	0	380,103
00112	Update Water Infrastructure Master Plan - UT00112	100%	211,545	52,080	0	0	0	300,000	0	0	0	0	300,000	0	0	863,625
00211	Beardsley WRF - Operations Building - UT00211	100%	2,561,733	285,780	0	0	0	0	0	0	0	0	0	0	0	2,847,513
00251	SCADA Master Plan	100%	0	0	0	0	0	0	125,000	0	0	0	0	0	0	125,000
00252	SCADA Control Optimization	50%	0	0	0	0	0	0	1,006,000	1,010,000	0	0	0	0	0	2,016,000
00300	Municipal Operations Center (UT00300)	50%	961,107	320,369	0	0	0	0	0	0	0	0	0	0	0	1,281,476
	North Municipal Facility Feasibility Study	100%	0	0	0	0	0	0	0	0	0	0	0	50,000	0	50,000
99999	Development Services Building (PW99999)	49%		814,748	0	0	0	0	0	0	0	0	0	0	0	814,748
00160	Utility Billing System - UT00160	13%	1,380,640	1,146,000	0	0	0	0	0	999,900	0	0	0	0	0	3,526,540
00215	Data Network for Remote Utility Facilities	50%	102,322	226,940	101,694	101,000	0	0	0	0	0	111,800	112,918	0	0	756,673
<b>Total Water Infrastructure Improvements</b>			<b>13,196,381</b>	<b>34,639,447</b>	<b>45,582,169</b>	<b>23,706,403</b>	<b>37,711,276</b>	<b>40,727,926</b>	<b>7,505,127</b>	<b>11,650,694</b>	<b>11,232,171</b>	<b>7,821,300</b>	<b>9,076,668</b>	<b>19,244,349</b>	<b>262,093,911</b>	

**Schedule B - 2**

**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**

**Water Resources Infrastructure Improvements Plan**

(All costs shown in FY 2007 dollars except where specifically noted)

	Percent Expansion	From FY 2008-2017 Capital Improvement Program										Total	
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
<b>Water Resources</b>													
00113 Update Water Resource Master Plan (UT00113)	100%			360,000					360,000				720,000
00234 Non-Indian Ag Cap Water Reallocation (UT00234)	100%	0	0	5,000,000	0	0	0	0	0				5,000,000
00033 CAP Water Rights (UT00033) (1)													
00033 Gila River Indian Lease (2)	100%	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	9,000,000
00033 CAP Water Reallocation (3)	100%	3,600,000		0	0	0	0	0	0	0	0	0	3,600,000
CAP Annual Take or Pay Charge (4)	100%	204,499	204,499	204,499	204,499	204,499	204,499	204,499	204,499	204,499	204,499	204,499	2,044,990
<b>Total Water Resources Infrastructure Improvements</b>		<b>4,704,499</b>	<b>1,104,499</b>	<b>6,464,499</b>	<b>1,104,499</b>	<b>1,104,499</b>	<b>1,104,499</b>	<b>1,104,499</b>	<b>1,464,499</b>	<b>1,104,499</b>	<b>1,104,499</b>	<b>1,104,499</b>	<b>20,364,990</b>

(1) This CIP cost code includes both reallocated CAP water and the Gila River Indian Lease.

(2) Lease payments of \$900,000 per year for 15 years which began in FY 2005. Actual payment amounts are shown, they are not in FY 2007 dollars.

(3) Payment shown in FY 2007 dollars.

(4) Represents \$37 per acre-foot in FY 2006 through FY 2043 on 5,527 Acre-Feet. Actual payment amounts are shown, they are not in FY 2008 dollars.

**Schedule B - 3**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Wastewater Infrastructure Improvements Plan**

(All costs shown in FY 2007 dollars)

Percent Expansion	Actual Expenditures Prior to 2007	From FY 2008-2017 Capital Improvement Program										Total		
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		2017	
<b>Wastewater Trunk Line Component</b>														
00156	100%	0	1,500,000	0	0	0	0	0	0	0	0	0	1,500,000	
00157	100%	0	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000	
00151	100%	0	0	0	0	0	0	437,742	2,224,824	2,224,824	0	0	4,887,390	
00103	100%	0	2,558,679	0	0	0	0	0	0	0	0	0	2,558,679	
00107	0%	363,999	568,281	126,250	252,500	0	0	0	0	0	0	0	1,311,030	
00191	100%	400,866	0	175,000	50,500	50,500	50,500	50,500	50,500	50,500	50,500	50,500	1,030,366	
00254	100%	0	1,621,483	0	0	0	0	0	0	0	0	0	1,621,483	
00171	100%	64,541	1,099,099	905,840	749,100	147,675	66,000	0	0	0	0	0	3,032,255	
<b>Underground Water Storage &amp; Recharge</b>														
00149	100%	1,265,068	463,517	0	0	0	0	0	0	0	0	0	1,728,585	
00248	100%	0	0	0	0	0	252,500	757,500	757,500	757,500	0	0	2,525,000	
<b>Wastewater Treatment Facilities Component</b>														
00124	100%	0	0	880,250	9,662,750	0	0	0	0	0	0	0	10,543,000	
00213	100%	0	0	0	0	0	0	0	0	4,019,598	20,097,992	20,097,992	44,215,582	
00196	100%	2,441,311	204,711	1,000,000	0	0	0	0	0	0	0	0	3,646,022	
00031	44%	7,016,174	19,851,478	34,273,705	8,656,074	0	0	0	0	0	0	0	69,797,430	
00225	46%	0	0	0	0	0	0	0	414,000	2,106,000	252,500	252,500	3,025,000	
00173	100%	0	4,841,486	0	0	0	0	0	0	0	0	0	4,841,486	
00237	100%	0	0	0	0	0	0	0	0	0	518,736	5,187,360	5,706,096	
<b>Administrative</b>														
00029	100%	0	20,000	0	20,000	0	75,000	0	75,000	0	75,000	0	340,000	
00018	100%	0	300,000	0	0	0	0	300,000	0	0	0	0	900,000	
00232	100%	0	52,500	75,000	0	0	0	62,500	0	0	0	0	252,500	
00179	100%	115,490	0	0	0	125,000	0	0	0	0	125,000	0	365,490	
00211	100%	356,768	2,370,233	0	0	0	0	0	0	0	0	0	2,727,001	
00300	50%	961,107	320,369	0	0	0	0	0	0	0	0	0	1,281,476	
	100%	0	0	0	0	0	0	0	0	0	0	0	50,000	
99999	100%	0	261,550	0	0	0	0	0	0	0	0	0	261,550	
00160	12%	1,380,640	1,146,000	0	0	0	0	0	999,900	0	0	0	3,526,540	
00215	50%	102,322	226,940	101,694	101,000	0	0	0	0	111,800	112,918	0	756,673	
<b>Total Wastewater Infrastructure Improvements</b>		<b>\$14,468,285</b>	<b>\$34,284,841</b>	<b>\$39,159,222</b>	<b>\$19,491,924</b>	<b>\$323,175</b>	<b>\$444,000</b>	<b>\$1,608,242</b>	<b>\$3,107,824</b>	<b>\$4,446,724</b>	<b>\$6,487,898</b>	<b>\$21,032,646</b>	<b>\$26,075,852</b>	<b>\$173,430,633</b>

(1) Tierra Del Rio sewer line projects (UT00156 & UT00157) are included in the Sewer Infrastructure Improvements Plan as they benefit development. However these projects are excluded from the expansion fee calculation as they are anticipated to be funded by a local developer.

**Schedule B - 3**  
**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**  
**Wastewater Infrastructure Improvements Plan**

(All costs shown in FY 2007 dollars)

Percent Expansion	Actual Expenditures Prior to 2007	From FY 2008-2017 Capital Improvement Program										Total		
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		2017	
<b>Wastewater Trunk Line Component</b>														
00156	100%	0	1,500,000	0	0	0	0	0	0	0	0	0	1,500,000	
00157	100%	0	1,000,000	0	0	0	0	0	0	0	0	0	1,000,000	
00151	100%	0	0	0	0	0	0	437,742	2,224,824	2,224,824	0	0	4,887,390	
00103	100%	0	2,558,679	0	0	0	0	0	0	0	0	0	2,558,679	
00107	0%	363,999	568,281	126,250	252,500	0	0	0	0	0	0	0	1,311,030	
00191	100%	400,866	0	175,000	50,500	50,500	50,500	50,500	50,500	50,500	50,500	50,500	1,030,366	
00254	100%	0	1,621,483	0	0	0	0	0	0	0	0	0	1,621,483	
00171	100%	64,541	1,099,099	905,840	749,100	147,675	66,000	0	0	0	0	0	3,032,255	
<b>Underground Water Storage &amp; Recharge</b>														
00149	100%	1,265,068	463,517	0	0	0	0	0	0	0	0	0	1,728,585	
00248	100%	0	0	0	0	0	252,500	757,500	757,500	757,500	0	0	2,525,000	
<b>Wastewater Treatment Facilities Component</b>														
00124	100%	0	0	880,250	9,662,750	0	0	0	0	0	0	0	10,543,000	
00213	100%	0	0	0	0	0	0	0	0	4,019,598	20,097,992	20,097,992	44,215,582	
00196	100%	2,441,311	204,711	1,000,000	0	0	0	0	0	0	0	0	3,646,022	
00031	44%	7,016,174	19,851,478	34,273,705	8,656,074	0	0	0	0	0	0	0	69,797,430	
00225	46%	0	0	0	0	0	0	0	414,000	2,106,000	252,500	252,500	3,025,000	
00173	100%	0	4,841,486	0	0	0	0	0	0	0	0	0	4,841,486	
00237	100%	0	0	0	0	0	0	0	0	0	518,736	5,187,360	5,706,096	
<b>Administrative</b>														
00029	100%	0	20,000	0	20,000	0	75,000	0	75,000	0	75,000	0	340,000	
00018	100%	0	300,000	0	0	0	0	300,000	0	0	0	0	900,000	
00232	100%	0	52,500	75,000	0	0	0	62,500	0	0	0	0	252,500	
00179	100%	115,490	0	0	0	125,000	0	0	0	0	125,000	0	365,490	
00211	100%	356,768	2,370,233	0	0	0	0	0	0	0	0	0	2,727,001	
00300	50%	961,107	320,369	0	0	0	0	0	0	0	0	0	1,281,476	
	100%	0	0	0	0	0	0	0	0	0	0	0	50,000	
99999	100%	0	261,550	0	0	0	0	0	0	0	0	0	261,550	
00160	12%	1,380,640	1,146,000	0	0	0	0	0	999,900	0	0	0	3,526,540	
00215	50%	102,322	226,940	101,694	101,000	0	0	0	0	111,800	112,918	0	756,673	
<b>Total Wastewater Infrastructure Improvements</b>		<b>\$14,468,285</b>	<b>\$34,284,841</b>	<b>\$39,159,222</b>	<b>\$19,491,924</b>	<b>\$323,175</b>	<b>\$444,000</b>	<b>\$1,608,242</b>	<b>\$3,107,824</b>	<b>\$4,446,724</b>	<b>\$6,487,898</b>	<b>\$21,032,646</b>	<b>\$26,075,852</b>	<b>\$173,430,633</b>

(1) Tierra Del Rio sewer line projects (UT00156 & UT00157) are included in the Sewer Infrastructure Improvements Plan as they benefit development. However these projects are excluded from the expansion fee calculation as they are anticipated to be funded by a local developer.

**Schedule B - 4**

**Peoria Water, Wastewater, and Solid Waste Expansion Fee Study**

**Projects Included in Solid Waste Expansion Fee**

(All costs shown in FY 2005 dollars)

	Percent Expansion	From FY 2005-2015 Infrastructure Improvement Program												Total
		Previous Years	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
<i>Collection Component</i>														
Sanitation Trucks (Residential)	98%	\$0	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$235,000	\$2,585,000
Recycling Containers	100%	0	59,137	107,713	115,966	128,663	130,414	136,397	131,183	141,841	141,841	141,841	141,841	1,376,838
Sanitation Containers	100%	0	51,944	94,611	101,860	113,013	114,550	119,806	115,226	124,588	124,588	124,588	124,588	1,209,361
<i>Administrative</i>														
Utility Billing System (UT00160)	100%	1,380,640	1,146,000	0	0	0	0	0	0	999,900	0	0	0	3,526,540
Municipal Operations Center	100%	5,125,903	0	0	0	0	0	0	0	0	0	0	0	5,125,903
North Municipal Facility Feasibility Study	100%	0	0	0	0	0	0	0	0	0	0	0	100,000	100,000
<b>Total Solid Waste Infrastructure Improvements</b>		<b>\$6,506,543</b>	<b>\$1,492,081</b>	<b>\$437,324</b>	<b>\$452,826</b>	<b>\$476,676</b>	<b>\$479,964</b>	<b>\$491,202</b>	<b>\$481,410</b>	<b>\$1,501,329</b>	<b>\$501,429</b>	<b>\$501,429</b>	<b>\$601,429</b>	<b>\$13,923,642</b>