



**Chandler • Arizona**  
*Where Values Make The Difference*

# 39  
MAR 13 2008

**MEMORANDUM**

**Management Services Memo No. 08-054**

**DATE:** MARCH 3, 2008

**TO:** MAYOR AND COUNCIL

**THRU:** W. MARK PENTZ, CITY MANAGER *WP*  
RICH DLUGAS, ASSISTANT CITY MANAGER *RD*  
DENNIS STRACHOTA, MANAGEMENT SERVICES DIRECTOR *DS*

**FROM:** JULIE BUELT, SENIOR FINANCIAL ANALYST *JB*

**SUBJECT:** APPROVAL OF THE NEW AND MODIFIED SYSTEM DEVELOPMENT FEES AND INFRASTRUCTURE IMPROVEMENTS PLANS

**RECOMMENDATION:** Staff recommends Council move to approve the process to consider and adopt new and modified System Development Fees and proposed Infrastructure Improvements Plans and set the date for the Public Hearings for May 22, 2008.

**BACKGROUND/DISCUSSION:** According to provisions of the Chandler City Code, system development fees are to be reviewed annually. It has been the City's practice to have consultants review the fees every other year, and make an inflationary adjustment in the interim years. This year's update is based upon the attached reports prepared by Red Oak Consulting for utility fees and Duncan & Associates for non-utility fees. In July 2007, the consultants and city staff met with representatives from Fulton Homes Corporation, Home Builders Association of Central Arizona and Valley Partnership in order to discuss their concerns at the beginning of the process.

In order to adequately notify interested parties of the 2008 update, e-mails will be sent on Friday, March 7, 2008 to the Associated General Contractors of America, Capitol Consulting, LLC (representing the Arizona Multihousing Association), Chandler Chamber of Commerce, Fulton Homes Corporation, Home Builders Association of Central Arizona and Valley Partnership informing them of the proposed update to the system development fees, the proposal of Infrastructure Improvements Plans and the planned date of the Public Hearings. These groups will also be invited to a public meeting to be scheduled during the month of April 2008 to discuss any questions or concerns prior to any scheduled City Council public hearings.

As required by law, an Advance Notice of Intent will be published in the Arizona Republic newspaper showing the date, time and place of the Public Hearings on May 22, 2008. In

compliance with State Statutes, a copy of the new and modified System Development Fees and Infrastructure Improvements Plans will be filed with the City Clerk for public review.

FINANCIAL IMPLICATIONS: System development fees are charges designed to provide funding to a community for the cost of expanding infrastructure or building capital facilities required to support new development. If these fees are not maintained at the proper level, the City may have to provide additional General Fund support to pay for growth related projects.

PROPOSED MOTION: Move to approve the process to consider and adopt new and modified System Development Fees and Infrastructure Improvements Plans and set the date for the Public Hearings for May 22, 2008.

Attachments: Notice of Intent

Schedule for the Adoption of 2008 Updated System Development Fees

Red Oak Consulting Utility SDC Update

Red Oak Consulting Utility Infrastructure Improvements Plan

Duncan & Associates Non-Utility SDF Update

Duncan & Associates Non-Utility Infrastructure Improvements Plan

cc: Pat McDermott, Assistant City Manager  
Mark Eynatten, Community Services Director  
Sherry Kiyler, Police Chief  
Jim Roxburgh, Fire Chief  
Dave Siegel, Municipal Utilities Director  
R. J. Zeder, Public Works Director

CITY OF CHANDLER  
ADVANCE NOTICE OF INTENT

NOTICE IS HEREBY GIVEN THAT the City of Chandler shall conduct two Public Hearings on Thursday, May 22, 2008 at a Regular Meeting of the Chandler City Council to be held in the Council Chambers, 22 South Delaware Street at 7:00 p.m. to consider the new and modified System Development Fees and the proposed Infrastructure Improvements Plans. NOTICE IS HEREBY GIVEN THAT at a Regular Meeting of the Chandler City Council to be held in the Council Chambers, 22 South Delaware Street, on Thursday, June 12, 2008 at 7:00 p.m. it is the Council's intention to consider introduction of an ordinance to adopt new and modified System Development Fees effective October 1, 2008. It is the intention of the Council to consider the final adoption of the ordinance for the new and modified System Development Fees and the adoption of the Infrastructure Improvement Plans at the Regular Meeting of the Chandler City Council to be held in the Council Chambers, 22 South Delaware Street, on Thursday, June 26, 2008 at 7:00 p.m.

A copy of the new and modified System Development Fees and the Infrastructure Improvements Plans will be available in the office of the City Clerk commencing March 14, 2008.

# **Schedule for the Adoption of 2008 Updated System Development Fees**

## **For an Effective Date of October 1, 2008:**

March 13, 2008	Council – Approve the Process to Consider and Adopt New and Modified System Development Fees and Proposed Infrastructure Improvements Plans and Set the Date for the Public Hearings
April 2008	Consultant Presentations to External Stakeholders at Public Meeting (to be scheduled)
May 22, 2008	Council – Conduct Public Hearings on the New and Modified System Development Fees and Proposed Infrastructure Improvements Plans
June 12, 2008	Council – Introduce Ordinance for New and Modified System Development Fees
June 26, 2008	Council – Adopt Ordinance for New and Modified System Development Fees and Adopt Infrastructure Improvements Plans
October 1, 2008	New System Development Fees in Effect



## City of Chandler

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# 2007 Utility SDC Update

February 2008

Report Prepared By:



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- B. Water and Wastewater SDC Cash Flow Schedules
- C. CIP and Development Plan
- D. Survey
- E. Water Resource SDC Area Map

# 1. Introduction and Background

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## 1.1. Purpose of Study

The City of Chandler (City) retained Red Oak Consulting (Red Oak) to update the City's Water and Wastewater System Development Charges (SDCs). Traditionally, the City updates SDCs every other year and a consultant performs a more comprehensive update on intervening years.

In 2006, the City increased the single family water SDC by 37.60% from \$3,085 to \$4,245 and the single family wastewater SDC by 25.19% from \$3,025 to \$3,787, upon completion of Red Oak's 2005 study.

In 2007, City staff updated the fees and increased the single family water SDC by 10.81% from \$4,245 to \$4,704 and the single family wastewater SDC by 3.04% from \$3,787 to \$3,902.

## 1.2. Background

The City of Chandler has a population of approximately 247,800 as of July 1, 2007. Growth of 2.34% is anticipated for the current fiscal year (FY) with growth declining as the City approaches build-out. Residential build-out is anticipated to occur in FY 2024-25 with a population of 286,300. Nonresidential build-out is anticipated to occur in FY 2039-40 with 112,752,650 square feet of development.

## 1.3. Reliance on City Provided Data

During the course of this project, the City provided Red Oak with financial reports and projected water and wastewater growth related expenditures. Red Oak has reviewed the data for reasonableness and general representation of cost and related activities. Red Oak did not independently assess or verify the accuracy of such data. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report. As is often the case, there will be differences between actual and projected data, and these differences may be significant. Therefore, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the City, nor does Red Oak have any responsibility for updating this report for events occurring after the date of this report.

#### **1.4. Acknowledgements**

The successful completion of this study depended on the efforts of the City of Chandler staff. In particular the Red Oak study team would like to thank Ms. Julie Buelt, Ms. Helen Parker and Mr. Dave Siegel, Municipal Utilities Director for their support and guidance throughout this study.

## 2. Updated SDCs

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### 2.1. Methodology

Properly designed SDCs should generate revenues sufficient to fund the planned growth-related capital improvements and any associated borrowing costs over the intended study period. In the case of Chandler the study period for this analysis is through the City's expected build-out. Due to the variability in development and resulting fee revenues, each SDC fund must maintain a separate and adequate fund balance.

The City's ability to fund the growth-related future capital improvements is illustrated in the cash flow schedules prepared for each SDC area (see Appendix B). SDC revenues are based on the City's planned development and capital expenditures. Red Oak included long-term borrowings and/or "loans" from the City's Water Operating Fund and Wastewater Operating Fund as necessary. Any borrowings made from the Operating Funds are later repaid from SDCs. The borrowings and loans finance improvements before sufficient SDC revenues are accumulated. In the event that there are insufficient funds available in the Operating Fund in a given year, it may be necessary to issue bonds for the SDC Fund or defer growth-related CIP.

Under the "cash flow" methodology a fee with a defined parameter is calculated in the base year (FY 2008-09) and escalated in future years. In this study the inflation factor applied to the water SDC in future years is 1.478%. The inflation factor applied to wastewater SDCs in future years is 2.239%. The inflation factor is calculated in combination with the base year fee in order to ensure that revenues from new development are sufficient to recover all growth-related expenditures or costs. The defined parameter referenced above is that the accrued SDC revenue is to be exhausted when the build-out year is reached or the year when final debt service payments are made, whichever is later.

The City intends to use SDC revenue to pay debt service on growth-related borrowings. For this reason Red Oak includes interest on debt issued for growth-related projects in the SDC calculation.

### 2.2. Calculated Fees

Red Oak used the "cash flow" approach to calculate to the water and wastewater SDCs. The 2005 SDC study also used this approach.

Red Oak recommends maintaining the total water SDC at the present level of \$4,704 per equivalent residential unit (ERU). Red Oak further recommends increasing the water system portion of the SDC and reducing the water resource portion by \$714 per ERU.

The lower water resource fee will be sufficient to fund the projected water resource capital projects through build-out.

The water system component of the SDC applies to all new development in the City. The water resource portion only applies to new development in a Southern portion of the City. Appendix E contains a map of this area.

Red Oak recommends increasing the total wastewater SDC from \$3,902 to \$6,100 per ERU. The wastewater SDC is comprised of three components: sewer treatment, trunkline and reclaimed water. The sewer treatment component increases from \$2,281 to \$4,908. The trunkline component decreases from \$285 to \$155. The reclaimed water component decreases from \$1,336 to \$1,037.

The fees for each component of the water and wastewater SDCs are based on the projected future capital needs for the individual components. Using the wastewater SDC as an example, the calculated wastewater SDC is \$6,100, and is comprised of treatment, trunkline and reclaimed water components. The projected growth-related trunkline CIP through build-out represents 2.54% of the total growth-related wastewater CIP. The trunkline SDC therefore represents 2.54% of the total wastewater SDC. The growth-related reclaimed water CIP comprises 17.00% of the total growth-related wastewater CIP and therefore is calculated at 17.00% of the total wastewater SDC. The balance of the growth-related wastewater CIP is related to treatment and is reflected accordingly in the treatment component of the wastewater SDC.

Table 2-1 shows the components of the single family residential water and wastewater SDCs. Appendix A includes a complete listing of the City's current and proposed utility SDCs. Appendix B contains the cash flow projection for both the water and wastewater SDC funds.

**Table 2-1.  
Projected Single Family Residential SDC**

<u>Fee</u>	<u>SDC</u>		<u>Difference</u>	
	<u>Current</u>	<u>Proposed</u>	<u>\$</u>	<u>%</u>
<b>Water</b>				
System	\$3,959	\$4,673	\$714	18%
Resource	<u>745</u>	<u>31</u>	<u>(714)</u>	(96%)
<b>Total</b>	<b>\$4,704</b>	<b>\$4,704</b>	<b>\$0</b>	<b>0%</b>
<b>Wastewater</b>				
Treatment	\$2,281	\$4,908	\$2,627	115%
Trunkline	285	155	(130)	(46%)
Reclaimed Water	<u>1,336</u>	<u>1,037</u>	<u>(299)</u>	(22%)
<b>Total</b>	<b>\$3,902</b>	<b>\$6,100</b>	<b>\$2,198</b>	<b>56%</b>

## 3. Explanation of Fee Differences

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### 3.1. Fee Calculations

There are two major components in determining or calculating SDCs. The first component is the capital cost and the second component is the development to be served. A change in either of the two components will result in a change in the calculated SDC. For the 2007 update to Chandler's utility SDCs both the capital cost component and development component changed.

#### 3.1.1. Growth-Related CIP

In last year's staff update, water growth-related CIP (inflated dollars) for FY 2007-08 through build-out period was projected at \$135,233,600; in the current update the CIP projections (excluding encumbrances and carry forwards) for the same time period are \$135,351,834. It should be noted that there may have been projects that were completed ahead of schedule and are no longer included in the CIP.

Whereas the water growth-related CIP increased slightly between the staff update and the current study, the projected wastewater growth-related CIP increased more significantly. In examining only the FY 2007-08 through build-out period the projected CIP (inflated dollars) in the staff update was \$103,847,100 and in the current study is \$200,432,462. The most significant increase was the addition of an \$86.8 million water reclamation facility expansion in FY 2011-12. As was the case for water, there may have been some projects that were completed ahead of schedule and are no longer in the plan. There may also be some projects that were delayed and are now shown in the FY 2007-08 through build-out period. Table 3-1 compares the CIP cost changes for both the water and wastewater funds.

**Table 3-1.  
CIP Comparison**

**Staff Update versus Current Study**

	<u>Current</u>	<u>Staff Update</u>	<u>Difference</u>	
			<u>\$</u>	<u>%</u>
Water	\$135,351,834	\$135,233,600	\$118,234	0.1%
Wastewater	200,432,462	103,847,100	96,585,362	93%

The water CIP projections increased by 0.1% while the wastewater CIP projections have increased by 93%. Table 3-2 illustrates the most significant changes in the growth-related CIP for water and wastewater for FY 2007-08 through build-out. Table 3-2 does not represent all of the changes in CIP, but rather provides examples of the types of change that occurred.

**Table 3-2.  
Growth-Related CIP  
Staff Update versus Current Study**

<u>Item</u>	<u>Project Number</u>	<u>Project Description</u>	<u>Staff Update</u>	<u>Current</u>	<u>Difference</u>
<u>Water</u>					
1	WA034	Well Construction	\$6,713,300	\$15,413,919	\$8,700,619
2	WA076	Transmission Mains	26,875,700	16,902,300	(9,973,400)
3	WA209	Water Treatment Plant Expansion	46,512,800	5,512,800	(41,000,000)
4	WA334	Joint Water Treatment Plant	54,269,400	95,932,100	41,662,700
<u>Wastewater</u>					
5	WW022	Water Reclamation Facility Expansion	\$80,380,000	\$169,165,000	\$88,785,000
6	WW192	Effluent Reuse-Transmission Mains	6,695,600	13,730,000	7,034,400

Another capital cost-related factor for the increase in the wastewater fee is the \$91.9 million in CIP in FY 2011-12. Because these costs are anticipated to occur in the near future the City will not generate sufficient SDC revenues to “cash fund” the project. The CIP expenditures in this one year result in the need for bond issues to fund the program. It is anticipated that \$80.0 million in bonds for wastewater will need to be issued. The projected bond issues result in an additional \$6.5 million in annual debt service for wastewater that was not previously projected. Higher SDCs are required to pay the additional debt service. The full CIP can be found in the City’s Infrastructure Improvement Plan (IIP).

**3.1.2. Development Projections**

The second component which impacts the determination of SDCs is the development to be served by growth-related capital. For the City of Chandler the unit of measurement for development to be served by additional growth-related capital projects is stated in equivalent residential units (ERUs). The number of ERUs that are projected in the current study are higher than those contained in the 2006 staff update. For FY 2008-09 through build-out, the staff update projected 28,730 ERUs for water and 28,918 ERUs for wastewater. The current study projects 39,902 ERUs for water, an increase of 11,172 or 39% and 40,166 for wastewater, an increase of 11,248 or 39%.

As the City approaches build-out the projections of new development improve and become more accurate. The adjustments to the number of ERUs to be served between the previous staff update and the current study are a reflection of better and more recent data and projections. Table 3-3 identifies the changes in projected development between the staff update and the current study.

**Table 3-3.  
Projected Development Staff Update versus Current Study**

<u>Description</u>	<u>Staff Update</u>	<u>Current</u>	<u>Difference</u>	
			<u>Number</u>	<u>%</u>
Population (1)	286,293	286,300	7	0%
Nonresidential Square Footage (2)	104,714,899	112,752,650	8,037,751	8%
Water ERUs (3)	28,730	39,902	11,172	39%
Wastewater ERUs (3)	28,918	40,166	11,248	39%

- (1) Population at build-out
- (2) Nonresidential square feet at build-out
- (3) ERUs FY 2008-09 through build-out

There are two reasons for the changes in projected nonresidential developments and therefore ERUs. The first is as previously discussed a better projection of planned developments as the City becomes increasingly closer to build-out. The second factor was a change in square foot/ERU ratio. In 2005, a square foot/ERU factor of 2,364 was calculated by Red Oak. This factor was also used in the staff update. In 2007 this ratio is calculated at 2,038. In order to arrive at the square foot/ERU figure, the total developed nonresidential square footage in the base year was divided by the number of water meter ERUs for the same base year. The number of nonresidential water meter ERUs (in the base years of the Consultant studies) increased by 23% (21,737 to 26,804) between FY 2004-05 and FY 2007-08, but the nonresidential square footage increased by 5% during the same period. The square footage per ERU factor therefore decreased between the prior Red Oak update in 2005 and the current study. The ERU ratio is used to approximate the number of ERUs for non-residential development.

By evaluating the number of ERUs associated with currently developed nonresidential square footage, it is then possible to project the number of future nonresidential ERUs. By dividing the projected nonresidential square footage development in each year by the calculated ratio, an estimation of the number of nonresidential ERUs to come on line each year is projected. The result of the higher square footage projection at build-out and lower square footage per ERU factor resulted in a higher number of ERUs to be served than in the prior study. Appendix C contains the projected ERU development plan.

**3.1.3. Net Result of Differences**

Water growth-related capital projects increased by 0.1% between the staff update and the current study, and the projected number of ERUs to be served increased 39% during the same timeframe. As a result of these changes the water SDC in total remains unchanged, but the escalation factor for the water SDC in the future decreases from 3.098% to 1.478%.

The wastewater growth-related CIP increased by 93% between the staff update and the current study, while the ERUs to be served increased by 39% during the same period. Based on the capital cost increases alone, the proposed wastewater SDC increase from \$3,902 to \$6,100 (a 56% increase) would have been even higher if the projections of ERUs had not increased. The wastewater SDC is proposed to increase at an annual rate of 2.239%, as opposed to the prior study rate of 3.112%.

## 4. SDC Survey Results

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### 4.1. Survey Results

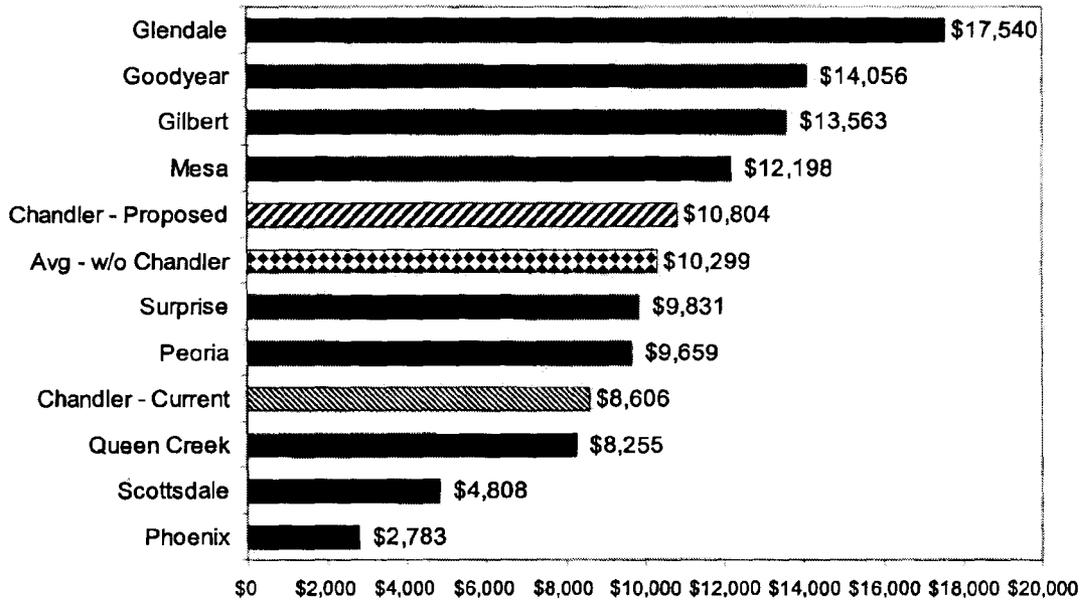
As part of the study Red Oak compared the proposed SDCs for the City of Chandler to the fees in surrounding communities. Survey results are intended only to compare the City's SDCs or cost of serving growth or new demand to similar fees assessed in the indicated communities. There can be any number of reasons why the City's SDCs are higher or lower than those indicated in the survey. These reasons may relate to conscious decisions made by these communities regarding how growth-related costs are defined, the degree to which "full cost" fees are adopted, e.g., a given community may adopt less than 100% of the full cost fee, etc.

Chandler's combined water and wastewater SDCs for a single-family development with a 1-inch meter (standard for a single family residential development) are currently \$8,606 and are projected to increase to \$10,804. The standard meter size for a single-family development in other communities is a 3/4-inch meter. Figure 4-1 compares the combined water and wastewater SDCs for a single family residential development with a 1-inch meter. While the survey average of \$9,673 is lower than Chandler's projected fee, the City's fee would still be lower than the fees currently in effect in Glendale, Goodyear, Gilbert and Surprise. Survey results for a 3/4-inch meter can be found in Appendix D.

Chandler's combined charges for water and wastewater for the multi-family class is projected to be \$4,509, a decrease from the current combined fee of \$4,702. This is below the survey average of \$5,786.

At \$86,637 the proposed water and wastewater SDC fees for a commercial development with a 2-inch meter in Chandler would be the second highest of the surveyed communities. The highest fee is for Scottsdale at \$139,339. Appendix D contains the complete survey results.

**Figure 4-1:  
Single Family Residential Combined Water and Wastewater SDC Comparison  
(1-inch meter)**





**City of Chandler**  
2007 Utility SDC Update

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**Appendix A:**  
**Current Versus Proposed Utility SDCs**



**City of Chandler  
System Development Charges**

	Current	Proposed
<b>Water System:</b>		
Single-family (per dwelling unit)	\$3,959.00	\$4,673.00
Multi-family (per dwelling unit)	1,998.00	1,705.00
5/8 x 3/4 Disc Meter	3,959.00	4,673.00
3/4 Disc Meter	5,939.00	7,010.00
1-0 Disc Meter	9,898.00	11,684.00
1 1/2 Disc Meter	19,795.00	23,367.00
2-0 Disc Meter	31,672.00	37,387.00
3-0 Compound Meter	63,343.00	74,775.00
4-0 Compound Meter	98,973.00	116,836.00
6-0 Compound Meter	197,946.00	233,671.00
8-0 Compound Meter	316,712.00	373,874.00
2-0 Turbine Meter	31,672.00	37,387.00
3-0 Turbine Meter	69,282.00	81,785.00
6-0 Turbine Meter	247,431.00	292,089.00
8-0 Turbine Meter	356,301.00	420,608.00
<b>Water Resource:</b>		
Single-family (per dwelling unit)	\$745.00	\$31.00
Multi-family (per dwelling unit)	407.00	12.00
5/8 x 3/4 Disc Meter	951.00	39.00
3/4 Disc Meter	1,455.00	60.00
1-0 Disc Meter	2,320.00	99.00
1 1/2 Disc Meter	6,254.00	231.00
2-0 Disc Meter	10,717.00	450.00
2-0 Turbine Meter	14,254.00	450.00
Larger than 2-inch separately determined based on estimated individual water use.		
<b>Wastewater Trunkline:</b>		
Single-family (per dwelling unit)	\$285.00	\$155.00
Multi-family (per dwelling unit)	167.00	71.00
5/8 x 3/4 Disc Meter	285.00	155.00
3/4 Disc Meter	427.00	233.00
1-0 Disc Meter	711.00	388.00
1 1/2 Disc Meter	1,422.00	776.00
2-0 Disc Meter	2,275.00	1,242.00
3-0 Compound Meter	4,549.00	2,483.00
4-0 Compound Meter	7,107.00	3,880.00
6-0 Compound Meter	14,214.00	7,761.00
8-0 Compound Meter	22,743.00	12,417.00
2-0 Turbine Meter	2,275.00	1,242.00
3-0 Turbine Meter	4,975.00	2,716.00
6-0 Turbine Meter	17,768.00	9,701.00
8-0 Turbine Meter	25,586.00	13,970.00

**City of Chandler  
System Development Charges**

	Current	Proposed
<b>Wastewater Treatment:</b>		
Single-family (per dwelling unit)	\$2,281.00	\$4,908.00
Multi-family (per dwelling unit)	1,343.00	2,246.00
5/8 x 3/4 Disc Meter	2,281.00	4,908.00
3/4 Disc Meter	3,420.00	7,361.00
1-0 Disc Meter	5,701.00	12,269.00
1 1/2 Disc Meter	11,401.00	24,538.00
2-0 Disc Meter	18,241.00	39,260.00
3-0 Compound Meter	36,482.00	78,521.00
4-0 Compound Meter	57,002.00	122,689.00
6-0 Compound Meter	114,004.00	245,377.00
8-0 Compound Meter	182,406.00	392,603.00
2-0 Turbine Meter	18,241.00	39,260.00
3-0 Turbine Meter	39,902.00	85,882.00
6-0 Turbine Meter	142,505.00	306,721.00
8-0 Turbine Meter	205,206.00	441,679.00
<b>Reclaimed Water:</b>		
Single-family (per dwelling unit)	\$1,336.00	\$1,037.00
Multi-family (per dwelling unit)	787.00	475.00
5/8 x 3/4 Disc Meter	1,336.00	1,037.00
3/4 Disc Meter	2,005.00	1,556.00
1-0 Disc Meter	3,341.00	2,593.00
1 1/2 Disc Meter	6,680.00	5,186.00
2-0 Disc Meter	10,688.00	8,298.00
3-0 Compound Meter	21,375.00	16,596.00
4-0 Compound Meter	33,398.00	25,931.00
6-0 Compound Meter	66,796.00	51,862.00
8-0 Compound Meter	106,873.00	82,979.00
2-0 Turbine Meter	10,688.00	8,298.00
3-0 Turbine Meter	23,379.00	18,152.00
6-0 Turbine Meter	83,495.00	64,827.00
8-0 Turbine Meter	120,232.00	93,352.00
<b>Total Utility SDC</b>		
Single-family (per dwelling unit)	\$8,606.00	\$10,804.00
Multi-family (per dwelling unit)	4,702.00	4,509.00
5/8 x 3/4 Disc Meter	8,812.00	10,812.00
3/4 Disc Meter	13,246.00	16,220.00
1-0 Disc Meter	21,971.00	27,033.00
1 1/2 Disc Meter	45,552.00	54,098.00
2-0 Disc Meter	73,593.00	86,637.00
2-0 Turbine Meter	77,130.00	86,637.00
Larger than 2-inch seperately determined based on estimated individual water use.		



**City of Chandler**  
2007 Utility SDC Update

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**Appendix B:**  
**Water and Wastewater SDC Cashflows**



**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

WATER SDC FUND	CURRENT	<i>Projected</i>					
	YEAR FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Water System SDC	\$3,959	\$4,673	\$4,743	\$4,814	\$4,886	\$4,959	\$5,033
Water Resource SDC	745	31	31	31	31	31	31
Combined SDC Per ERU	<b>\$4,704</b>	<b>\$4,704</b>	<b>\$4,774</b>	<b>\$4,845</b>	<b>\$4,917</b>	<b>\$4,990</b>	<b>\$5,064</b>
SDC Growth Rate	<b>1.478%</b>	0.00%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	2,905	2,731	1,943	1,943	1,943	1,943
Total							
<b>Beginning of Year Fund Balance:</b>	<b>\$32,445,939</b>	<b>\$26,473,190</b>	<b>\$1,592,144</b>	<b>\$3,714,911</b>	<b>\$409,662</b>	<b>\$37,780,271</b>	<b>\$5,206,171</b>
Fund Revenues							
System Development Charges	9,447,773	13,666,677	13,037,794	9,413,835	9,553,731	9,695,570	9,839,352
Interest Earnings	719,206	661,830	47,764	130,022	16,386	1,700,112	260,309
Bond Proceeds	45,600,000	22,000,000	-	-	42,400,000	-	-
Loan From Operating or Bond Fund	-	-	-	675,000	-	-	-
<b>Total Revenues</b>	<b>55,766,979</b>	<b>36,328,507</b>	<b>13,085,558</b>	<b>10,218,857</b>	<b>51,970,117</b>	<b>11,395,682</b>	<b>10,099,661</b>
Fund Expenditures							
Water Growth - Related Capital	56,552,628	55,798,850	4,558,700	5,747,300	4,469,400	34,052,900	-
Loan Repayment To Operating or Bond Fund	1,336,288	1,336,288	1,336,288	1,336,288	1,381,659	1,381,659	1,381,659
Debt Service Payments	3,850,812	4,074,415	5,067,804	6,440,517	8,748,450	8,535,224	8,429,614
<b>Total Expenditures</b>	<b>61,739,728</b>	<b>61,209,553</b>	<b>10,962,792</b>	<b>13,524,105</b>	<b>14,599,508</b>	<b>43,969,783</b>	<b>9,811,272</b>
Increase/(Decrease) In Fund Balance	(5,972,749)	(24,881,046)	2,122,767	(3,305,249)	37,370,609	(32,574,101)	288,388
<b>End of Year Fund Balance:</b>	<b>\$26,473,190</b>	<b>\$1,592,144</b>	<b>\$3,714,911</b>	<b>\$409,662</b>	<b>\$37,780,271</b>	<b>\$5,206,171</b>	<b>\$5,494,559</b>

**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

		<i>Projected</i>						
<b>WATER SDC FUND</b>		FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Water System SDC		\$5,108	\$5,184	\$5,261	\$5,339	\$5,418	\$5,499	\$5,581
Water Resource SDC		31	31	31	31	31	31	31
<b>Combined SDC Per ERU</b>		<b>\$5,139</b>	<b>\$5,215</b>	<b>\$5,292</b>	<b>\$5,370</b>	<b>\$5,449</b>	<b>\$5,530</b>	<b>\$5,612</b>
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	1,943	1,171	1,171	1,171	1,171	1,172	1,066
	Total							
<b>Beginning of Year Fund Balance:</b>		<b>\$5,494,559</b>	<b>\$5,570,383</b>	<b>\$2,012,946</b>	<b>\$528,959</b>	<b>\$463,469</b>	<b>\$515,474</b>	<b>\$502,310</b>
<b>Fund Revenues</b>								
System Development Charges		9,985,077	6,106,765	6,196,932	6,288,270	6,380,779	6,481,160	5,982,392
Interest Earnings		274,728	278,519	100,647	26,448	23,173	25,774	25,116
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	-	2,300,000	3,656,000	3,915,000	3,990,000	6,355,000
<b>Total Revenues</b>		<b>10,259,805</b>	<b>6,385,284</b>	<b>8,597,579</b>	<b>9,970,718</b>	<b>10,318,952</b>	<b>10,496,934</b>	<b>12,362,508</b>
<b>Fund Expenditures</b>								
Water Growth - Related Capital		236,097	-	-	-	-	-	1,525,121
Loan Repayment To Operating or Bond Fund		1,381,659	1,381,659	1,381,659	1,536,255	1,781,995	2,045,145	2,313,336
Debt Service Payments		8,566,225	8,561,063	8,699,908	8,499,953	8,484,953	8,464,953	8,464,953
<b>Total Expenditures</b>		<b>10,183,980</b>	<b>9,942,722</b>	<b>10,081,567</b>	<b>10,036,207</b>	<b>10,266,948</b>	<b>10,510,097</b>	<b>12,303,409</b>
Increase/(Decrease) In Fund Balance		75,824	(3,557,437)	(1,483,987)	(65,489)	52,005	(13,164)	59,099
<b>End of Year Fund Balance:</b>		<b>\$5,570,383</b>	<b>\$2,012,946</b>	<b>\$528,959</b>	<b>\$463,469</b>	<b>\$515,474</b>	<b>\$502,310</b>	<b>\$561,409</b>

CITY OF CHANDLER, ARIZONA  
WATER SDC FUND

FILE: 07 Fin Plan  
SCHEDULE: 30 Yr SDC Cash  
DATE: 02/18/08  
RANGE: W30YR

		<i>Projected</i>						
<b>WATER SDC FUND</b>		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Water System SDC		\$5,664	\$5,748	\$5,833	\$5,920	\$6,008	\$6,097	\$6,188
Water Resource SDC		31	31	31	31	31	31	31
Combined SDC Per ERU		\$5,695	\$5,779	\$5,864	\$5,951	\$6,039	\$6,128	\$6,219
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	1,066	1,066	1,066	1,067	891	891	891
Total								
<b>Beginning of Year Fund Balance:</b>		\$561,409	\$671,155	\$674,539	\$717,013	\$777,864	\$854,870	\$930,608
<b>Fund Revenues</b>								
System Development Charges		6,070,870	6,160,414	6,251,024	6,349,717	5,380,749	5,460,048	5,541,129
Interest Earnings		28,070	33,558	33,727	35,851	38,893	42,744	46,530
Bond Proceeds		-	3,000,000	-	-	2,500,000	-	-
Loan From Operating or Bond Fund		5,185,000	4,000,000	5,740,000	7,785,000	3,590,000	5,185,000	3,620,000
<b>Total Revenues</b>		<b>11,283,940</b>	<b>13,193,972</b>	<b>12,024,751</b>	<b>14,170,568</b>	<b>11,509,642</b>	<b>10,687,792</b>	<b>9,207,659</b>
<b>Fund Expenditures</b>								
Water Growth - Related Capital		-	1,627,439	-	1,736,623	-	1,853,131	-
Loan Repayment To Operating or Bond Fund		2,740,491	3,018,284	3,287,147	3,672,965	2,591,332	3,171,976	3,520,490
Debt Service Payments		8,433,703	8,544,865	8,695,130	8,700,130	8,841,303	5,586,946	5,586,946
<b>Total Expenditures</b>		<b>11,174,194</b>	<b>13,190,588</b>	<b>11,982,277</b>	<b>14,109,717</b>	<b>11,432,635</b>	<b>10,612,054</b>	<b>9,107,436</b>
Increase/(Decrease) In Fund Balance		109,747	3,384	42,474	60,850	77,007	75,738	100,223
<b>End of Year Fund Balance:</b>		<b>\$671,155</b>	<b>\$674,539</b>	<b>\$717,013</b>	<b>\$777,864</b>	<b>\$854,870</b>	<b>\$930,608</b>	<b>\$1,030,832</b>

**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

		<i>Projected</i>					
<b>WATER SDC FUND</b>		FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
Water System SDC		\$6,280	\$6,373	\$6,468	\$6,564	\$6,661	\$6,760
Water Resource SDC		31	31	31	31	31	31
Combined SDC Per ERU		\$6,311	\$6,404	\$6,499	\$6,595	\$6,692	\$6,791
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	891	890	891	891	891	891
	Total						
<b>Beginning of Year Fund Balance:</b>		\$1,030,832	\$1,173,644	\$1,172,413	\$1,308,410	\$1,381,610	\$2,841,023
<b>Fund Revenues</b>							
System Development Charges		5,623,101	5,699,560	5,790,609	5,876,145	5,962,572	6,050,781
Interest Earnings		51,542	58,682	58,621	65,421	69,081	142,051
Bond Proceeds		-	-	-	-	-	-
Loan From Operating or Bond Fund		4,850,000	1,990,000	2,170,000	675,000	-	-
<b>Total Revenues</b>		<b>10,524,643</b>	<b>7,748,242</b>	<b>8,019,230</b>	<b>6,616,566</b>	<b>6,031,653</b>	<b>6,192,832</b>
<b>Fund Expenditures</b>							
Water Growth - Related Capital		1,977,456	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		3,518,070	3,844,066	3,977,826	4,078,313	4,123,684	4,123,684
Debt Service Payments		4,886,305	3,905,407	3,905,407	2,465,052	448,556	448,556
<b>Total Expenditures</b>		<b>10,381,830</b>	<b>7,749,473</b>	<b>7,883,232</b>	<b>6,543,365</b>	<b>4,572,240</b>	<b>4,572,240</b>
Increase/(Decrease) In Fund Balance		142,812	(1,231)	135,997	73,200	1,459,413	1,620,592
<b>End of Year Fund Balance:</b>		<b>\$1,173,644</b>	<b>\$1,172,413</b>	<b>\$1,308,410</b>	<b>\$1,381,610</b>	<b>\$2,841,023</b>	<b>\$4,461,616</b>

**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

		<i>Projected</i>						
<b>WATER SDC FUND</b>		FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41
Water System SDC		\$6,860	\$6,962	\$7,065	\$7,170	\$7,276	\$7,384	\$7,494
Water Resource SDC		31	31	31	31	31	31	31
Combined SDC Per ERU		\$6,891	\$6,993	\$7,096	\$7,201	\$7,307	\$7,415	\$7,525
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	891	891	891	891	891	891	-
	Total							
<b>Beginning of Year Fund Balance:</b>		\$4,461,616	\$6,252,338	\$8,223,478	\$10,384,948	\$12,694,944	\$15,168,686	\$18,076,017
Fund Revenues								
System Development Charges		6,139,881	6,230,763	6,322,536	6,416,091	6,510,537	6,606,765	-
Interest Earnings		223,081	312,617	411,174	311,548	380,848	455,061	542,281
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-	-	-	-
<b>Total Revenues</b>		<b>6,362,962</b>	<b>6,543,380</b>	<b>6,733,710</b>	<b>6,727,639</b>	<b>6,891,385</b>	<b>7,061,826</b>	<b>542,281</b>
Fund Expenditures								
Water Growth - Related Capital		-	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		4,123,684	4,123,684	4,123,684	3,969,088	3,969,088	3,705,938	3,437,747
Debt Service Payments		448,556	448,556	448,556	448,556	448,556	448,556	448,556
<b>Total Expenditures</b>		<b>4,572,240</b>	<b>4,572,240</b>	<b>4,572,240</b>	<b>4,417,644</b>	<b>4,417,644</b>	<b>4,154,494</b>	<b>3,886,303</b>
Increase/(Decrease) In Fund Balance		1,790,722	1,971,140	2,161,470	2,309,996	2,473,742	2,907,331	(3,344,023)
<b>End of Year Fund Balance:</b>		<b>\$6,252,338</b>	<b>\$8,223,478</b>	<b>\$10,384,948</b>	<b>\$12,694,944</b>	<b>\$15,168,686</b>	<b>\$18,076,017</b>	<b>\$14,731,994</b>

**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

		<i>Projected</i>						
<b>WATER SDC FUND</b>		FY 2041-42	FY 2042-43	FY 2043-44	FY 2044-45	FY 2045-46	FY 2046-47	FY 2047-48
Water System SDC		\$7,605	\$7,718	\$7,833	\$7,949	\$8,067	\$8,187	\$8,308
Water Resource SDC		31	31	31	31	31	31	31
Combined SDC Per ERU		\$7,636	\$7,749	\$7,864	\$7,980	\$8,098	\$8,218	\$8,339
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	-	-	-	-	-	-	-
Total								
<b>Beginning of Year Fund Balance:</b>		\$14,731,994	\$11,714,806	\$9,057,591	\$6,732,288	\$4,723,043	\$3,380,612	\$2,239,211
<b>Fund Revenues</b>								
System Development Charges		-	-	-	-	-	-	-
Interest Earnings		441,960	351,444	271,728	201,969	141,691	101,418	67,176
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-	-	-	-
<b>Total Revenues</b>		<b>441,960</b>	<b>351,444</b>	<b>271,728</b>	<b>201,969</b>	<b>141,691</b>	<b>101,418</b>	<b>67,176</b>
<b>Fund Expenditures</b>								
Water Growth - Related Capital		-	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		3,010,592	2,662,078	2,393,215	2,007,397	1,484,123	1,242,818	894,305
Debt Service Payments		448,556	346,581	203,816	203,816	-	-	-
<b>Total Expenditures</b>		<b>3,459,148</b>	<b>3,008,659</b>	<b>2,597,031</b>	<b>2,211,213</b>	<b>1,484,123</b>	<b>1,242,818</b>	<b>894,305</b>
Increase/(Decrease) In Fund Balance		(3,017,188)	(2,657,215)	(2,325,304)	(2,009,245)	(1,342,432)	(1,141,400)	(827,129)
<b>End of Year Fund Balance:</b>		<b>\$11,714,806</b>	<b>\$9,057,591</b>	<b>\$6,732,288</b>	<b>\$4,723,043</b>	<b>\$3,380,612</b>	<b>\$2,239,211</b>	<b>\$1,412,083</b>

**CITY OF CHANDLER, ARIZONA  
WATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** W30YR

<i>Projected</i>					
<b>WATER SDC FUND</b>		FY 2048-49	FY 2049-50	FY 2050-51	FY 2051-52
Water System SDC		\$8,431	\$8,556	\$8,683	\$8,812
Water Resource SDC		31	31	31	31
Combined SDC Per ERU		<u>\$8,462</u>	<u>\$8,587</u>	<u>\$8,714</u>	<u>\$8,843</u>
SDC Growth Rate	<b>1.478%</b>	1.478%	1.478%	1.478%	1.478%
Incremental ERU's	39,902	-	-	-	-
Total					
<b>Beginning of Year Fund Balance:</b>		\$1,412,083	\$803,461	\$502,577	\$326,426
<b>Fund Revenues</b>					
System Development Charges		-	-	-	-
Interest Earnings		42,362	24,104	15,077	9,793
Bond Proceeds		-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-
<b>Total Revenues</b>		<u>42,362</u>	<u>24,104</u>	<u>15,077</u>	<u>9,793</u>
<b>Fund Expenditures</b>					
Water Growth - Related Capital		-	-	-	-
Loan Repayment To Operating or Bond Fund		650,984	324,988	191,229	45,371
Debt Service Payments		-	-	-	-
<b>Total Expenditures</b>		<u>650,984</u>	<u>324,988</u>	<u>191,229</u>	<u>45,371</u>
Increase/(Decrease) In Fund Balance		(608,622)	(300,884)	(176,151)	(35,578)
<b>End of Year Fund Balance:</b>		<u>\$803,461</u>	<u>\$502,577</u>	<u>\$326,426</u>	<u>\$290,848</u>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

SEWER SDC FUND	CURRENT YEAR	Projected						
		FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Sewer Treatment SDC		\$2,281	\$4,908	\$5,018	\$5,131	\$5,246	\$5,363	\$5,483
Reclaimed Water SDC		1,336	1,037	1,060	1,083	1,107	1,132	1,157
Sewer Trunkline SDC		285	155	159	163	167	171	175
SDC Per ERU		<b>\$3,902</b>	<b>\$6,100</b>	<b>\$6,237</b>	<b>\$6,377</b>	<b>\$6,520</b>	<b>\$6,666</b>	<b>\$6,815</b>
SDC Growth Rate	<b>2.239%</b>		56.33%	17.00%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166		2,952	2,774	1,967	1,967	1,967	1,967
Total								
<b>Beginning of Year Fund Balance:</b>		\$14,025,347	\$6,667,221	\$11,419,241	\$24,500,551	\$21,403,850	\$11,608,498	\$9,070,228
<b>Fund Revenues</b>								
System Development Charges		7,593,330	18,009,219	17,301,438	12,543,559	12,824,840	13,112,022	13,405,105
Interest Earnings		592,370	166,681	342,577	857,519	856,154	522,382	453,511
Bond Proceeds		-	-	19,000,000	-	80,000,000	-	-
Loan From Operating or Bond Fund		80,000,000	-	-	-	-	-	-
<b>Total Revenues</b>		<b>88,185,700</b>	<b>18,175,900</b>	<b>36,644,015</b>	<b>13,401,078</b>	<b>93,680,994</b>	<b>13,634,404</b>	<b>13,858,616</b>
<b>Fund Expenses</b>								
Sewer Growth - Related Capital		93,652,654	6,272,600	15,727,100	7,800,200	91,948,100	702,456	911,304
Loan Repayment To Operating or Bond Fund		(69,422)	5,307,835	5,307,835	5,307,835	5,307,835	5,307,835	5,307,835
Loan Repayment To Water Operating Fund		650,000	650,000	650,000	650,000	650,000	650,000	-
Loan Repayment To Sewer Operating Fund		600,000	600,000	600,000	600,000	600,000	600,000	600,000
Debt Service Payments		710,594	593,446	1,277,770	2,139,745	4,970,411	8,912,383	8,750,325
<b>Total Expenses</b>		<b>95,543,825</b>	<b>13,423,880</b>	<b>23,562,705</b>	<b>16,497,780</b>	<b>103,476,346</b>	<b>16,172,674</b>	<b>15,569,463</b>
Increase/(Decrease) In Fund Balance		(7,358,126)	4,752,020	13,081,311	(3,096,702)	(9,795,352)	(2,538,270)	(1,710,847)
<b>End of Year Fund Balance:</b>		<b>\$6,667,221</b>	<b>\$11,419,241</b>	<b>\$24,500,551</b>	<b>\$21,403,850</b>	<b>\$11,608,498</b>	<b>\$9,070,228</b>	<b>\$7,359,381</b>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>						
<b>SEWER SDC FUND</b>		FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Sewer Treatment SDC		\$5,606	\$5,732	\$5,861	\$5,992	\$6,126	\$6,263	\$6,403
Reclaimed Water SDC		1,183	1,209	1,236	1,264	1,293	1,322	1,352
Sewer Trunkline SDC		179	183	187	191	195	199	203
SDC Per ERU		<u>\$6,968</u>	<u>\$7,124</u>	<u>\$7,284</u>	<u>\$7,447</u>	<u>\$7,614</u>	<u>\$7,784</u>	<u>\$7,958</u>
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	1,967	1,178	1,178	1,178	1,178	1,178	1,070
	Total							
<b>Beginning of Year Fund Balance:</b>		\$7,359,381	\$5,600,775	\$408,286	\$525,399	\$478,505	\$579,427	\$575,722
<b>Fund Revenues</b>								
System Development Charges		13,706,056	8,392,072	8,580,552	8,772,566	8,969,292	9,169,552	8,515,060
Interest Earnings		367,969	280,039	20,414	26,270	23,925	28,971	28,786
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	650,000	7,140,000	6,020,000	5,950,000	5,440,000	6,500,000
<b>Total Revenues</b>		<u>14,074,025</u>	<u>9,322,111</u>	<u>15,740,966</u>	<u>14,818,836</u>	<u>14,943,217</u>	<u>14,638,523</u>	<u>15,043,846</u>
<b>Fund Expenses</b>								
Sewer Growth - Related Capital		1,099,779	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		5,307,835	5,307,835	5,351,525	5,831,445	6,236,084	6,636,017	7,001,670
Loan Repayment To Water Operating Fund		-	-	-	-	-	-	-
Loan Repayment To Sewer Operating Fund		600,000	600,000	600,000	600,000	600,000	-	-
Debt Service Payments		8,825,017	8,606,765	9,672,329	8,434,285	8,006,211	8,006,211	8,006,211
<b>Total Expenses</b>		<u>15,832,631</u>	<u>14,514,600</u>	<u>15,623,854</u>	<u>14,865,730</u>	<u>14,842,295</u>	<u>14,642,228</u>	<u>15,007,882</u>
Increase/(Decrease) In Fund Balance		(1,758,606)	(5,192,489)	117,113	(46,894)	100,922	(3,705)	35,964
<b>End of Year Fund Balance:</b>		<u>\$5,600,775</u>	<u>\$408,286</u>	<u>\$525,399</u>	<u>\$478,505</u>	<u>\$579,427</u>	<u>\$575,722</u>	<u>\$611,686</u>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>						
<b>SEWER SDC FUND</b>		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
Sewer Treatment SDC		\$6,546	\$6,692	\$6,842	\$6,995	\$7,152	\$7,312	\$7,475
Reclaimed Water SDC		1,382	1,413	1,444	1,476	1,509	1,543	1,578
Sewer Trunkline SDC		208	213	218	223	228	233	238
SDC Per ERU		\$8,136	\$8,318	\$8,504	\$8,694	\$8,889	\$9,088	\$9,291
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	1,070	1,070	1,070	1,071	891	891	891
	Total							
<b>Beginning of Year Fund Balance:</b>		\$611,686	\$753,007	\$845,705	\$657,516	\$668,041	\$780,494	\$446,508
<b>Fund Revenues</b>								
System Development Charges		8,705,520	8,900,260	9,099,280	9,311,274	7,920,099	8,097,408	8,278,281
Interest Earnings		30,584	37,650	42,285	32,876	33,402	39,025	22,325
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		6,850,000	7,060,000	7,050,000	7,520,000	9,550,000	9,600,000	10,300,000
<b>Total Revenues</b>		<b>15,586,104</b>	<b>15,997,910</b>	<b>16,191,565</b>	<b>16,864,150</b>	<b>17,503,501</b>	<b>17,736,433</b>	<b>18,600,606</b>
<b>Fund Expenses</b>								
Sewer Growth - Related Capital		-	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		7,438,573	7,899,000	8,373,543	8,847,414	9,384,836	10,064,208	10,709,479
Loan Repayment To Water Operating Fund		-	-	-	-	-	-	-
Loan Repayment To Sewer Operating Fund		-	-	-	-	-	-	-
Debt Service Payments		8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211
<b>Total Expenses</b>		<b>15,444,784</b>	<b>15,905,212</b>	<b>16,379,754</b>	<b>16,853,625</b>	<b>17,391,047</b>	<b>18,070,419</b>	<b>18,715,690</b>
Increase/(Decrease) In Fund Balance		141,320	92,699	(188,189)	10,525	112,454	(333,987)	(115,084)
<b>End of Year Fund Balance:</b>		<b>\$753,007</b>	<b>\$845,705</b>	<b>\$657,516</b>	<b>\$668,041</b>	<b>\$780,494</b>	<b>\$446,508</b>	<b>\$331,424</b>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>					
<b>SEWER SDC FUND</b>		FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34
Sewer Treatment SDC		\$7,642	\$7,813	\$7,988	\$8,167	\$8,350	\$8,537
Reclaimed Water SDC		1,614	1,651	1,687	1,724	1,762	1,801
Sewer Trunkline SDC		243	248	254	260	266	272
SDC Per ERU		<u>\$9,499</u>	<u>\$9,712</u>	<u>\$9,929</u>	<u>\$10,151</u>	<u>\$10,378</u>	<u>\$10,610</u>
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	891	890	891	891	891	891
	Total						
<b>Beginning of Year Fund Balance:</b>		\$331,424	\$300,849	\$26,158	\$105,516	\$28,404	\$2,139,994
<b>Fund Revenues</b>							
System Development Charges		8,463,609	8,643,680	8,846,739	9,044,541	9,246,798	9,453,510
Interest Earnings		16,571	15,042	1,308	5,276	1,420	107,000
Bond Proceeds		-	-	-	-	-	-
Loan From Operating or Bond Fund		5,520,000	4,850,000	4,475,000	1,700,000	-	-
<b>Total Revenues</b>		<u>14,000,180</u>	<u>13,508,722</u>	<u>13,323,047</u>	<u>10,749,817</u>	<u>9,248,218</u>	<u>9,560,510</u>
<b>Fund Expenses</b>							
Sewer Growth - Related Capital		-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		6,024,544	6,395,575	6,721,571	7,022,361	7,136,628	7,136,628
Loan Repayment To Water Operating Fund		-	-	-	-	-	-
Loan Repayment To Sewer Operating Fund		-	-	-	-	-	-
Debt Service Payments		8,006,211	7,387,839	6,522,117	3,804,569	-	-
<b>Total Expenses</b>		<u>14,030,755</u>	<u>13,783,414</u>	<u>13,243,688</u>	<u>10,826,930</u>	<u>7,136,628</u>	<u>7,136,628</u>
Increase/(Decrease) In Fund Balance		(30,575)	(274,691)	79,359	(77,113)	2,111,590	2,423,882
<b>End of Year Fund Balance:</b>		<u>\$300,849</u>	<u>\$26,158</u>	<u>\$105,516</u>	<u>\$28,404</u>	<u>\$2,139,994</u>	<u>\$4,563,876</u>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>						
<b>SEWER SDC FUND</b>		FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41
Sewer Treatment SDC		\$8,728	\$8,924	\$9,124	\$9,328	\$9,537	\$9,750	\$9,968
Reclaimed Water SDC		1,842	1,883	1,925	1,969	2,013	2,058	2,104
Sewer Trunkline SDC		278	284	290	296	303	310	317
SDC Per ERU		\$10,848	\$11,091	\$11,339	\$11,593	\$11,853	\$12,118	\$12,389
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	891	891	891	891	891	891	-
	Total							
<b>Beginning of Year Fund Balance:</b>		\$4,563,876	\$7,321,010	\$10,432,514	\$13,964,251	\$18,099,524	\$22,995,154	\$28,673,701
<b>Fund Revenues</b>								
System Development Charges		9,665,568	9,882,081	10,103,049	10,329,363	10,561,023	10,797,138	-
Interest Earnings		228,194	366,050	521,626	418,928	542,986	689,855	860,211
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-	-	-	-
<b>Total Revenues</b>		<b>9,893,762</b>	<b>10,248,131</b>	<b>10,624,675</b>	<b>10,748,291</b>	<b>11,104,009</b>	<b>11,486,993</b>	<b>860,211</b>
<b>Fund Expenses</b>								
Sewer Growth - Related Capital		-	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		7,136,628	7,136,628	7,092,938	6,613,017	6,208,379	5,808,445	5,442,792
Loan Repayment To Water Operating Fund		-	-	-	-	-	-	-
Loan Repayment To Sewer Operating Fund		-	-	-	-	-	-	-
Debt Service Payments		-	-	-	-	-	-	-
<b>Total Expenses</b>		<b>7,136,628</b>	<b>7,136,628</b>	<b>7,092,938</b>	<b>6,613,017</b>	<b>6,208,379</b>	<b>5,808,445</b>	<b>5,442,792</b>
Increase/(Decrease) In Fund Balance		2,757,134	3,111,504	3,531,737	4,135,273	4,895,630	5,678,547	(4,582,581)
<b>End of Year Fund Balance:</b>		<b>\$7,321,010</b>	<b>\$10,432,514</b>	<b>\$13,964,251</b>	<b>\$18,099,524</b>	<b>\$22,995,154</b>	<b>\$28,673,701</b>	<b>\$24,091,120</b>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>						
<b>SEWER SDC FUND</b>		FY 2041-42	FY 2042-43	FY 2043-44	FY 2044-45	FY 2045-46	FY 2046-47	FY 2047-48
Sewer Treatment SDC		\$10,191	\$10,420	\$10,653	\$10,891	\$11,135	\$11,384	\$11,639
Reclaimed Water SDC		2,151	2,199	2,249	2,299	2,350	2,403	2,457
Sewer Trunkline SDC		324	331	338	346	354	362	370
SDC Per ERU		\$12,666	\$12,950	\$13,240	\$13,536	\$13,839	\$14,149	\$14,466
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	-	-	-	-	-	-	-
Total								
<b>Beginning of Year Fund Balance:</b>		\$24,091,120	\$19,807,964	\$15,856,741	\$12,261,524	\$9,032,321	\$6,211,704	\$3,948,378
<b>Fund Revenues</b>								
System Development Charges		-	-	-	-	-	-	-
Interest Earnings		722,734	594,239	475,702	367,846	270,970	186,351	118,451
Bond Proceeds		-	-	-	-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-	-	-	-
<b>Total Revenues</b>		<b>722,734</b>	<b>594,239</b>	<b>475,702</b>	<b>367,846</b>	<b>270,970</b>	<b>186,351</b>	<b>118,451</b>
<b>Fund Expenses</b>								
Sewer Growth - Related Capital		-	-	-	-	-	-	-
Loan Repayment To Operating or Bond Fund		5,005,890	4,545,462	4,070,919	3,597,049	3,091,586	2,449,676	1,804,406
Loan Repayment To Water Operating Fund		-	-	-	-	-	-	-
Loan Repayment To Sewer Operating Fund		-	-	-	-	-	-	-
Debt Service Payments		-	-	-	-	-	-	-
<b>Total Expenses</b>		<b>5,005,890</b>	<b>4,545,462</b>	<b>4,070,919</b>	<b>3,597,049</b>	<b>3,091,586</b>	<b>2,449,676</b>	<b>1,804,406</b>
Increase/(Decrease) In Fund Balance		(4,283,156)	(3,951,223)	(3,595,217)	(3,229,203)	(2,820,617)	(2,263,325)	(1,685,954)
<b>End of Year Fund Balance:</b>		<b>\$19,807,964</b>	<b>\$15,856,741</b>	<b>\$12,261,524</b>	<b>\$9,032,321</b>	<b>\$6,211,704</b>	<b>\$3,948,378</b>	<b>\$2,262,424</b>

**CITY OF CHANDLER, ARIZONA  
WASTEWATER SDC FUND**

**FILE:** 07 Fin Plan  
**SCHEDULE:** 30 Yr SDC Cash  
**DATE:** 02/18/08  
**RANGE:** WW30YR

		<i>Projected</i>			
<b>SEWER SDC FUND</b>		FY 2048-49	FY 2049-50	FY 2050-51	FY 2051-52
Sewer Treatment SDC		\$11,900	\$12,166	\$12,439	\$12,717
Reclaimed Water SDC		2,512	2,569	2,626	2,685
Sewer Trunkline SDC		378	386	395	404
SDC Per ERU		\$14,790	\$15,121	\$15,460	\$15,806
SDC Growth Rate	<b>2.239%</b>	2.239%	2.239%	2.239%	2.239%
Incremental ERU's	40,166	-	-	-	-
	Total				
<b>Beginning of Year Fund Balance:</b>		\$2,262,424	\$1,218,213	\$513,706	\$114,060
<b>Fund Revenues</b>					
System Development Charges		-	-	-	-
Interest Earnings		67,873	36,546	15,411	3,422
Bond Proceeds		-	-	-	-
Loan From Operating or Bond Fund		-	-	-	-
<b>Total Revenues</b>		<b>67,873</b>	<b>36,546</b>	<b>15,411</b>	<b>3,422</b>
<b>Fund Expenses</b>					
Sewer Growth - Related Capital		-	-	-	-
Loan Repayment To Operating or Bond Fund		1,112,084	741,053	415,057	114,267
Loan Repayment To Water Operating Fund		-	-	-	-
Loan Repayment To Sewer Operating Fund		-	-	-	-
Debt Service Payments		-	-	-	-
<b>Total Expenses</b>		<b>1,112,084</b>	<b>741,053</b>	<b>415,057</b>	<b>114,267</b>
Increase/(Decrease) In Fund Balance		(1,044,211)	(704,507)	(399,646)	(110,845)
<b>End of Year Fund Balance:</b>		<b>\$1,218,213</b>	<b>\$513,706</b>	<b>\$114,060</b>	<b>\$3,215</b>



**City of Chandler**  
2007 Utility SDC Update

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**Appendix C:**  
**Development Plan**



**CITY OF CHANDLER, ARIZONA  
SDC REVENUES**

**FILE:** 07 Fin Plan  
**SCHEDULE:** SDC REV  
**DATE:** 02/18/08  
**RANGE:** SDCREV

CURRENT YEAR	Projected										
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
<b>Commercial / Industrial ERUs By Meter Size</b>											
5/8"	531	549	566	584	602	619	637	655	672	690	708
3/4"	390	403	416	429	442	455	468	481	494	507	520
1"	2,453	2,534	2,616	2,697	2,779	2,860	2,942	3,023	3,105	3,186	3,268
1 1/2"	4,865	5,027	5,188	5,350	5,512	5,674	5,835	5,997	6,159	6,320	6,482
2"	12,216	12,622	13,028	13,434	13,840	14,246	14,652	15,058	15,464	15,871	16,277
3"	3,584	3,703	3,822	3,941	4,060	4,180	4,299	4,418	4,537	4,656	4,775
4"	750	775	800	825	850	875	900	925	949	974	999
6"	800	827	853	880	906	933	960	986	1,013	1,039	1,066
8"	640	661	683	704	725	746	768	789	810	831	853
10"	575	594	613	632	651	671	690	709	728	747	766
12"	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-Residential ERUs</b>	<b>26,804</b>	<b>27,894</b>	<b>28,585</b>	<b>29,476</b>	<b>30,367</b>	<b>31,258</b>	<b>32,149</b>	<b>33,040</b>	<b>33,931</b>	<b>34,822</b>	<b>35,713</b>
Non-Residential Building Area SF	54,636,560	56,452,688	58,268,816	60,084,943	61,901,071	63,717,199	65,533,327	67,349,455	69,165,583	70,981,710	72,797,838
SF per ERU	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038
Incremental Non-Residential ERUs	28,511	891	891	891	891	891	891	891	891	891	891
Total											
Water SDC per ERU		\$4,704	\$4,774	\$4,845	\$4,917	\$4,990	\$5,064	\$5,139	\$5,215	\$5,292	\$5,370
Water Non-Residential SDC Revenue		\$4,188,912	\$4,253,634	\$4,318,895	\$4,384,147	\$4,449,409	\$4,514,671	\$4,579,932	\$4,645,194	\$4,710,456	\$4,775,718
Wastewater SDC per ERU		\$6,100	\$6,237	\$6,377	\$6,520	\$6,666	\$6,815	\$6,968	\$7,124	\$7,284	\$7,447
Wastewater Non-Residential SDC Revenue		\$5,432,050	\$5,557,167	\$5,681,907	\$5,809,320	\$5,939,406	\$6,072,165	\$6,208,488	\$6,347,484	\$6,490,044	\$6,635,277
<b>Total Incremental ERUs</b>											
<b>Water</b>											
Single Family	9,717	1,719	1,570	897	897	897	897	897	239	239	239
Multi-Family	1,675	296	270	155	155	155	155	155	41	41	41
Non-Residential	28,511	891	891	891	891	891	891	891	891	891	891
<b>Total Water</b>	<b>39,902</b>	<b>2,905</b>	<b>2,731</b>	<b>1,943</b>	<b>1,943</b>	<b>1,943</b>	<b>1,943</b>	<b>1,943</b>	<b>1,171</b>	<b>1,171</b>	<b>1,171</b>
<b>Wastewater</b>											
Single Family	9,717	1,719	1,570	897	897	897	897	897	239	239	239
Multi-Family	1,939	343	313	179	179	179	179	179	48	48	48
Non-Residential	28,511	891	891	891	891	891	891	891	891	891	891
<b>Total Wastewater</b>	<b>40,166</b>	<b>2,952</b>	<b>2,774</b>	<b>1,967</b>	<b>1,967</b>	<b>1,967</b>	<b>1,967</b>	<b>1,967</b>	<b>1,178</b>	<b>1,178</b>	<b>1,178</b>
Water SDC Revenue per SF Unit		\$8,085,381	\$7,495,180	\$4,345,965	\$4,410,549	\$4,476,030	\$4,542,408	\$4,609,683	\$1,246,385	\$1,264,788	\$1,283,430
Water SDC Revenue per MF Unit		\$1,392,384	\$1,288,980	\$750,975	\$762,135	\$773,450	\$784,920	\$796,545	\$213,815	\$216,972	\$220,170
Wastewater SDC Revenue per SF Unit		\$10,484,869	\$9,792,090	\$5,720,169	\$5,848,440	\$5,979,402	\$6,113,055	\$6,250,296	\$1,702,636	\$1,740,876	\$1,779,833
Wastewater SDC Revenue per MF Unit		\$2,092,300	\$1,952,181	\$1,141,483	\$1,167,080	\$1,193,214	\$1,219,885	\$1,247,272	\$341,952	\$349,632	\$357,456
<b>Total SDC Revenue</b>											
Water		\$13,666,677	\$13,037,794	\$9,413,835	\$9,553,731	\$9,695,570	\$9,839,352	\$9,985,077	\$6,106,765	\$6,196,932	\$6,288,270
Wastewater		\$18,009,219	\$17,301,438	\$12,543,559	\$12,824,840	\$13,112,022	\$13,405,105	\$13,706,056	\$8,392,072	\$8,580,552	\$8,772,566

**CITY OF CHANDLER, ARIZONA  
SDC REVENUES**

**FILE:** 07 Fin Plan  
**SCHEDULE:** SDC REV  
**DATE:** 02/28/03  
**RANGE:** SDCREV

	<i>Projected</i>										
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29
<b>Commercial / Industrial ERUs By Meter Size</b>											
5/8"	725	743	760	778	796	813	831	849	866	884	902
3/4"	533	546	559	571	584	597	610	623	636	649	662
1'	3,349	3,431	3,512	3,594	3,675	3,757	3,838	3,920	4,001	4,083	4,164
1 1/2"	6,644	6,806	6,967	7,129	7,291	7,452	7,614	7,776	7,938	8,099	8,261
2'	16,683	17,089	17,495	17,901	18,307	18,713	19,119	19,525	19,931	20,337	20,744
3'	4,894	5,014	5,133	5,252	5,371	5,490	5,609	5,728	5,848	5,967	6,086
4'	1,024	1,049	1,074	1,099	1,124	1,149	1,174	1,199	1,224	1,249	1,274
6"	1,093	1,119	1,146	1,172	1,199	1,225	1,252	1,279	1,305	1,332	1,358
8"	874	895	917	938	959	980	1,002	1,023	1,044	1,065	1,087
10"	785	804	823	843	862	881	900	919	938	957	976
12"	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-Residential ERUs</b>	<b>36,604</b>	<b>37,495</b>	<b>38,386</b>	<b>39,277</b>	<b>40,168</b>	<b>41,059</b>	<b>41,950</b>	<b>42,841</b>	<b>43,732</b>	<b>44,623</b>	<b>45,514</b>
<b>Non-Residential Building Area SF</b>	<b>74,613,966</b>	<b>76,430,094</b>	<b>78,246,222</b>	<b>80,062,349</b>	<b>81,878,477</b>	<b>83,694,605</b>	<b>85,510,733</b>	<b>87,326,861</b>	<b>89,142,988</b>	<b>90,959,116</b>	<b>92,775,244</b>
<b>SF per ERU</b>	<b>2,038</b>										
<b>Incremental Non-Residential ERUs</b>	<b>891</b>										
<b>Water SDC per ERU</b>	<b>\$5,449</b>	<b>\$5,530</b>	<b>\$5,612</b>	<b>\$5,695</b>	<b>\$5,779</b>	<b>\$5,864</b>	<b>\$5,951</b>	<b>\$6,039</b>	<b>\$6,128</b>	<b>\$6,219</b>	<b>\$6,311</b>
<b>Water Non-Residential SDC Revenue</b>	<b>\$4,855,059</b>	<b>\$4,927,230</b>	<b>\$5,000,292</b>	<b>\$5,074,245</b>	<b>\$5,149,089</b>	<b>\$5,224,824</b>	<b>\$5,302,341</b>	<b>\$5,380,749</b>	<b>\$5,460,048</b>	<b>\$5,541,129</b>	<b>\$5,623,101</b>
<b>Wastewater SDC per ERU</b>	<b>\$7,614</b>	<b>\$7,784</b>	<b>\$7,958</b>	<b>\$8,136</b>	<b>\$8,318</b>	<b>\$8,504</b>	<b>\$8,694</b>	<b>\$8,889</b>	<b>\$9,088</b>	<b>\$9,291</b>	<b>\$9,499</b>
<b>Wastewater Non-Residential SDC Revenue</b>	<b>\$6,784,074</b>	<b>\$6,935,544</b>	<b>\$7,090,578</b>	<b>\$7,249,176</b>	<b>\$7,411,338</b>	<b>\$7,577,064</b>	<b>\$7,746,354</b>	<b>\$7,920,099</b>	<b>\$8,097,408</b>	<b>\$8,278,281</b>	<b>\$8,463,609</b>
<b>Total Incremental ERUs</b>											
<b>Water</b>											
Single Family	239	240	149	149	149	149	151	0	0	0	0
Multi-Family	41	41	26	26	26	26	25	0	0	0	0
Non-Residential	891	891	891	891	891	891	891	891	891	891	891
<b>Total Water</b>	<b>1,171</b>	<b>1,172</b>	<b>1,066</b>	<b>1,066</b>	<b>1,066</b>	<b>1,066</b>	<b>1,067</b>	<b>891</b>	<b>891</b>	<b>891</b>	<b>891</b>
<b>Wastewater</b>											
Single Family	239	240	149	149	149	149	151	0	0	0	0
Multi-Family	48	47	30	30	30	30	29	-	-	-	-
Non-Residential	891	891	891	891	891	891	891	891	891	891	891
<b>Total Wastewater</b>	<b>1,178</b>	<b>1,178</b>	<b>1,070</b>	<b>1,070</b>	<b>1,070</b>	<b>1,070</b>	<b>1,071</b>	<b>891</b>	<b>891</b>	<b>891</b>	<b>891</b>
<b>Water SDC Revenue per SF Unit</b>	<b>\$1,302,311</b>	<b>\$1,327,200</b>	<b>\$836,188</b>	<b>\$848,555</b>	<b>\$861,071</b>	<b>\$873,736</b>	<b>\$898,601</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Water SDC Revenue per MF Unit</b>	<b>\$223,409</b>	<b>\$226,730</b>	<b>\$145,912</b>	<b>\$148,070</b>	<b>\$150,254</b>	<b>\$152,464</b>	<b>\$148,775</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Wastewater SDC Revenue per SF Unit</b>	<b>\$1,819,746</b>	<b>\$1,868,160</b>	<b>\$1,185,742</b>	<b>\$1,212,264</b>	<b>\$1,239,382</b>	<b>\$1,267,096</b>	<b>\$1,312,794</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Wastewater SDC Revenue per MF Unit</b>	<b>\$365,472</b>	<b>\$365,848</b>	<b>\$238,740</b>	<b>\$244,080</b>	<b>\$249,540</b>	<b>\$255,120</b>	<b>\$252,126</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total SDC Revenue</b>											
<b>Water</b>	<b>\$6,380,779</b>	<b>\$6,481,160</b>	<b>\$5,982,392</b>	<b>\$6,070,870</b>	<b>\$6,160,414</b>	<b>\$6,251,024</b>	<b>\$6,349,717</b>	<b>\$5,380,749</b>	<b>\$5,460,048</b>	<b>\$5,541,129</b>	<b>\$5,623,101</b>
<b>Wastewater</b>	<b>\$8,989,292</b>	<b>\$9,169,552</b>	<b>\$8,515,080</b>	<b>\$8,705,520</b>	<b>\$8,900,260</b>	<b>\$9,099,280</b>	<b>\$9,311,274</b>	<b>\$7,920,099</b>	<b>\$8,097,408</b>	<b>\$8,278,281</b>	<b>\$8,463,609</b>

CITY OF CHANDLER, ARIZONA  
SDC REVENUES

FILE: 07 Fin Plan  
SCHEDULE: SDC REV  
DATE: 02/28/03  
RANGE: SDCREV

	Projected										
	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40
Commercial / Industrial											
<b>ERUs By Meter Size</b>											
5/8"	919	937	955	972	990	1,008	1,025	1,043	1,061	1,078	1,096
3/4"	675	688	701	714	727	740	753	766	779	792	805
1"	4,246	4,327	4,409	4,491	4,572	4,654	4,735	4,817	4,898	4,980	5,061
1 1/2"	8,423	8,584	8,746	8,908	9,069	9,231	9,393	9,555	9,716	9,878	10,040
2"	21,149	21,555	21,961	22,367	22,773	23,180	23,586	23,992	24,398	24,804	25,210
3"	6,205	6,324	6,443	6,562	6,681	6,801	6,920	7,039	7,158	7,277	7,396
4"	1,298	1,323	1,348	1,373	1,398	1,423	1,448	1,473	1,498	1,523	1,548
6"	1,385	1,412	1,438	1,465	1,491	1,518	1,545	1,571	1,598	1,624	1,651
8"	1,108	1,129	1,151	1,172	1,193	1,214	1,236	1,257	1,278	1,299	1,321
10"	995	1,015	1,034	1,053	1,072	1,091	1,110	1,129	1,148	1,168	1,187
12"	-	-	-	-	-	-	-	-	-	-	-
<b>Total Non-Residential ERUs</b>	<b>46,404</b>	<b>47,295</b>	<b>48,186</b>	<b>49,077</b>	<b>49,968</b>	<b>50,859</b>	<b>51,750</b>	<b>52,641</b>	<b>53,532</b>	<b>54,423</b>	<b>55,314</b>
Non-Residential Building Area SF	94,591,372	96,407,500	98,223,628	100,039,755	101,855,883	103,672,011	105,488,139	107,304,267	109,120,394	110,936,522	112,752,650
SF per ERU	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038	2,038
Incremental Non-Residential ERUs	890	891	891	891	891	891	891	891	891	891	891
Water SDC per ERU	\$8,404	\$6,499	\$6,595	\$6,692	\$6,791	\$6,891	\$6,993	\$7,096	\$7,201	\$7,307	\$7,415
<b>Water Non-Residential SDC Revenue</b>	<b>\$5,699,560</b>	<b>\$5,790,609</b>	<b>\$5,876,145</b>	<b>\$5,962,572</b>	<b>\$6,050,781</b>	<b>\$6,139,881</b>	<b>\$6,230,763</b>	<b>\$6,322,536</b>	<b>\$6,416,091</b>	<b>\$6,510,537</b>	<b>\$6,606,765</b>
Wastewater SDC per ERU	\$9,712	\$9,929	\$10,151	\$10,378	\$10,610	\$10,848	\$11,091	\$11,339	\$11,593	\$11,853	\$12,118
<b>Wastewater Non-Residential SDC Revenue</b>	<b>\$8,643,680</b>	<b>\$8,846,739</b>	<b>\$9,044,541</b>	<b>\$9,246,798</b>	<b>\$9,453,510</b>	<b>\$9,665,568</b>	<b>\$9,882,081</b>	<b>\$10,103,049</b>	<b>\$10,329,363</b>	<b>\$10,561,023</b>	<b>\$10,797,138</b>
<b>Total Incremental ERUs</b>											
Water											
Single Family	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0
Non-Residential	890	891	891	891	891	891	891	891	891	891	891
<b>Total Water</b>	<b>890</b>	<b>891</b>	<b>891</b>	<b>891</b>	<b>891</b>						
Wastewater											
Single Family	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	-	-	-	-	-	-	-	-	-	-	-
Non-Residential	890	891	891	891	891	891	891	891	891	891	891
<b>Total Wastewater</b>	<b>890</b>	<b>891</b>	<b>891</b>	<b>891</b>	<b>891</b>						
Water SDC Revenue per SF Unit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water SDC Revenue per MF Unit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wastewater SDC Revenue per SF Unit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Wastewater SDC Revenue per MF Unit	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total SDC Revenue</b>											
Water	\$5,699,560	\$5,790,609	\$5,876,145	\$5,962,572	\$6,050,781	\$6,139,881	\$6,230,763	\$6,322,536	\$6,416,091	\$6,510,537	\$6,606,765
Wastewater	\$8,643,680	\$8,846,739	\$9,044,541	\$9,246,798	\$9,453,510	\$9,665,568	\$9,882,081	\$10,103,049	\$10,329,363	\$10,561,023	\$10,797,138



**City of Chandler**  
2007 Utility SDC Update

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**Appendix D:**  
**Survey**



**SDC Survey**  
**Single Family Residential 3/4" meter**

Jurisdiction	Water		Sewer	Total
	Water	Resource		
Gilbert	\$4,319	\$895	\$4,914	\$10,128
Goodyear	3,470	2,426	3,977	9,873
Glendale	6,660	0	2,330	8,990
Surprise (1)	3,895	796	3,039	7,730
Peoria	3,533	621	1,923	6,077
Queen Creek (2)	0	0	4,885	4,885
Mesa	2,220	0	2,659	4,879
Scottsdale (3)	1,727	442	2,639	4,808
Phoenix (4)	600	633	600	1,833
<i>Average - w/o Chandler</i>	\$2,936	\$646	\$2,996	\$6,578
<b>Chandler - Proposed (5)</b>	<b>\$4,673</b>	<b>\$31</b>	<b>\$6,100</b>	<b>\$10,804</b>
<b>Chandler - Current (5)</b>	<b>\$3,959</b>	<b>\$745</b>	<b>\$3,902</b>	<b>\$8,606</b>

- (1) SPA 2/4/6 fee
- (2) Water Service is provided by private water companies
- (3) Fee is for Northern Zone
- (4) Off-project areas North of Jomax Rd
- (5) Standard single family meter size is 1-inch

**SDC Survey  
Multi-Family Residential**

Jurisdiction	Water	Water Resource	Sewer	Total
Goodyear (1)	\$3,470	\$2,426	\$3,977	\$9,873
Glendale (2)	6,660	0	2,330	8,990
Surprise (3)	3,895	796	3,039	7,730
Peoria (4)	3,533	621	1,923	6,077
Gilbert	1,829	417	2,955	5,201
Scottsdale (5)	2,023	517	2,639	5,180
Queen Creek (6)	0	0	4,885	4,885
Mesa	1,265	0	1,516	2,781
Phoenix (7)	360	633	360	1,353
<i>Average - w/o Chandler</i>	\$2,559	\$601	\$2,625	\$5,786
<b>Chandler - Proposed</b>	<b>\$1,705</b>	<b>\$12</b>	<b>\$2,792</b>	<b>\$4,509</b>
<b>Chandler - Current</b>	<b>\$1,998</b>	<b>\$407</b>	<b>\$2,297</b>	<b>\$4,702</b>

- (1) Assumes 3/4" meter
- (2) Assumes a 3/4" meter, a separate fee for multi-family is not assessed
- (3) SPA 2/4/6 fee assumes 3/4" meter
- (4) Fee for Peoria Northern Zone Fee Assumes a 3/4" meter, a separate fee for multi-family is not assessed
- (5) Fee is for Zones B-E  
Assumes 1,000 square foot residence
- (6) Water Service is provided by private water companies  
Assumes 3/4" meter, a separate fee for multi-family is not assessed
- (7) Off-project areas North of Jomax Rd 5/8" meter

**SDC Survey  
Commercial/Industrial 2" Disc Meter**

<b>Jursidiction</b>	<b>Water</b>	<b>Water Resource</b>	<b>Sewer</b>	<b>Total</b>
Scottsdale (1)	\$32,743	\$8,369	\$98,228	\$139,339
Gilbert	23,035	13,745	26,208	62,988
Goodyear	17,400	12,802	20,562	50,764
Glendale	35,310	0	12,350	47,660
Surprise (2)	20,559	4,202	15,925	40,686
Mesa	17,760	0	21,272	39,032
Peoria (3)	16,809	3,310	9,315	29,434
Queen Creek (4)	0	0	25,507	25,507
Phoenix (5)	4,500	5,064	4,500	14,064
<i>Average - w/o Chandler</i>	\$18,680	\$5,277	\$25,985	\$49,942
<b>Chandler - Proposed</b>	<b>\$37,387</b>	<b>\$450</b>	<b>\$48,800</b>	<b>\$86,637</b>
<b>Chandler - Current</b>	<b>\$31,672</b>	<b>\$10,717</b>	<b>\$31,204</b>	<b>\$73,593</b>

(1) Fee is for zones B-E

Water fee of \$9.82 per gallon of average day use, Water resource fee of \$2.51 per gallon of average day use Sewer fee of \$29.46 per gallon of average day use.

Assumes 1,217,000 gallons per year based on City of Chandler FY 2006-07 2" commercial meter water use

(2) SPA 2/4/6 fee

(3) Fee for Peoria Northern Zone

(4) Water Service is provided by private water companies

(5) Off-project areas North of Jomax Rd



**City of Chandler**  
2007 Utility SDC Update

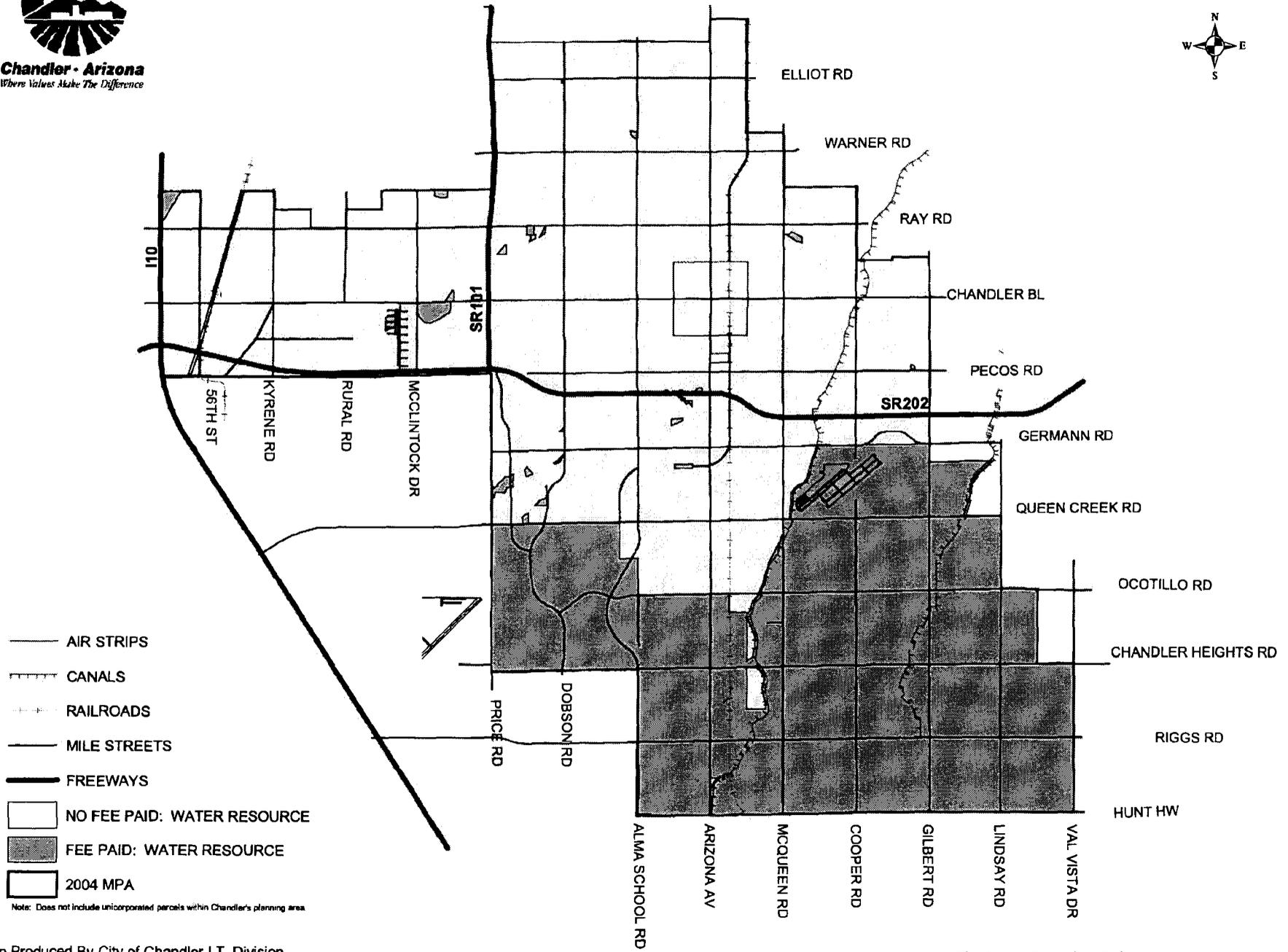
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**Appendix E:**  
**Water Resource SDC Area Map**





# CITY OF CHANDLER WATER RESOURCE IMPACT AREA MAP



Map Produced By City of Chandler I.T. Division  
 Source: GIS Enterprise Database Map Date: 01/2006  
 ../GIS/Maps/WRAM.mxd

The City of Chandler I.T. Division makes no warranties, written or implied, regarding the information on this map.



City of Chandler

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# Infrastructure Improvement Plan

Water  
Wastewater

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Report Prepared By:



100 Fillmore Street, Suite 200  
Denver, CO 80206  
303-316-6500

0627512

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**Infrastructure Improvement Plan**

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**REDAK  
CONSULTING**  
A DIVISION OF MALCOLM PIRNIE

City of Chandler  
Utility SDC Study



**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

	CURRENT	<i>Projected</i>					
	YEAR						
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
<b>WATER BONDS</b>							
Series 1998/2005 - Growth	55,399	30,586	38,077	37,416	49,993	65,272	83,661
2007 G.O. - Water Growth	3,795,414	3,343,188	3,348,188	4,721,563	5,576,563	3,331,563	3,207,563
New Issue - Growth	-	700,641	1,681,539	1,681,539	3,121,894	5,138,390	5,138,390
<b>TOTAL</b>	<b>3,850,812</b>	<b>\$4,074,415</b>	<b>\$5,067,804</b>	<b>\$6,440,517</b>	<b>\$8,748,450</b>	<b>\$8,535,224</b>	<b>\$8,429,614</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

	<i>Projected</i>						
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
<b>WATER BONDS</b>							
Series 1998/2005 - Growth	92,272	67,110	189,955	-	-	-	-
2007 G.O. - Water Growth	3,335,563	3,355,563	3,371,563	3,361,563	3,346,563	3,326,563	3,326,563
New Issue - Growth	5,138,390	5,138,390	5,138,390	5,138,390	5,138,390	5,138,390	5,138,390
<b>TOTAL</b>	<b>\$8,566,225</b>	<b>\$8,561,063</b>	<b>\$8,699,908</b>	<b>\$8,499,953</b>	<b>\$8,484,953</b>	<b>\$8,464,953</b>	<b>\$8,464,953</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

	<i>Projected</i>						
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
<b>WATER BONDS</b>							
Series 1998/2005 - Growth	-	-	-	-	-	-	-
2007 G.O. - Water Growth	3,295,313	3,304,500	3,312,000	3,317,000	3,373,250	-	-
New Issue - Growth	5,138,390	5,240,365	5,383,130	5,383,130	5,468,053	5,586,946	5,586,946
<b>TOTAL</b>	<b>\$8,433,703</b>	<b>\$8,544,865</b>	<b>\$8,695,130</b>	<b>\$8,700,130</b>	<b>\$8,841,303</b>	<b>\$5,586,946</b>	<b>\$5,586,946</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

	<i>Projected</i>						
	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
<b>WATER BONDS</b>							
Series 1998/2005 - Growth	-	-	-	-	-	-	-
2007 G.O. - Water Growth	-	-	-	-	-	-	-
New Issue - Growth	4,886,305	3,905,407	3,905,407	2,465,052	448,556	448,556	448,556
<b>TOTAL</b>	<b>\$4,886,305</b>	<b>\$3,905,407</b>	<b>\$3,905,407</b>	<b>\$2,465,052</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

	<i>Projected</i>						
	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42
<b>WATER BONDS</b>							
Series 1998/2005 - Growth	-	-	-	-	-	-	-
2007 G.O. - Water Growth	-	-	-	-	-	-	-
New Issue - Growth	448,556	448,556	448,556	448,556	448,556	448,556	448,556
<b>TOTAL</b>	<b>\$448,556</b>						

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT1

<i>Projected</i>			
	FY 2042-43	FY 2043-44	FY 2044-45
<b>WATER BONDS</b>			
Series 1998/2005 - Growth	-	-	-
2007 G.O. - Water Growth	-	-	-
New Issue - Growth	346,581	203,816	203,816
<b>TOTAL</b>	<b>\$346,581</b>	<b>\$203,816</b>	<b>\$203,816</b>

CITY OF CHANDLER, ARIZONA  
 WATER BOND SIZING - GROWTH

FILE: 07 Fin Plan  
 SCHEDULE: DEBT  
 DATE: 2/18/2008  
 RANGE: DEBT3

BOND SIZING	CURRENT YEAR	Projected								
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Amount to be Funded	\$0	\$22,000,000	\$0	\$0	\$42,400,000	\$0	\$0	\$0	\$0	\$0
Issuance Costs	-	352,000	-	-	678,400	-	-	-	-	-
Rounding Amount	-	3,000	-	-	1,600	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>	<b>\$22,355,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,080,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

DEBT SERVICE PAYMENT CALCULATION	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
SERIES:										
FY 2007-08	-	-	-	-	-	-	-	-	-	-
FY 2008-09		700,641	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539
FY 2009-10			-	-	-	-	-	-	-	-
FY 2010-11				-	-	-	-	-	-	-
FY 2011-12					1,440,354	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851
FY 2012-13						-	-	-	-	-
FY 2013-14							-	-	-	-
FY 2014-15								-	-	-
FY 2015-16									-	-
FY 2016-17										-
FY 2017-18										
FY 2018-19										
FY 2019-20										
FY 2020-21										
FY 2021-22										
FY 2022-23										
FY 2023-24										
FY 2024-25										
FY 2025-26										
FY 2026-27										
FY 2027-28										
FY 2028-29										
FY 2029-30										
FY 2030-31										
FY 2031-32										
FY 2032-33										
FY 2033-34										
FY 2034-35										
FY 2035-36										
FY 2036-37										
FY 2037-38										
FY 2038-39										
FY 2039-40										
FY 2040-41										
FY 2041-42										
FY 2042-43										
FY 2043-44										
FY 2044-45										
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$0</b>	<b>\$700,641</b>	<b>\$1,681,539</b>	<b>\$1,681,539</b>	<b>\$3,121,894</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>

**CITY OF CHANDLER, ARIZONA  
WATER BOND SIZING - GROWTH**

FILE: 07 Fin Plan  
SCHEDULE: DEBT  
DATE: 2/18/2008  
RANGE: DEBT3

<i>Projected</i>										
<b>BOND SIZING</b>	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
Amount to be Funded	\$0	\$0	\$0	\$0	\$0	\$3,000,000	\$0	\$0	\$2,500,000	\$0
Issuance Costs	-	-	-	-	-	48,000	-	-	40,000	-
Rounding Amount	-	-	-	-	-	2,000	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,050,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,540,000</b>	<b>\$0</b>

<b>DEBT SERVICE PAYMENT CALCULATION</b>	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
<b>SERIES:</b>										
FY 2007-08	-	-	-	-	-	-	-	-	-	-
FY 2008-09	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539	1,681,539
FY 2009-10	-	-	-	-	-	-	-	-	-	-
FY 2010-11	-	-	-	-	-	-	-	-	-	-
FY 2011-12	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851	3,456,851
FY 2012-13	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-
FY 2016-17	-	-	-	-	-	-	-	-	-	-
FY 2017-18	-	-	-	-	-	-	-	-	-	-
FY 2018-19	-	-	-	-	-	-	-	-	-	-
FY 2019-20	-	-	-	-	-	-	-	-	-	-
FY 2020-21	-	-	-	-	-	-	-	-	-	-
FY 2021-22	-	-	-	-	-	-	-	-	-	-
FY 2022-23	-	-	-	-	-	101,975	244,740	244,740	244,740	244,740
FY 2023-24	-	-	-	-	-	-	-	-	-	-
FY 2024-25	-	-	-	-	-	-	-	-	-	-
FY 2025-26	-	-	-	-	-	-	-	-	84,923	203,816
FY 2026-27	-	-	-	-	-	-	-	-	-	-
FY 2027-28	-	-	-	-	-	-	-	-	-	-
FY 2028-29	-	-	-	-	-	-	-	-	-	-
FY 2029-30	-	-	-	-	-	-	-	-	-	-
FY 2030-31	-	-	-	-	-	-	-	-	-	-
FY 2031-32	-	-	-	-	-	-	-	-	-	-
FY 2032-33	-	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,138,390</b>	<b>\$5,240,365</b>	<b>\$5,383,130</b>	<b>\$5,383,130</b>	<b>\$5,468,053</b>	<b>\$5,586,946</b>

CITY OF CHANDLER, ARIZONA  
 WATER BOND SIZING - GROWTH

FILE: 07 Fin Plan  
 SCHEDULE: DEBT  
 DATE: 1/0/1900  
 RANGE: DEBT3

Projected										
BOND SIZING	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36	FY 2036-37
Amount to be Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Issuance Costs	-	-	-	-	-	-	-	-	-	-
Rounding Amount	-	-	-	-	-	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>									

DEBT SERVICE PAYMENT CALCULATION	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36	FY 2036-37
SERIES:										
FY 2007-08	-	-	-	-	-	-	-	-	-	-
FY 2008-09	1,681,539	980,898	-	-	-	-	-	-	-	-
FY 2009-10	-	-	-	-	-	-	-	-	-	-
FY 2010-11	-	-	-	-	-	-	-	-	-	-
FY 2011-12	3,456,851	3,456,851	3,456,851	3,456,851	2,016,496	-	-	-	-	-
FY 2012-13	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-
FY 2016-17	-	-	-	-	-	-	-	-	-	-
FY 2017-18	-	-	-	-	-	-	-	-	-	-
FY 2018-19	-	-	-	-	-	-	-	-	-	-
FY 2019-20	-	-	-	-	-	-	-	-	-	-
FY 2020-21	-	-	-	-	-	-	-	-	-	-
FY 2021-22	-	-	-	-	-	-	-	-	-	-
FY 2022-23	244,740	244,740	244,740	244,740	244,740	244,740	244,740	244,740	244,740	244,740
FY 2023-24	-	-	-	-	-	-	-	-	-	-
FY 2024-25	-	-	-	-	-	-	-	-	-	-
FY 2025-26	203,816	203,816	203,816	203,816	203,816	203,816	203,816	203,816	203,816	203,816
FY 2026-27	-	-	-	-	-	-	-	-	-	-
FY 2027-28	-	-	-	-	-	-	-	-	-	-
FY 2028-29	-	-	-	-	-	-	-	-	-	-
FY 2029-30	-	-	-	-	-	-	-	-	-	-
FY 2030-31	-	-	-	-	-	-	-	-	-	-
FY 2031-32	-	-	-	-	-	-	-	-	-	-
FY 2032-33	-	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$5,586,946</b>	<b>\$4,886,305</b>	<b>\$3,905,407</b>	<b>\$3,905,407</b>	<b>\$2,465,052</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>

**CITY OF CHANDLER, ARIZONA  
WATER BOND SIZING - GROWTH**

FILE: 07 Fin Plan  
SCHEDULE: DEBT  
DATE: 2/18/2008  
RANGE: DEBT3

<i>Projected</i>								
BOND SIZING	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43	FY 2043-44	FY 2044-45
Amount to be Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Issuance Costs	-	-	-	-	-	-	-	-
Rounding Amount	-	-	-	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>							

DEBT SERVICE PAYMENT CALCULATION	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43	FY 2043-44	FY 2044-45
SERIES:								
FY 2007-08								
FY 2008-09								
FY 2009-10								
FY 2010-11								
FY 2011-12								
FY 2012-13								
FY 2013-14								
FY 2014-15								
FY 2015-16								
FY 2016-17								
FY 2017-18	-							
FY 2018-19	-	-						
FY 2019-20	-	-	-					
FY 2020-21	-	-	-	-				
FY 2021-22	-	-	-	-	-			
FY 2022-23	244,740	244,740	244,740	244,740	244,740	142,765		
FY 2023-24	-	-	-	-	-	-	-	-
FY 2024-25	-	-	-	-	-	-	-	-
FY 2025-26	203,816	203,816	203,816	203,816	203,816	203,816	203,816	203,816
FY 2026-27	-	-	-	-	-	-	-	-
FY 2027-28	-	-	-	-	-	-	-	-
FY 2028-29	-	-	-	-	-	-	-	-
FY 2029-30	-	-	-	-	-	-	-	-
FY 2030-31	-	-	-	-	-	-	-	-
FY 2031-32	-	-	-	-	-	-	-	-
FY 2032-33	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$448,556</b>	<b>\$346,581</b>	<b>\$203,816</b>	<b>\$203,816</b>

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - WATER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN1

CURRENT YEAR	Projected											
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Loan From Operating Subfund	\$0	\$0	\$0	\$675,000	\$0	\$0	\$0	\$0	\$0	\$2,300,000	\$3,656,000	\$3,915,000
Series												
FY 2005-06	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907
FY 2006-07	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)
FY 2007-08	70,721	70,721	70,721	70,721	70,721	70,721	70,721	70,721	70,721	70,721	70,721	70,721
FY 2008-09												
FY 2009-10												
FY 2010-11												
FY 2011-12					45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371
FY 2012-13												
FY 2013-14												
FY 2014-15												
FY 2015-16												
FY 2016-17												
FY 2017-18											154,596	154,596
FY 2018-19												245,741
FY 2019-20												
FY 2020-21												
FY 2021-22												
FY 2022-23												
FY 2023-24												
FY 2024-25												
FY 2025-26												
FY 2026-27												
FY 2027-28												
FY 2028-29												
FY 2029-30												
FY 2030-31												
FY 2031-32												
FY 2032-33												
FY 2033-34												
FY 2034-35												
FY 2035-36												
FY 2036-37												
FY 2037-38												
FY 2038-39												
FY 2039-40												
FY 2040-41												
FY 2041-42												
FY 2042-43												
FY 2043-44												
FY 2044-45												
Total	\$1,336,288	\$1,336,288	\$1,336,288	\$1,336,288	\$1,381,659	\$1,381,659	\$1,381,659	\$1,381,659	\$1,381,659	\$1,381,659	\$1,536,255	\$1,781,995

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - WATER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN1

	<i>Projected</i>											
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Loan From Operating Subfund	\$3,990,000	\$6,355,000	\$5,185,000	\$4,000,000	\$5,740,000	\$7,785,000	\$3,590,000	\$5,185,000	\$3,620,000	\$4,850,000	\$1,990,000	\$2,170,000
Series												
FY 2005-06	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907	1,604,907						
FY 2006-07	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)	(339,340)					
FY 2007-08	70,721	70,721	70,721									
FY 2008-09												
FY 2009-10	-	-	-	-	-	-	-	-	-	-	-	-
FY 2010-11	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371
FY 2011-12	-	-	-	-	-	-	-	-	-	-	-	-
FY 2012-13	-	-	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-	-	-
FY 2016-17	154,596	154,596	154,596	154,596	154,596	154,596	154,596	154,596	154,596	154,596	154,596	154,596
FY 2017-18	245,741	245,741	245,741	245,741	245,741	245,741	245,741	245,741	245,741	-	-	-
FY 2018-19	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149
FY 2019-20		268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191
FY 2020-21			427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156
FY 2021-22				348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513
FY 2022-23					268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863
FY 2023-24						385,818	385,818	385,818	385,818	385,818	385,818	385,818
FY 2024-25							523,274	523,274	523,274	523,274	523,274	523,274
FY 2025-26								241,304	241,304	241,304	241,304	241,304
FY 2026-27									348,513	348,513	348,513	348,513
FY 2027-28										243,321	243,321	243,321
FY 2028-29											325,996	325,996
FY 2029-30												133,759
FY 2030-31												
FY 2031-32												
FY 2032-33												
FY 2033-34												
FY 2034-35												
FY 2035-36												
FY 2036-37												
FY 2037-38												
FY 2038-39												
FY 2039-40												
FY 2040-41												
FY 2041-42												
FY 2042-43												
FY 2043-44												
FY 2044-45												
<b>Total</b>	<b>\$2,045,145</b>	<b>\$2,313,336</b>	<b>\$2,740,491</b>	<b>\$3,018,284</b>	<b>\$3,287,147</b>	<b>\$3,672,965</b>	<b>\$2,591,332</b>	<b>\$3,171,976</b>	<b>\$3,520,490</b>	<b>\$3,518,070</b>	<b>\$3,844,066</b>	<b>\$3,977,826</b>

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - WATER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN1

	Projected											
	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43
Loan From Operating Subfund	\$675,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Series												
FY 2005-06												
FY 2006-07												
FY 2007-08												
FY 2008-09												
FY 2009-10												
FY 2010-11												
FY 2011-12	-	-	-	-	-	-	-	-	-	-	-	-
FY 2012-13	-	-	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-	-	-
FY 2016-17	154,596	154,596	154,596	154,596	154,596	154,596	-	-	-	-	-	-
FY 2017-18	-	-	-	-	-	-	-	-	-	-	-	-
FY 2018-19	263,149	263,149	263,149	263,149	263,149	263,149	263,149	263,149	268,191	268,191	268,191	268,191
FY 2019-20	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191	268,191
FY 2020-21	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156	427,156
FY 2021-22	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513
FY 2022-23	268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863	268,863
FY 2023-24	385,818	385,818	385,818	385,818	385,818	385,818	385,818	385,818	385,818	385,818	385,818	385,818
FY 2024-25	523,274	523,274	523,274	523,274	523,274	523,274	523,274	523,274	523,274	523,274	523,274	523,274
FY 2025-26	241,304	241,304	241,304	241,304	241,304	241,304	241,304	241,304	241,304	241,304	241,304	241,304
FY 2026-27	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513	348,513
FY 2027-28	243,321	243,321	243,321	243,321	243,321	243,321	243,321	243,321	243,321	243,321	243,321	243,321
FY 2028-29	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996
FY 2029-30	133,759	133,759	133,759	133,759	133,759	133,759	133,759	133,759	133,759	133,759	133,759	133,759
FY 2030-31	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858
FY 2031-32	-	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371
FY 2032-33	-	-	-	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$4,078,313	\$4,123,684	\$4,123,684	\$4,123,684	\$4,123,684	\$4,123,684	\$3,969,088	\$3,969,088	\$3,705,938	\$3,437,747	\$3,010,592	\$2,662,078

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - WATER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN1

	<i>Projected</i>								
	FY 2043-44	FY 2044-45	FY 2045-46	FY 2046-47	FY 2047-48	FY 2048-49	FY 2049-50	FY 2050-51	FY 2051-52
Loan From Operating Subfund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Series									
FY 2005-06									
FY 2006-07									
FY 2007-08									
FY 2008-09									
FY 2009-10									
FY 2010-11									
FY 2011-12									
FY 2012-13									
FY 2013-14									
FY 2014-15									
FY 2015-16									
FY 2016-17									
FY 2017-18									
FY 2018-19									
FY 2019-20									
FY 2020-21									
FY 2021-22									
FY 2022-23									
FY 2023-24	385,818								
FY 2024-25	523,274	523,274							
FY 2025-26	241,304	241,304	241,304						
FY 2026-27	348,513	348,513	348,513	348,513					
FY 2027-28	243,321	243,321	243,321	243,321	243,321				
FY 2028-29	325,996	325,996	325,996	325,996	325,996	325,996			
FY 2029-30	133,759	133,759	133,759	133,759	133,759	133,759	133,759		
FY 2030-31	145,858	145,858	145,858	145,858	145,858	145,858	145,858	145,858	
FY 2031-32	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371	45,371
FY 2032-33	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$2,393,215</b>	<b>\$2,007,397</b>	<b>\$1,484,123</b>	<b>\$1,242,818</b>	<b>\$894,305</b>	<b>\$650,984</b>	<b>\$324,988</b>	<b>\$191,229</b>	<b>\$45,371</b>

**CITY OF CHANDLER, ARIZONA**  
**GROWTH CIP – SEWER**  
**Inflated \$**

**FILE:** 07 Fin Plan  
**SCHEDULE:** CIP  
**DATE:** 2/18/2008  
**RANGE:** CIP2

PROJECT DESCRIPTION	FY 2007-08 thru FY 2011-12	FY 2012-13 thru FY 2016-17	FY 2017-18 thru FY 2021-22	FY 2022-23 thru FY 2026-27	FY 2027-28 thru FY 2031-32
WW021 Wastewater Master Plan Update	\$188,100	\$236,097	\$0	\$0	\$0
WW022 Water Reclamation Facility Expansion	169,165,000	-	-	-	-
WW073 Effluent Reuse Master Plan Update	188,100	236,097	-	-	-
WW189 Effluent Reuse - Storage & Recovery Wells	11,284,423	-	-	-	-
WW192 Effluent Reuse - Transmission Mains	13,730,000	-	-	-	-
WW196 Collection System Facility Improvements	3,163,300	1,937,576	-	-	-
WW266 Sewer Assessment & Rehabilitation	-	-	-	-	-
WW332 Replacement Sewer Mains	-	-	-	-	-
WW621 Ocotillo Water Reclamation Facility Rehabilitation	-	-	-	-	-
WWXXX Vactor Truck	-	303,768	-	-	-
WWXXX 2007 Utility SDC Study Update	35,898	-	-	-	-
WW020 Relief Sewer mains Encumbrance/Carry Forward	328,576	-	-	-	-
WW021 Wastewater Master Plan Update Encumbrance	157,800	-	-	-	-
WW022 Water Reclamation Facility Expansion Encumbrance/Carry Forward	4,756,191	-	-	-	-
WW099 System Level Monitor and Flow Metering Encumbrance/Carry Forward	96,892	-	-	-	-
WW196 Collection System Facility Improvements Encumbrance/Carry Forward	674,467	-	-	-	-
WW073 Effluent Reuse Master Plan Update Encumbrance	157,800	-	-	-	-
WW189 Effluent Reuse - Storage & Recovery Wells Encumbrance	209,754	-	-	-	-
WW190 Effluent Reuse - Wetlands Encumbrance	4,323,358	-	-	-	-
WW192 Effluent Reuse - Transmission Mains Encumbrance/Carry Forward	6,940,995	-	-	-	-
<b>Total</b>	<b>\$215,400,654</b>	<b>\$2,713,539</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Green Font Indicates Sewer Treatment  
Orange Font Indicates Reclaimed  
Purple Font Indicates Trunkline

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT2

	CURRENT	<i>Projected</i>					
	YEAR						
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
<b>SEWER BONDS</b>							
Series 1998/2001/2005 - Growth	\$710,594	\$593,446	\$659,398	\$655,651	\$768,768	\$906,172	\$744,114
New Issue - Growth	-	-	618,372	1,484,094	4,201,643	8,006,211	8,006,211
<b>TOTAL</b>	<b>\$710,594</b>	<b>\$593,446</b>	<b>\$1,277,770</b>	<b>\$2,139,745</b>	<b>\$4,970,411</b>	<b>\$8,912,383</b>	<b>\$8,750,325</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT2

	<i>Projected</i>						
	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
<b>SEWER BONDS</b>							
Series 1998/2001/2005 - Growth	\$818,806	\$600,554	\$1,666,117	\$428,074	\$0	\$0	\$0
New Issue - Growth	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211
<b>TOTAL</b>	<b>\$8,825,017</b>	<b>\$8,606,765</b>	<b>\$9,672,329</b>	<b>\$8,434,285</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT2

	<i>Projected</i>						
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28
<b>SEWER BONDS</b>							
Series 1998/2001/2005 - Growth	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Issue - Growth	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211	8,006,211
TOTAL	<u>\$8,006,211</u>						

**CITY OF CHANDLER, ARIZONA  
DEBT SERVICE PAYMENTS**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 02/18/08  
**RANGE:** DEBT2

	<i>Projected</i>						
	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35
<b>SEWER BONDS</b>							
Series 1998/2001/2005 - Growth	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Issue - Growth	8,006,211	7,387,839	6,522,117	3,804,569	-	-	-
<b>TOTAL</b>	<b>\$8,006,211</b>	<b>\$7,387,839</b>	<b>\$6,522,117</b>	<b>\$3,804,569</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**CITY OF CHANDLER, ARIZONA  
SEWER BOND SIZING - GROWTH**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 2/18/2008  
**RANGE:** DEBT4

BOND SIZING	CURRENT YEAR	Projected								
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Amount to be Funded	\$0	\$0	\$19,000,000	\$0	\$80,000,000	\$0	\$0	\$0	\$0	\$0
Other Issuance Costs	-	-	304,000	-	1,280,000	-	-	-	-	-
Rounding Amount	-	-	1,000	-	-	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,305,000</b>	<b>\$0</b>	<b>\$81,280,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

DEBT SERVICE PAYMENT CALCULATION	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
SERIES:										
FY 2007-08	-	-	-	-	-	-	-	-	-	-
FY 2008-09	-	-	-	-	-	-	-	-	-	-
FY 2009-10	-	-	618,372	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094
FY 2010-11	-	-	-	-	-	-	-	-	-	-
FY 2011-12	-	-	-	-	2,717,549	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117
FY 2012-13	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-
FY 2016-17	-	-	-	-	-	-	-	-	-	-
FY 2017-18	-	-	-	-	-	-	-	-	-	-
FY 2018-19	-	-	-	-	-	-	-	-	-	-
FY 2019-20	-	-	-	-	-	-	-	-	-	-
FY 2020-21	-	-	-	-	-	-	-	-	-	-
FY 2021-22	-	-	-	-	-	-	-	-	-	-
FY 2022-23	-	-	-	-	-	-	-	-	-	-
FY 2023-24	-	-	-	-	-	-	-	-	-	-
FY 2024-25	-	-	-	-	-	-	-	-	-	-
FY 2025-26	-	-	-	-	-	-	-	-	-	-
FY 2026-27	-	-	-	-	-	-	-	-	-	-
FY 2027-28	-	-	-	-	-	-	-	-	-	-
FY 2028-29	-	-	-	-	-	-	-	-	-	-
FY 2029-30	-	-	-	-	-	-	-	-	-	-
FY 2030-31	-	-	-	-	-	-	-	-	-	-
FY 2031-32	-	-	-	-	-	-	-	-	-	-
FY 2032-33	-	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$0</b>	<b>\$0</b>	<b>\$618,372</b>	<b>\$1,484,094</b>	<b>\$4,201,643</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>

CITY OF CHANDLER, ARIZONA  
SEWER BOND SIZING - GROWTH

FILE: 07 Fin Plan  
SCHEDULE: DEBT  
DATE: 2/18/2008  
RANGE: DEBT4

<i>Projected</i>										
<b>BOND SIZING</b>	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
Amount to be Funded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Issuance Costs	-	-	-	-	-	-	-	-	-	-
Rounding Amount	-	-	-	-	-	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>									

<b>DEBT SERVICE PAYMENT CALCULATION</b>	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
<b>SERIES:</b>										
FY 2007-08	-	-	-	-	-	-	-	-	-	-
FY 2008-09	-	-	-	-	-	-	-	-	-	-
FY 2009-10	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094	1,484,094
FY 2010-11	-	-	-	-	-	-	-	-	-	-
FY 2011-12	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117	6,522,117
FY 2012-13	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-
FY 2015-16	-	-	-	-	-	-	-	-	-	-
FY 2016-17	-	-	-	-	-	-	-	-	-	-
FY 2017-18	-	-	-	-	-	-	-	-	-	-
FY 2018-19	-	-	-	-	-	-	-	-	-	-
FY 2019-20	-	-	-	-	-	-	-	-	-	-
FY 2020-21	-	-	-	-	-	-	-	-	-	-
FY 2021-22	-	-	-	-	-	-	-	-	-	-
FY 2022-23	-	-	-	-	-	-	-	-	-	-
FY 2023-24	-	-	-	-	-	-	-	-	-	-
FY 2024-25	-	-	-	-	-	-	-	-	-	-
FY 2025-26	-	-	-	-	-	-	-	-	-	-
FY 2026-27	-	-	-	-	-	-	-	-	-	-
FY 2027-28	-	-	-	-	-	-	-	-	-	-
FY 2028-29	-	-	-	-	-	-	-	-	-	-
FY 2029-30	-	-	-	-	-	-	-	-	-	-
FY 2030-31	-	-	-	-	-	-	-	-	-	-
FY 2031-32	-	-	-	-	-	-	-	-	-	-
FY 2032-33	-	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$8,006,211</b>									

**CITY OF CHANDLER, ARIZONA  
SEWER BOND SIZING - GROWTH**

**FILE:** 07 Fin Plan  
**SCHEDULE:** DEBT  
**DATE:** 1/0/1900  
**RANGE:** DEBT4

<i>Projected</i>					
<b>BOND SIZING</b>	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32
Amount to be Funded	\$0	\$0	\$0	\$0	\$0
Other Issuance Costs	-	-	-	-	-
Rounding Amount	-	-	-	-	-
<b>Total Bond Size</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>DEBT SERVICE PAYMENT CALCULATION</b>	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32
<b>SERIES:</b>					
FY 2007-08	-	-	-	-	-
FY 2008-09	-	-	-	-	-
FY 2009-10	1,484,094	1,484,094	865,721	-	-
FY 2010-11	-	-	-	-	-
FY 2011-12	6,522,117	6,522,117	6,522,117	6,522,117	3,804,569
FY 2012-13	-	-	-	-	-
FY 2013-14	-	-	-	-	-
FY 2014-15	-	-	-	-	-
FY 2015-16	-	-	-	-	-
FY 2016-17	-	-	-	-	-
FY 2017-18	-	-	-	-	-
FY 2018-19	-	-	-	-	-
FY 2019-20	-	-	-	-	-
FY 2020-21	-	-	-	-	-
FY 2021-22	-	-	-	-	-
FY 2022-23	-	-	-	-	-
FY 2023-24	-	-	-	-	-
FY 2024-25	-	-	-	-	-
FY 2025-26	-	-	-	-	-
FY 2026-27	-	-	-	-	-
FY 2027-28	-	-	-	-	-
FY 2028-29	-	-	-	-	-
FY 2029-30	-	-	-	-	-
FY 2030-31	-	-	-	-	-
FY 2031-32	-	-	-	-	-
FY 2032-33	-	-	-	-	-
FY 2033-34	-	-	-	-	-
FY 2034-35	-	-	-	-	-
FY 2035-36	-	-	-	-	-
FY 2036-37	-	-	-	-	-
FY 2037-38	-	-	-	-	-
FY 2038-39	-	-	-	-	-
FY 2039-40	-	-	-	-	-
FY 2040-41	-	-	-	-	-
FY 2041-42	-	-	-	-	-
FY 2042-43	-	-	-	-	-
FY 2043-44	-	-	-	-	-
FY 2044-45	-	-	-	-	-
<b>TOTAL PROPOSED DEBT SERVICE</b>	<b>\$8,006,211</b>	<b>\$8,006,211</b>	<b>\$7,387,839</b>	<b>\$6,522,117</b>	<b>\$3,804,569</b>

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - SEWER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN2

CURRENT YEAR	Projected											
	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Loan From Operating or Bond Subfund	\$80,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$650,000	\$7,140,000	\$6,020,000	\$5,950,000
Series												
FY 2005-06	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)
FY 2006-07	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)
FY 2007-08		5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257
FY 2008-09												
FY 2009-10												
FY 2010-11												
FY 2011-12												
FY 2012-13												
FY 2013-14												
FY 2014-15												
FY 2015-16												
FY 2016-17									43,690	43,690	43,690	43,690
FY 2017-18										479,920	479,920	479,920
FY 2018-19												404,639
FY 2019-20												
FY 2020-21												
FY 2021-22												
FY 2022-23												
FY 2023-24												
FY 2024-25												
FY 2025-26												
FY 2026-27												
FY 2027-28												
FY 2028-29												
FY 2029-30												
FY 2030-31												
FY 2031-32												
FY 2032-33												
FY 2033-34												
FY 2034-35												
FY 2035-36												
FY 2036-37												
FY 2037-38												
FY 2038-39												
FY 2039-40												
FY 2040-41												
FY 2041-42												
FY 2042-43												
FY 2043-44												
FY 2044-45												
Total	(\$69,422)	\$5,307,835	\$5,307,835	\$5,307,835	\$5,307,835	\$5,307,835	\$5,307,835	\$5,307,835	\$5,307,835	\$5,351,525	\$5,831,445	\$6,236,084

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - SEWER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN2

	Projected											
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
Loan From Operating or Bond Subfund	\$5,440,000	\$6,500,000	\$6,850,000	\$7,060,000	\$7,050,000	\$7,520,000	\$9,550,000	\$9,600,000	\$10,300,000	\$5,520,000	\$4,850,000	\$4,475,000
Series												
FY 2005-06	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)	(31,960)						
FY 2006-07	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)	(37,462)					
FY 2007-08	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257	5,377,257			
FY 2008-09	-	-	-	-	-	-	-	-	-	-	-	-
FY 2009-10	-	-	-	-	-	-	-	-	-	-	-	-
FY 2010-11	-	-	-	-	-	-	-	-	-	-	-	-
FY 2011-12	-	-	-	-	-	-	-	-	-	-	-	-
FY 2012-13	-	-	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-	-	-
FY 2015-16	43,690	43,690	43,690	43,690	43,690	43,690	43,690	43,690	43,690	43,690	43,690	43,690
FY 2016-17	479,920	479,920	479,920	479,920	479,920	479,920	479,920	479,920	479,920	479,920	479,920	479,920
FY 2017-18	404,639	404,639	404,639	404,639	404,639	404,639	404,639	404,639	404,639	404,639	404,639	404,639
FY 2018-19	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933
FY 2019-20		365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653
FY 2020-21			436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902
FY 2021-22				460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428
FY 2022-23					474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543
FY 2023-24						473,871	473,871	473,871	473,871	473,871	473,871	473,871
FY 2024-25							505,462	505,462	505,462	505,462	505,462	505,462
FY 2025-26								641,910	641,910	641,910	641,910	641,910
FY 2026-27									645,271	645,271	645,271	645,271
FY 2027-28										692,322	692,322	692,322
FY 2028-29											371,031	371,031
FY 2029-30												325,996
FY 2030-31												
FY 2031-32												
FY 2032-33												
FY 2033-34												
FY 2034-35												
FY 2035-36												
FY 2036-37												
FY 2037-38												
FY 2038-39												
FY 2039-40												
FY 2040-41												
FY 2041-42												
FY 2042-43												
FY 2043-44												
FY 2044-45												
Total	\$6,636,017	\$7,001,670	\$7,438,573	\$7,899,000	\$8,373,543	\$8,847,414	\$9,384,836	\$10,064,208	\$10,709,479	\$6,024,544	\$6,395,575	\$6,721,571

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SDC - SEWER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN2

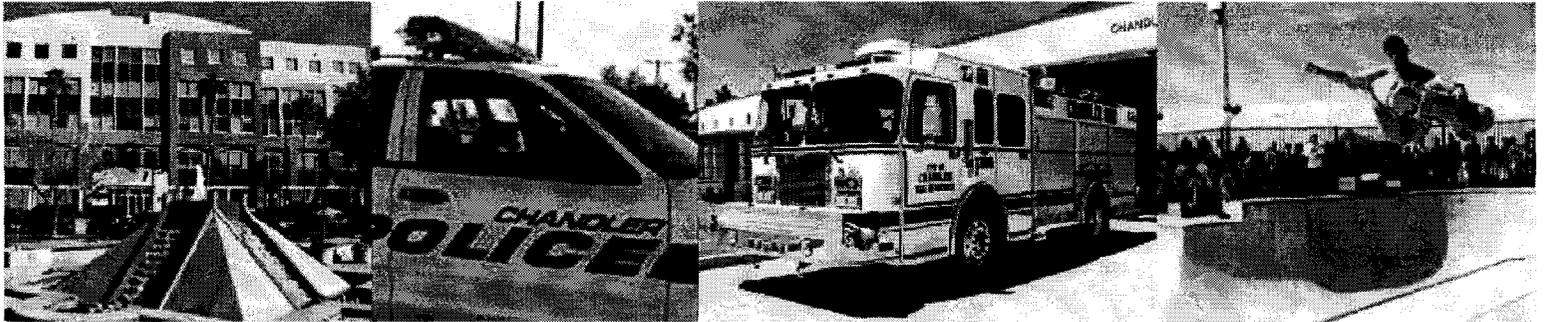
	Projected											
	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36	FY 2036-37	FY 2037-38	FY 2038-39	FY 2039-40	FY 2040-41	FY 2041-42	FY 2042-43
Loan From Operating or Bond Subfund	\$1,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Series												
FY 2005-06												
FY 2006-07												
FY 2007-08												
FY 2008-09												
FY 2009-10												
FY 2010-11												
FY 2011-12	-	-	-	-	-	-	-	-	-	-	-	-
FY 2012-13	-	-	-	-	-	-	-	-	-	-	-	-
FY 2013-14	-	-	-	-	-	-	-	-	-	-	-	-
FY 2014-15	-	-	-	-	-	-	-	-	-	-	-	-
FY 2015-16	43,690	43,690	43,690	43,690	43,690							
FY 2016-17	479,920	479,920	479,920	479,920	479,920	479,920						
FY 2017-18	404,639	404,639	404,639	404,639	404,639	404,639	404,639					
FY 2018-19	399,933	399,933	399,933	399,933	399,933	399,933	399,933	399,933				
FY 2019-20	365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653	365,653			
FY 2020-21	436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902	436,902		
FY 2021-22	460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428	460,428	
FY 2022-23	474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543	474,543
FY 2023-24	473,871	473,871	473,871	473,871	473,871	473,871	473,871	473,871	473,871	473,871	473,871	473,871
FY 2024-25	505,462	505,462	505,462	505,462	505,462	505,462	505,462	505,462	505,462	505,462	505,462	505,462
FY 2025-26	641,910	641,910	641,910	641,910	641,910	641,910	641,910	641,910	641,910	641,910	641,910	641,910
FY 2026-27	645,271	645,271	645,271	645,271	645,271	645,271	645,271	645,271	645,271	645,271	645,271	645,271
FY 2027-28	692,322	692,322	692,322	692,322	692,322	692,322	692,322	692,322	692,322	692,322	692,322	692,322
FY 2028-29	371,031	371,031	371,031	371,031	371,031	371,031	371,031	371,031	371,031	371,031	371,031	371,031
FY 2029-30	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996	325,996
FY 2030-31	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790
FY 2031-32		114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267
FY 2032-33		-	-	-	-	-	-	-	-	-	-	-
FY 2033-34		-	-	-	-	-	-	-	-	-	-	-
FY 2034-35		-	-	-	-	-	-	-	-	-	-	-
FY 2035-36		-	-	-	-	-	-	-	-	-	-	-
FY 2036-37		-	-	-	-	-	-	-	-	-	-	-
FY 2037-38		-	-	-	-	-	-	-	-	-	-	-
FY 2038-39		-	-	-	-	-	-	-	-	-	-	-
FY 2039-40		-	-	-	-	-	-	-	-	-	-	-
FY 2040-41		-	-	-	-	-	-	-	-	-	-	-
FY 2041-42		-	-	-	-	-	-	-	-	-	-	-
FY 2042-43		-	-	-	-	-	-	-	-	-	-	-
FY 2043-44		-	-	-	-	-	-	-	-	-	-	-
FY 2044-45		-	-	-	-	-	-	-	-	-	-	-
Total	\$7,022,361	\$7,136,628	\$7,136,628	\$7,136,628	\$7,136,628	\$7,092,938	\$6,613,017	\$6,208,379	\$5,808,445	\$5,442,792	\$5,005,890	\$4,545,462

CITY OF CHANDLER, ARIZONA  
 INTRAFUND LENDING  
 OPERATING TO SOC - SEWER

FILE: 07 Fin Plan  
 SCHEDULE: INTRAFUND  
 DATE: 2/18/2008  
 RANGE: LOAN2

	Projected								
	FY 2043-44	FY 2044-45	FY 2045-46	FY 2046-47	FY 2047-48	FY 2048-49	FY 2049-50	FY 2050-51	FY 2051-52
Loan From Operating or Bond Subfund	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Series									
FY 2005-06									
FY 2006-07									
FY 2007-08									
FY 2008-09									
FY 2009-10									
FY 2010-11									
FY 2011-12									
FY 2012-13									
FY 2013-14									
FY 2014-15									
FY 2015-16									
FY 2016-17									
FY 2017-18									
FY 2018-19									
FY 2019-20									
FY 2020-21									
FY 2021-22									
FY 2022-23									
FY 2023-24	473,871								
FY 2024-25	505,462	505,462							
FY 2025-26	641,910	641,910	641,910						
FY 2026-27	645,271	645,271	645,271	645,271					
FY 2027-28	692,322	692,322	692,322	692,322	692,322				
FY 2028-29	371,031	371,031	371,031	371,031	371,031	371,031			
FY 2029-30	325,996	325,996	325,996	325,996	325,996	325,996	325,996		
FY 2030-31	300,790	300,790	300,790	300,790	300,790	300,790	300,790	300,790	
FY 2031-32	114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267	114,267
FY 2032-33	-	-	-	-	-	-	-	-	-
FY 2033-34	-	-	-	-	-	-	-	-	-
FY 2034-35	-	-	-	-	-	-	-	-	-
FY 2035-36	-	-	-	-	-	-	-	-	-
FY 2036-37	-	-	-	-	-	-	-	-	-
FY 2037-38	-	-	-	-	-	-	-	-	-
FY 2038-39	-	-	-	-	-	-	-	-	-
FY 2039-40	-	-	-	-	-	-	-	-	-
FY 2040-41	-	-	-	-	-	-	-	-	-
FY 2041-42	-	-	-	-	-	-	-	-	-
FY 2042-43	-	-	-	-	-	-	-	-	-
FY 2043-44	-	-	-	-	-	-	-	-	-
FY 2044-45	-	-	-	-	-	-	-	-	-
Total	\$4,070,919	\$3,597,049	\$3,091,586	\$2,449,676	\$1,804,406	\$1,112,084	\$741,053	\$415,057	\$114,267

# **City of Chandler, Arizona**



## **Non-Utility System Development Fee Update**

**duncan** | associates

*March 2008*

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## **EXECUTIVE SUMMARY**

Impact fees are charges assessed on new development to cover the costs of capital improvements needed to accommodate growth. The City of Chandler calls its impact fees “system development fees.” This report updates the City’s system development fees for arterial streets, fire, police and public buildings. The City’s neighborhood and community park fee have also been updated and combined into one City-wide park system fee. In addition, this update includes the option to re-instate the library system development fee, which was eliminated by the City as part of the 2005 fee update and has not been charged since February 1, 2006.

The purpose of this study is to update Chandler’s non-utility system development fees based on the most appropriate methodology and the most current data. Given that the City’s last fee update was done in-house based on a prior consultant’s methodology, this update provides the opportunity to take a fresh look at the methodology used to calculate the fees. A separate report provides the infrastructure improvements plan for non-utility system development fees required by Arizona State law.

### **Methodology Changes**

Several deviations from the methodology used in the previous study were made to simplify and improve the City’s system development fees. The most significant change was to perform an analysis of the existing level of service to ensure that the fees are not based on a higher level of service than is currently provided to existing development. This change responds to criticism raised during the last update that remaining growth was being charged for more than its proportionate share of the cost of the ultimate system.

This study utilizes a standardized unit of demand for each facility type based on the Equivalent Dwelling Unit, or EDU, for the calculation and assessment of the system development fees. The number of EDUs associated with each individual land use represents the demand that it generates for each capital facility category compared to the demand created by a single-family housing unit.

This study also incorporates recent changes to the State’s impact fee act. In 2007, the Arizona State Legislature passed Senate Bill 1423, which amended State law relating to municipal impact fees. Among other changes, the revised statute requires municipalities to adopt an infrastructure improvements plan, which provides a list and schedule of planned infrastructure that will be funded with the development fee. The infrastructure improvements plan required by State law for each of the City’s non-utility system development fees is provided in a separate document.

### **Potential Impact Fee Summary**

In Table 1 through Table 5, current non-utility system development fees for typical land use types are compared to the potential maximum fees calculated in this report. The total non-utility fee for

single-family units, multi-family units and industrial/warehouse land uses would decline. The retail fee would essentially remain unchanged, while the total fee for offices would increase.

**Table 1. Current and Potential Single-Family Fees**

Facility	Current Fees	Potential Fees	Change
Arterial Streets	\$2,896	\$3,587	\$691
Parks	\$6,658	\$4,708	(\$1,950)
Fire	\$564	\$537	(\$27)
Police	\$241	\$268	\$27
Public Buildings	\$573	\$428	(\$145)
Library	\$0	\$233	\$233
Total, Non-Utility	\$10,932	\$9,761	(\$1,171)

Source: Table 21, Table 38, Table 50, Table 61, Table 70 and Table 79.

**Table 2. Current and Potential Multi-Family Fees**

Facility	Current Fees	Potential Fees	Change
Arterial Streets	\$1,904	\$2,202	\$298
Parks	\$3,831	\$3,606	(\$225)
Fire	\$564	\$411	(\$153)
Police	\$241	\$205	(\$36)
Public Buildings	\$573	\$328	(\$245)
Library	\$0	\$178	\$178
Total, Non-Utility	\$7,113	\$6,930	(\$183)

Source: Table 21, Table 38, Table 50, Table 61, Table 70 and Table 79.

**Table 3. Current and Potential Retail Fees per 1,000 sq. ft.**

Facility	Current Fees	Potential Fees	Change
Arterial Streets	\$13,860	\$13,319	(\$541)
Parks	\$0	\$0	\$0
Fire	\$330	\$672	\$342
Police	\$140	\$335	\$195
Public Buildings	\$330	\$535	\$205
Library	\$0	\$0	\$0
Total, Non-Utility	\$14,660	\$14,861	\$201

Source: Table 21, Table 38, Table 50, Table 61, Table 70 and Table 79.

**Table 4. Current and Potential Office Fees per 1,000 sq. ft.**

Facility	Current Fees	Potential Fees	Change
Arterial Streets	\$4,260	\$5,291	\$1,031
Parks	\$0	\$0	\$0
Fire	\$330	\$511	\$181
Police	\$140	\$255	\$115
Public Buildings	\$330	\$407	\$77
Library	\$0	\$0	\$0
Total, Non-Utility	\$5,060	\$6,464	\$1,404

Source: Table 21, Table 38, Table 50, Table 61, Table 70 and Table 79.

**Table 5. Current and Potential Industrial/Warehouse Fees per 1,000 sq. ft.**

Facility	Current	Potential	Change
	Fees	Fees	
Arterial Streets	\$3,070	\$2,364	(\$706)
Parks	\$0	\$0	\$0
Fire	\$330	\$164	(\$166)
Police	\$140	\$82	(\$58)
Public Buildings	\$330	\$131	(\$199)
Library	\$0	\$0	\$0
<b>Total, Non-Utility</b>	<b>\$3,870</b>	<b>\$2,741</b>	<b>(\$1,129)</b>

Source: Table 21, Table 38, Table 50, Table 61, Table 70 and Table 79.

Compared to revenues that would be collected under current fee schedules, overall system development fee revenues to be collected from now until build-out are expected to decrease for arterial streets, parks, fire and public buildings and increase for police and library fees. The sum of all non-utility system development fee revenue through build-out can be expected to be about 8 percent lower under the updated fees than under current fee schedules.

**Table 6. Current and Updated Revenue Estimates**

Facility	Revenue Estimates to Build-Out			Percent Change
	Current Fees	Updated Fees	Change	
Arterial Streets	\$290,856,660	\$282,368,488	(\$8,488,172)	-3%
Parks	\$88,455,128	\$69,062,528	(\$19,392,600)	-22%
Fire	\$28,410,726	\$25,947,461	(\$2,463,265)	-9%
Police	\$12,081,309	\$12,951,822	\$870,513	7%
Public Buildings	\$28,558,047	\$20,685,650	(\$7,872,397)	-28%
Library	\$0	\$3,414,567	\$3,414,567	NA
<b>Total, Non-Utility</b>	<b>\$448,361,870</b>	<b>\$414,430,516</b>	<b>(\$33,931,354)</b>	<b>-8%</b>

Source: Table 22, Table 39, Table 51, Table 62, Table 71 and Table 80.

## INTRODUCTION

Based on U.S. Census data, Chandler was the 7<sup>th</sup> fastest growing city in the country with a population greater than 100,000 between 1990 and 2000. The City's recent rapid population growth is projected to level off over the next decade as it nears residential build-out within its current borders. As illustrated in Figure 1, the City's population is projected to increase from an estimated 247,800 in 2007 to 286,300 in 2025.

Given Chandler's proximity to build-out, the City's current system development fees are based on a "forward looking" methodology, which essentially divides the remaining cost of planned facilities required to serve growth at build-out by the development anticipated to occur from now until build-out. Under this methodology, system development fees will cease to be collected when the City can no longer identify additional capacity-expanding projects to fund.

This section provides the legal framework for impact fees, general information about impact fee principles and a description of the role of level of service in impact fee analysis. Subsequent sections calculate updated system development fees for arterial streets, parks, fire, police, public buildings and libraries.

## Legal Framework

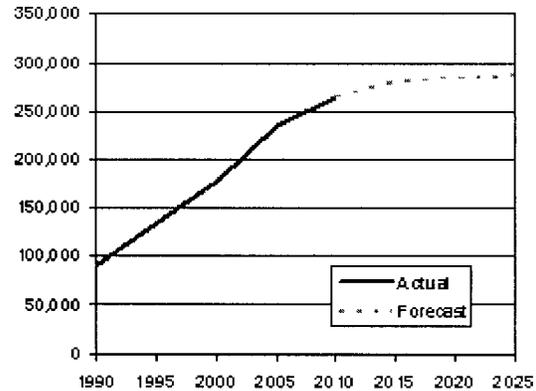
Impact fees are charges that are assessed on new development to help pay for the capital facility costs they impose on the community. Unlike other types of developer exactions, impact fees are based on a standard formula and a pre-determined fee schedule. Essentially, impact fees require that each new residential or commercial project pay its pro-rata share of the cost of new facilities required to serve that development.

### State Law

Arizona is one of 27 states that have adopted specific enabling legislation authorizing the use of impact fees, referred to in State law as "development fees," as a method of financing improvements to public facilities necessitated by the increased demands resulting from new development. The Arizona impact fee enabling act for cities, Section 9-463.05, Arizona Revised Statutes (A.R.S.), provides that:

*A municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings and other personality (A.R.S. 9-463.05.A).*

Figure 1. Population Growth, 1990-2025



While this is a broad grant of authority, the Arizona Supreme Court has ruled that facilities that are not directly provided by a municipality, such as schools, do not represent “costs to the municipality” and therefore are not eligible for impact fees.<sup>1</sup>

To conform to State law, a municipal impact fee must meet the following standards, which are set forth in Section 9-463.05.B:

1. *Development fees shall result in a beneficial use to the development.*
2. *Monies received from the development fees...shall be placed in a separate fund...and may only be used for the purposes authorized by this section....*
3. *The schedule for payment of fees shall be provided by the municipality. The municipality shall provide a credit toward the payment of a development fee for the required dedication of public sites, improvements and other necessary public services included in the infrastructure improvements plan and for which a development fee is assessed to the extent the public sites, improvements and necessary public services are provided by the developer....*
4. *The amount of any development fee...must bear a reasonable relationship to the burden imposed upon the municipality to provide additional necessary public services to the development. The municipality, in determining the extent of the burden imposed by the development, shall consider, among other things, the contribution made or to be made in the future in cash or by taxes, fees or assessments by the property owner towards the capital costs of the necessary public service covered by the development fee.*
5. *If development fees are assessed by a municipality, such fees shall be assessed in a nondiscriminatory manner.*

The State Legislature amended the statute relating to municipal impact fees during the 2007 session (Senate Bill 1423). In addition to expanding and clarifying some of the impact fee requirement standards, the bill amends the public notice periods necessary for the assessment of a new or modified impact fee.

The amended statute also allows municipalities to automatically adjust an impact fee on an annual basis based on a nationally-recognized cost index without a public hearing provided that the municipality provides public notice of the adjustment at least thirty days prior to the effective date. An automatic adjustment may be appropriate in years when the City does not perform a comprehensive update. The State statute does not suggest a mechanism for indexing the impact fee. There are several national indexes that track annual and monthly changes in construction costs. For Chandler, we recommend the use of the Construction Cost Index (CCI) published by the *Engineering News-Record* (ENR), which measures changes in costs related to construction cost components, such as cement, steel, wood and labor costs. Such an index is most appropriate for all of Chandler’s fees since construction accounts for the biggest component of planned system development fee expenditures. The most straight-forward and simplest approach to annual impact fee updates would be to adjust the fees at the end of each year that the fees were not comprehensively updated based on the percent change in the CCI during the preceding 12-month period.

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<sup>1</sup> Homebuilders of Central Arizona, et. al. v. City of Apache Junction, 2000.

The revised statute also requires that “before the assessment of a new or modified fee, the governing body of the municipality shall adopt or amend an infrastructure improvements plan.” The revised statute requires that an infrastructure improvements plan include an estimate of future facilities that will be required as a result of new development, a forecast of the infrastructure costs and a schedule of planned infrastructure construction. The infrastructure improvements plan is included in a separate report that may be adopted concurrently with the impact fee update.

### **Case Law**

The adoption of impact fee legislation in Arizona and its interpretation by the Arizona courts has taken place in the larger context of the national evolution of impact fees. Since impact fees were pioneered in states like Florida that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government’s broad “police power” to protect the health, safety and welfare of the community. The courts have gradually developed guidelines for constitutionally valid impact fees, based on a “rational nexus” that must exist between the regulatory fee or exaction and the development activity that is being regulated. The standards set by court cases generally require that an impact fee meet a two-part test:

- 1) The amount of the fee must be proportional to the need for new facilities created by the new development; and
- 2) The expenditure of impact fee revenues must provide benefit to the fee-paying development.

Of key importance in calculating legally-valid development impact fees in Arizona is the proper interpretation of the clause “must bear a reasonable relationship to the burden imposed upon the municipality to provide additional necessary public services.” The following four principles developed from case law provide guidance for interpreting this clause:

- 1) Fees should not exceed the cost of needed facilities;
- 2) Fees should be proportional to the demand generated by the development;
- 3) Fees should not charge new development for a higher level-of-service; and
- 4) New development should not be charged twice for the same level-of-service.

The first principle was often linked to the second principle in early impact fee cases. For example, the Florida Supreme Court in the 1976 Dunedin case held that water and sewer connection fees charged for the purpose of funding system capacity expansion were permissible if they “do not exceed a pro rata share of reasonable anticipated costs of expansion.”<sup>2</sup>

The second principle sets a somewhat different standard: not only is it necessary not to overcharge new development generally, each particular development must pay no more than its proportionate share of the costs. Impact fees for various types of developments should be proportional to the impact of each development on the need to construct additional or expanded facilities. The fees do

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<sup>2</sup> Contractors and Builders Association of Pinellas County v. City of Dunedin, 1976

not have to recover the full cost, but if the fees are reduced by a percentage from the full cost, the percentage reduction should apply evenly to all types of developments.

The third principle of impact fees is that impact fees should not charge new development for a higher level of service than is provided to existing development. While the impact fees could be based on a higher level of service than the one existing at the time of the adoption or update of the fees, two things are required if this is done. First, another source of funding other than impact fees must be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development.

Finally, under the fourth principle, new development should not have to pay twice for the same level of service. As noted above, if impact fees are based on a higher-than-existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. To avoid requiring new development to pay more than its proportional share, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities.

In general, reductions of impact fees are not required for other types of funding that are used for capacity-expanding improvements. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. Nonetheless, where identifiable, the cost of planned facilities has been reduced to account for other funding sources, such as anticipated Maricopa County Department of Transportation and Regional Transportation Plan funding for arterial streets.

## **Study Methodology**

Given Chandler's proximity to build-out, the "forward looking" methodology utilized to determine the City's system development fees in past updates ensures that fees will cease to be collected when the City can no longer identify capacity-expanding projects to fund. Such an approach is appropriate for a city such as Chandler that has developed infrastructure plans for its major facilities to accommodate growth at an accepted level-of-service standard developed for each facility type. While continuing to use the forward-looking methodology, this update also includes an existing level of service analysis to ensure that the fees do not charge new development for a higher level of service than provided to existing development. The fees are based on the results of the forward-looking method or the existing level of service analysis, whichever is less.

## **Growth-Related Costs**

A minimum standard in any plan-based impact fee calculation is that the improvements used in calculating the fee must expand the capacity of the system to serve additional development. The current methodology includes the cost of improvements that are deemed to be "growth-related." For most facility types, growth-related improvements can be identified based on the nature of the

improvement (e.g., replacing an existing fire station would not be eligible, but building a new fire station would be growth-related).

The identification of growth-related costs is less clear-cut when it comes to one-of-a-kind facilities that the City does not currently provide. Examples include the planned police training facility and city hall. The City has in past updates allocated less than 100 percent of the cost of these planned improvements to growth. Our position is that it is legitimate to include the full cost of these new facilities in the impact fee calculation. The fact that the City does not now provide police training facilities or a municipally-owned city hall (the current one is leased) does not matter, since the City does currently provide other facilities for the respective general category of facilities. The nexus between new development and the provision of such facilities is provided through the inclusion of an existing level of service analysis, which ensures that the fee does not exceed the existing level of service.

The issue is also less clear-cut with respect to existing facilities that have not been fully paid for. Examples include the recoupment of negative fund balances, debt repayment or the purchase of a leased facility. The inclusion of such costs recognizes that the community has already constructed improvements that will serve future growth. If the improvements creating the excess capacity have not been fully paid for, the fees collected from future development can be used to retire the debt on those improvements. Again, the key is to perform an existing level of service analysis to ensure that the fee does not exceed the value of the existing level of service.

### **Service Units**

To make a level of service standard, it is necessary to define a common unit of expression for service demand, known as a “service unit.” This study utilizes Equivalent Dwelling Units (EDUs) to standardize the demand generated by each land use type for the calculation and assessment of the system development fee. The EDU associated with each land use represents the demand that it places on each capital facility category compared to the demand created by a detached single-family housing unit on each category.

The EDU factors for major arterial streets are based on the impact a development has on the street system. As in prior updates, the impact on the arterial street system is based on how many trips are made by a vehicle. However, the trip rates are updated to reflect the most recent published data on peak hour trip generation rates published in the seventh edition of the Institute of Transportation Engineers’ (ITE) *Trip Generation* manual. Prior studies utilized the sixth edition of the ITE *Trip Generation* manual.

The City’s current community and neighborhood park service unit allocation is based on a 1997 park usage survey. This update recommends the use of a service unit that avoids the need to update the park usage survey or make assumptions about park usage. For parks, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. In this update, we recommend using persons per unit as the standard for allocating park costs among residential land uses.

The service unit used in the current methodology for fire, police and public building fees is building floor area, expressed in square feet. The implicit assumption is that a square foot of building generates the same demand for public safety or public buildings regardless of whether it is

residential, commercial, industrial or institutional. The resulting fee schedules, however, had a flat rate for all dwelling units regardless of size or housing type. While this is not necessarily unreasonable, it is arguably more accurate to measure the demand for general government services and public safety functions based on the presence of people. For fire, police and public buildings fees, the recommended EDU factors are based on a concept referred to as “functional population” in the impact fee literature. The functional population approach differentiates between single-family and multi-family based on household size, and between commercial, office, industrial and warehousing uses based on the density of people (functional population per 1,000 square feet).

### **Level of Service**

To determine if impact fees are equitable, it is necessary to determine what level of service is currently being provided by the City for existing residents and businesses. As long as the fees based on the cost of planned improvements are not based on a higher level of service than is currently provided to existing development, the fees are consistent with rational nexus principles.

While various indicators can be used to measure level of service, such as acres of parkland per 1,000 residents, it is possible to address these issues without specifying a level of service standard in terms of an explicit ratio. In reality, the level of service is a set of capital facilities, including land, buildings and equipment that provide service to a given amount of development. Explicit level of service standards inevitably over-simplify this complex relationship by emphasizing one element of the capital facilities, such as acres of land for parks or square feet of library buildings (or, in some cases a characteristic that is not directly related to capital facilities, such as officers for law enforcement). The preferred approach is to measure the existing level of service in terms of the replacement cost of existing facilities per existing service unit.

In this study, the cost per service unit will be calculated in two ways. First, the cost of remaining planned improvements will be divided by remaining service units to determine the plan-based cost per service unit. Second, the replacement cost of existing facilities will be divided by existing service units to determine the existing cost per service unit. The updated system development fees will be based on whichever cost per service unit is lower.

### **Developer Credits**

As discussed in the Legal Framework section, impact fee case law requires that developers be given credit against impact fees otherwise due for in-kind contributions toward the same types of facilities covered by the fees. The City of Chandler provides credits that can be used to reduce the fees that would otherwise be owed within the development for which a dedication or improvement was made. For non-utility fees, the City has historically only provided credit to developers for arterial street improvements.

Chandler provides credit to developers for the dedication or construction of capital facilities or participation in an improvement district provided that the contribution meets capital improvement needs for which the particular development fee has been imposed. The City provides a credit based on the value of the developer contribution, which reduces the system development fee liability for the new units within a given development.

According to the City's ordinance, in order to be eligible for credit a developer must submit a credit application to the City Engineer prior to the Final Plat approval. The credit value is determined by the City Engineer and fixed at the value of fees in place at the time when the development's first permit is issued. The developer credits are allocated within a development based on the land use associated with the development. The credits run with the land and are applied to whoever pulls the permits within the development. Credits are non-transferable.

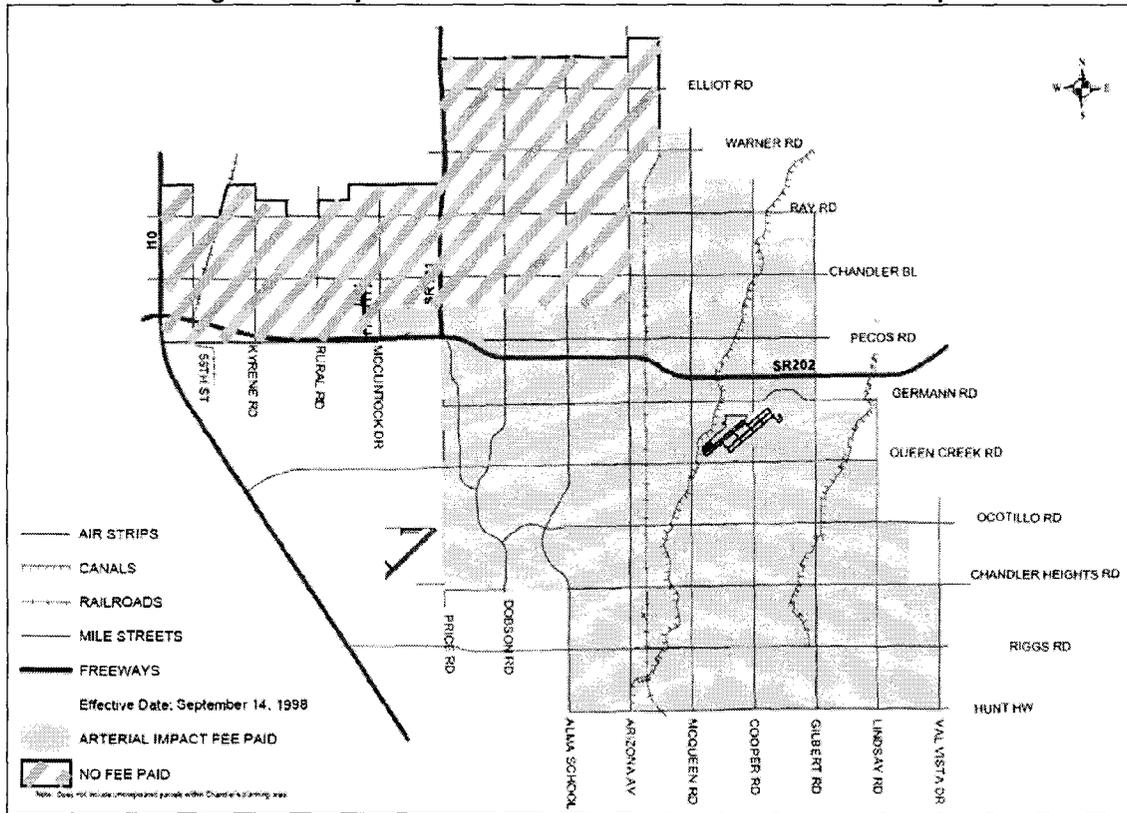
# ARTERIAL STREETS

The City of Chandler currently charges an arterial street system development fee based on the cost of planned arterial street improvements in the City's arterial street service area. The arterial street system development fee was last updated by City staff in 2006 based on the methodology utilized by the previous consultant in the 2005 update.<sup>3</sup>

## Arterial Street System and Service Area

Unlike the City's other non-utility system development fees, the arterial street fee is only charged to new development located in the southern and eastern portions of the city (see Figure 2). The rest of the city is exempted because it is mostly built-out and most arterial streets were funded with special improvement districts. The City's system development fee ordinance defines the arterial street system to be funded with the fees as arterial streets within the service area; the definition excludes collector streets and freeways. This update maintains the service area boundaries and definition of the major street system. An inventory of the existing arterial street system in the service area was compiled for this update and is presented in Table 88 in Appendix C.

Figure 2. City of Chandler Arterial Street Service Area Map



<sup>3</sup> BBC Research & Consulting, *City of Chandler System Development Fee Update*, September 2005.

## Methodology

There are two main alternative methodologies used in road impact fee analysis: “consumption-based” and “plan-based.” The consumption-based methodology, also known as the “incremental expansion” approach, assumes that the roadway system will need to be expanded to replace the capacity consumed by new development. Such an approach does not require a list of planned improvements, but requires only a typical cost to construct a lane-mile of roadway and the average capacity of a lane. A plan-based methodology, also called an “improvements-based” or “forward-looking” approach, essentially divides the cost of growth-related improvements required over a fixed planning horizon by the number of new service units projected to be generated by growth over the same planning horizon in order to determine a cost per service unit.

As discussed in the introduction, this study maintains the use of the plan-based approach in developing the arterial street system development fee. The calculation of the arterial street cost per service unit is based on a list of planned arterial street improvements in the service area; these costs include street construction, right-of-way (ROW) acquisition, traffic signals, culverts and storm drains and bridges. The list of arterial street improvements in the City’s infrastructure improvements plan is based on the City’s approved Street Classification Map, which defines the future arterial street network and the street cross-section. The classification map is not based on a fixed planning horizon, but represents the future arterial street network that will be in place at build-out.

The arterial street system development fee represents the net cost to fund growth-related improvements. The net cost is total cost, less the amount of State, Federal and local funding from gas tax and other dedicated sources, such as the Regional Transportation Plan (RTP) funds from the countywide supplemental sales tax, anticipated to be available to help fund those improvements.

As discussed in the introduction to this report, all of the fee calculations include an existing level of service analysis. Such an analysis ensures that new development does not pay for a higher level of service than has been paid for by existing development. In addition, a credit for outstanding debt, if applicable, will be provided to place new development on an equal footing with existing development in terms of debt funding of past improvements. However, debt-funded facilities that will serve future growth will be excluded from the existing level of service analysis, with the repayment included in the fee calculation. The cost to remedy existing deficiencies, if any, will be subtracted from the growth-related improvement costs in calculating the fee.

## Service Units

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for facilities. This unit of measurement is called a “service unit.” The service unit proposed for the City’s arterial street system development fees is the Equivalent Dwelling Unit, or EDU, which represents the impact on the major arterial street system of a typical single-family detached dwelling unit.

As discussed in the introduction, this study utilizes updated trip generation rates as the basis for the EDUs. The arterial street costs were allocated among land uses based on the usage of streets and

facilities generated by particular land uses using P.M. peak hour trip generation rates from the seventh edition of the Institute of Transportation Engineers' (ITE) *Trip Generation* manual.

### Service Unit Multipliers

The first step in quantifying existing and future service units for the arterial street system development fee is to determine the relationship of travel demand for all land uses to average single-family travel demand. As in prior updates, this study utilizes peak hour trip generation rates to determine the service unit multipliers associated with each land use. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends. The recommended arterial street EDUs based on trip generation rates for major land uses are shown in Table 7.

**Table 7. Arterial Street Service Unit Multipliers**

Land Use	Unit	Pk Hr Trips	EDU/Unit
Single Family	Dwelling	0.505	1.000
Multi-Family	Dwelling	0.310	0.614
Retail/Commercial	1000 sq. ft.	1.875	3.713
Office	1000 sq. ft.	0.745	1.475
Public/Institutional	1000 sq. ft.	0.210	0.416
Industrial/Warehouse	1000 sq. ft.	0.333	0.659

Source: Peak hour trips is 1/2 of average peak hour trips during weekday from ITE, *Trip Generation*, 7<sup>th</sup> ed., 2003 (retail based on shopping center, public based on nursing home, industrial/warehouse based on average trip rate for industrial park and warehouse).

As shown in Table 8, the weighting factor currently used by the City in determining system development fees is converted to an equivalency factor based on the single-family factor and compared to the proposed EDU per unit. As previously mentioned, the City's current weighting factor is based on P.M. peak hour trip generation rates from the sixth edition of the ITE *Trip Generation* manual. Under the proposed EDU per unit schedule based on updated ITE trip generation rates, the relative EDU per unit would remain the same or decline for all land uses except the public/institutional category.

**Table 8. Arterial Street Service Unit Comparison**

Land Use	Unit	Current			
		Weighting Factor	Current EDU/Unit	Proposed EDU/Unit	Percent Change
Single Family	Dwelling	1.02	1.000	1.000	0%
Multi-Family	Dwelling	0.67	0.657	0.614	-7%
Retail/Commercial	1000 sq. ft.	4.88	4.784	3.713	-22%
Office	1000 sq. ft.	1.50	1.471	1.475	0%
Public/Institutional	1000 sq. ft.	0.30	0.294	0.416	41%
Industrial/Warehouse	1000 sq. ft.	1.08	1.059	0.659	-38%

Source: Current weighting factor from BBC Research & Consulting, *System Development Fee Update*, 2005; current EDU/unit based on relative ratio of current weighting factor to single-family weighting factor; proposed EDU/unit from Table 7.

City staff has expressed concern that changing the service units assigned to each land use could complicate the calculation of outstanding developer credits, since the developer credits are currently allocated based on the total number of EDUs associated with the development. If the EDU factors change, there is some concern that staff would need to recalculate outstanding credits. In order to limit the need to recalculate outstanding developer credits, this study recommends amending the City's ordinance to retain the original credit calculations.

### Existing and Future Service Units

In order to determine the existing level of service and calculate the arterial street system development fee, it is necessary to determine the existing and future service units in the service area. The existing service unit calculation is based on the EDU factors calculated in this section and an analysis of existing residential and nonresidential development prepared by the City of Chandler Long Range Planning Division. The City's land use data were provided for each Traffic Analysis Zone (TAZ), and the TAZs included in the service area were summed to determine the total existing arterial street service units. As shown in Table 9, the City has 96,025 EDUs in the arterial street service area.

**Table 9. Existing Arterial Street Service Units**

Land Use	ITE Code	Unit	Units	EDU/Unit	EDUs
Single Family	210	Dwelling	43,677	1.000	43,677
Multi-Family	220	Dwelling	11,956	0.614	7,341
Retail/Commercial	820	1000 sq. ft.	8,109	3.713	30,109
Office	710	1000 sq. ft.	2,796	1.475	4,124
Public/Institutional	620	1000 sq. ft.	5,546	0.416	2,307
Industrial/Warehouse	130/150	1000 sq. ft.	12,848	0.659	8,467
Existing Development					96,025

Source: Existing units from Table 83 in Appendix A; EDUs per unit from Table 7.

To determine the cost per service unit using a plan-based methodology, the planned improvement costs are divided by the projected growth in service units over the planning horizon. The planning horizon is build-out, which is estimated to occur by about 2040. Future service units were estimated based on residential and nonresidential development growth forecasts prepared by the City of Chandler Long Range Planning Division. The residential and nonresidential unit forecasts were developed based on existing housing units and employment, land use trends and historic growth trends for the traffic analysis zones included in the arterial street service area. As shown in Table 10, given the City's growth projection through build-out, the City will need to accommodate 78,717 additional EDUs in the service area.

**Table 10. Build-Out Arterial Street Service Units**

Land Use	ITE Code	Unit	Units	EDU/Unit	EDUs
Single Family	210	Dwelling	52,715	1.000	52,715
Multi-Family	220	Dwelling	18,839	0.614	11,567
Retail/Commercial	820	1000 sq. ft.	16,353	3.713	60,719
Office	710	1000 sq. ft.	11,704	1.475	17,263
Public/Institutional	620	1000 sq. ft.	7,164	0.416	2,980
Industrial/Warehouse	130/150	1000 sq. ft.	44,762	0.659	29,498
Future Development					174,742
Existing Development					96,025
New EDUs to Build-out					78,717

Source: Build-out units from Table 83, Appendix A; EDUs per unit from Table 7; existing EDUs from Table 9.

## Planned Improvement Costs

Expanding the capacity of the City’s arterial street system is primarily accomplished by widening existing roadway cross-sections to accommodate additional through lanes and by building new roads. The arterial street system development fee is designed to cover the cost of adding capacity to the arterial streets that are required to serve expected growth in the service area. All of the normal components of a roadway expansion project are eligible for system development fee funding, including engineering and design, ROW acquisition, construction of new lanes, reconstruction of existing lanes and relocation of utilities where necessary as part of a widening project, and installation of sidewalks, street lighting and landscaping as part of an improvement project.

In developing the planned improvement cost estimates, the system development fee calculation utilizes standardized costs for construction components, utility relocations and ROW acquisition. The ROW cost assumption utilized in developing the system development fee is based on an acquisition cost of \$3 per square foot (\$130,680 per acre).

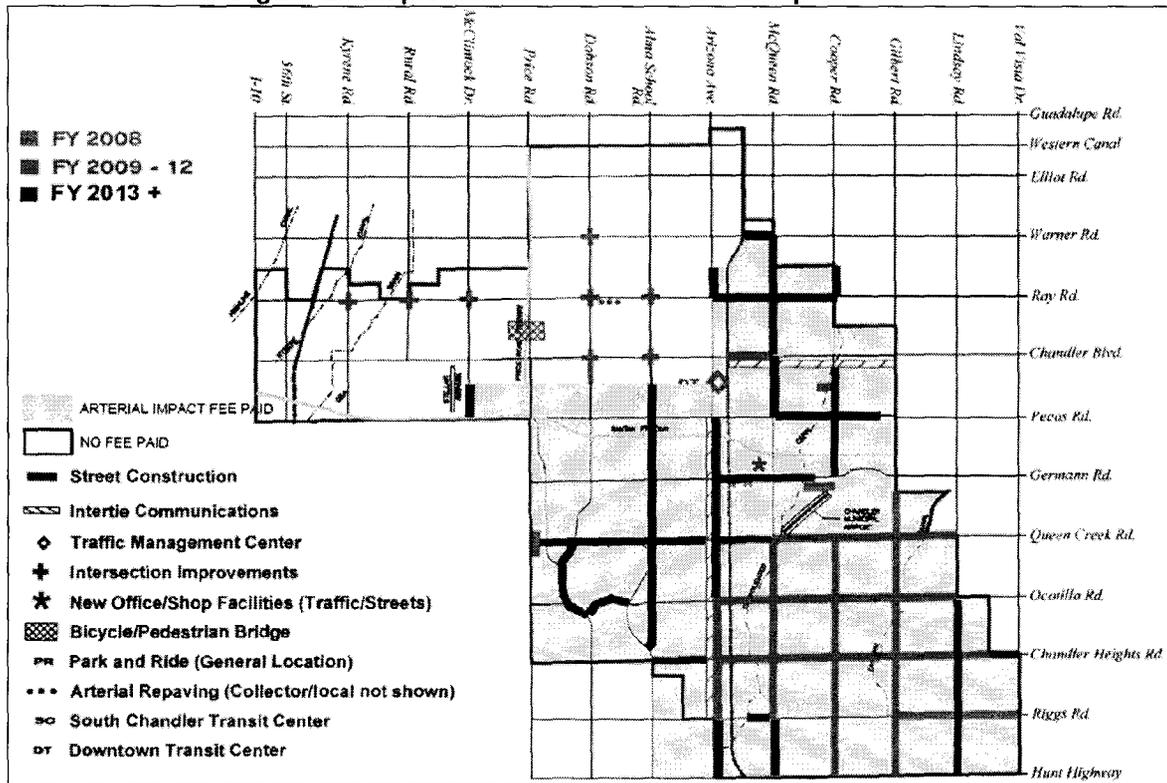
The system development fee is based on planned growth-related improvements in the arterial street service area. The project costs included in Table 11 represent the updated cost of implementing all of the remaining arterial street capacity identified by the City’s Transportation Master Plan that will be needed through build-out. In some instances the planned improvement costs for certain projects differ from the amount listed in the City’s current five-year CIP. The CIP costs are based on inflated cost estimates, while the costs used in the impact fee calculation are based on current dollars and are not adjusted for future inflation. In addition, the CIP costs may include only those costs programmed during the next five years rather than the full project cost and may include special design features that are not included in the calculation of the impact fee.

The project costs related to improvements that are under construction or fully-funded are not included in the list of planned improvement costs, since the value of these projects is reflected in the system development fee account encumbrances and carry-forward reserve balances. The net fee calculation includes an adjustment for impact fee account encumbrances and carry-forward balances that reflects the outstanding cost of projects currently under construction and no longer listed in the CIP.

The costs of arterial street improvements outside the physical boundaries of the service area are not included in the system development fee calculation. The locations of planned projects are illustrated in Figure 2; planned projects that are included in the current 2007-2012 CIP are highlighted in green and red and planned projects through build-out are highlighted in blue.

In prior system development fee studies, the arterial street costs and exclusions were adjusted by 88 percent to account for the 12 percent of pass-through traffic. The pass-through traffic rate represents trips that do not have an origin and destination within the fee area and are based on a transportation modeling analysis developed by the Maricopa Association of Governments. The portion of the arterial street improvements that are not included in the system development fee are funded through the General Fund since they are not attributable to growth. While it can be argued that this adjustment is not necessary, this study maintains the pass-through adjustment. As shown in Table 11, the growth-related share of the planned improvements is an estimated \$270.4 million in 2007 dollars.

**Figure 2. Map of Planned Arterial Street Improvements**



**Table 11. Planned Arterial Street Improvements**

Alma School - Frye to Germann	\$7,240,000
Alma School - Germann to Ocotillo	\$9,125,000
Alma School - Ocotillo to Chandler Heights	\$6,790,000
Alma School - Chandler Heights to City Limit	\$3,165,000
Arizona - Knox to Ray	\$90,000
Arizona - Pecos to Ocotillo	\$2,300,000
Arizona - Ocotillo to Riggs	\$12,202,000
Arizona - Riggs to Hunt	\$5,002,000
Chandler Blvd - Colorado to McQueen Road	\$8,770,000
Chandler Heights - Alma School to Arizona	\$1,100,000
Chandler Hts - Arizona to Cooper	\$17,857,500
Chandler Hts - Cooper to Gilbert	\$7,697,500
Chandler Hts - Gilbert to Val Vista	\$15,395,000
Cooper - North City Limit to Ray	\$2,740,000
Cooper - Consolidated Canal to Germann	NA*
Cooper - Queen Creek to Riggs	\$14,300,000
Dobson - Queen Creek to Ocotillo	\$7,900,000
Germann - Dobson to Alma School	NA*
Germann - Alma School to Arizona	NA*
Germann - Arizona Ave to .25 E of Airport Blvd	\$4,185,000
Gilbert - Germann to Queen Creek	\$8,290,000
Gilbert Road - Queen Creek to Chandler Heights	\$21,058,100
Gilbert Road - Chandler Heights to Hunt Hwy	\$10,371,900
Lindsay - Ocotillo to Riggs	\$17,395,000
Lindsay - Riggs to Hunt	\$4,045,000
McClintock - Frye to Santan	\$1,960,000
McQueen - Warner to Chandler	\$4,725,000
McQueen - Chandler to Pecos	\$7,070,000
McQueen Road - Queen Creek to Riggs	\$21,320,000
McQueen - Riggs to Hunt Highway	\$3,015,000
Ocotillo - Dobson to Alma School	\$4,300,000
Ocotillo Rd. - Arizona to Cooper	\$13,145,000
Ocotillo - Cooper to Gilbert	\$6,821,100
Ocotillo - Gilbert to 148th St	\$19,413,900
Pecos - McQueen to 1/4 West of Gilbert	NA*
Price - Santan to Germann	NA*
Queen Creek - W City Limit to Dobson	NA*
Queen Creek - Dobson to Alma School	NA*
Queen Creek - Alma School to Arizona	NA*
Queen Creek - Arizona to McQueen	NA*
Queen Creek - McQueen to Cooper	\$9,452,000
Queen Creek - Cooper to Gilbert	\$7,868,790
Queen Creek - Gilbert to Lindsay	\$6,309,210
Ray - Arizona to Cooper	\$6,230,000
Riggs - West City Limit to Arizona	\$3,725,000
Riggs - Gilbert to Val Vista	NA*
Warner - UPRR to McQueen	\$4,915,000
Subtotal, Planned Improvement Costs	\$307,289,000
Growth Share	88%
Total, Growth-Related Improvement Costs	\$270,414,320

\*Projects with no value are already under construction or fully funded in the 2007-08 CIP.

Source: City of Chandler Management Services Department and Public Works Department, Traffic Engineering Division, November 21, 2007; growth share based on assumed pass-through factor of 12 percent.

## Cost per Service Unit

The cost per service unit is developed by dividing the planned improvement costs by the projected growth in service units through build-out. The growth-related improvement costs for arterial streets must be adjusted to account for outstanding inter-fund loans, developer credits related to prior improvement district arterial street improvements, anticipated state and county funding for the arterial projects included in the fee calculation and the net system development fee fund balance.

Inter-fund loans are utilized if system development fee funds are unavailable to cover project costs; these loans are provided from the general fund or existing general obligation bond authority. The City's arterial street system development fee fund currently has an outstanding inter-fund loan of \$7.9 million. The City utilized the inter-fund loan proceeds to fund improvements to Germann Road, Pecos Road, Cooper Road and Riggs Road in southeast Chandler. These inter-fund loans add to the future growth-related arterial costs that will be repaid through the fees collected from new development.

The City of Chandler has several improvement districts in the arterial street fee area that will receive credit back through reduced system development fee revenues. These improvement districts have funded some arterial street improvements, and the development in these districts will receive credit against their impact fee for district assessments through reduced system development fees. Similar to the adjustment for the inter-fund loan balance, adding back the cost of the credits recognizes the portion of the improvement district projects that will be funded with future system development fee revenue. As shown in Table 12, the value of the outstanding credits for the improvement districts is \$16.5 million.

**Table 12. Arterial Street Improvement District Credits**

Improvement District #51	\$2,889,025
Improvement District #53	\$409,514
Improvement District #67	\$4,056,426
Ocotillo West	\$6,959,222
Ocotillo Phase 2	\$2,221,969
<b>Total Outstanding Credit Value</b>	<b>\$16,536,156</b>

*Source:* City of Chandler Management Services Department and Public Works Department, Traffic Engineering Division, November 21, 2007.

The total arterial street construction costs are reduced by the total amount of existing system development fee account fund balances. The available cash balance is subtracted from the total costs since the fund balance will be used to pay for a portion of the future infrastructure and decrease the amount needed to be collected from future system development fees. However, the impact fee account balance also includes encumbrances and capital carry-forward balances related to current arterial street projects that exceed the fund's cash balance. The carry-forward reserves represent encumbrances on purchase orders on projects that are under construction and not included in the existing level of service. The capital carry-forward balance represents the value of projects that are included in past capital improvement plans and represent commitments funded with existing fund balances that are not included in the existing level of service. The planned arterial street costs are adjusted to account for these outstanding balances.

The average cost per service unit is determined by dividing the adjusted cost of planned improvements by the future service units. As shown in Table 13, the cost for the planned arterial street improvements and costs attributable to new development is \$4,102 per EDU.

**Table 13. Arterial Street Cost per Service Unit**

Growth-Related Improvement Costs	\$270,414,320
Inter-Fund Loan from General Fund	\$7,870,000
Encumbrances for Current Projects	\$25,166,294
Capital Carry-Forward Balance	\$29,208,730
Outstanding Credit Value	\$16,536,156
Less: Ending Fund Balance, 6/30/2007	\$26,297,256
<b>Total, Growth-Related Costs</b>	<b>\$322,898,244</b>
New EDUs	78,717
<b>Plan-Based Cost per EDU</b>	<b>\$4,102</b>

*Source:* Total growth-related improvement costs from Table 11; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; encumbrances, capital carry-forward and ending fund balance from City of Chandler Management Services Department, November 21, 2007; outstanding improvement district credits from Table 12; and new EDUs from Table 10.

## Level of Service Analysis

One of the principles of impact fees is that new development should not be charged, through the impact fees, for a higher level of service than is provided to existing development. The list of improvements upon which the system development fee is based was originally developed in 2001 as part of the transportation master plan, and the improvements were developed to allow the City to maintain a Level of Service D (LOS D) at build-out.<sup>4</sup> This update provides an opportunity to examine the current and build-out level of service based on planned arterial street projects to ensure that the system development fee is not based on a higher level of service than provided to existing development in the service area.

Traditional road impact fees define level of service in terms of operational characteristics of individual roadway segments or intersections. The City's current and build-out arterial street system, including segment descriptions, segment lengths in miles, number of lanes, number of lane-miles, peak-hour capacity, peak-hour vehicle-miles of capacity, peak-hour volumes and peak-hour vehicle-miles, are summarized in Appendix C.

Rather than examining the LOS of individual arterial street sections, the level of service measure used in this analysis is based on the system-wide ratio of road capacity (at LOS D) to travel demand. As shown in Table 14, the arterial street system in the service area currently provides 1.60 vehicle-mile of capacity (VMC) for every unit of travel demand (VMT).

In order to ensure that new development will not pay for a higher level of service than provided on the existing arterial street system, the ratio of capacity to demand was developed for build-out in 2040 based on the City's transportation study forecast of future traffic and road capacity based on

<sup>4</sup> Parsons Brinckerhoff, *Chandler Transportation Study*, May 24, 2001, p. 48.

planned arterial street cross-sections. The build-out assumptions used in modeling the future traffic volume for the City of Chandler were developed in the City's transportation study based on forecast employment and population assumptions similar to those utilized in this study, thus the build-out traffic model remains a relevant measure of future traffic volume in the impact fee area.<sup>5</sup> The future capacity is based on the arterial street projects recommended in the 2001 *Chandler Transportation Study*, which were utilized to develop the list of planned arterial street projects for the City's system development fee. Based on the analysis of current and future traffic shown in Table 14, the build-out capacity ratio will fall from 1.60 to 1.11. The reduction in the ratio over time indicates that the planned arterial street construction and the additional roadway capacity will not provide a higher level of service than provided by the current arterial street system, and new development will not be paying for a higher level of service than is provided to existing development.

**Table 14. Arterial Street Capacity/Demand Ratios**

	Existing	Future
Lane-Miles with Counts	320.03	481.63
VMT (Roads with Counts)	116,774	247,170
Average Volume per Lane (Roads with Counts)	364.88	513.19
3/4 Observed Volume per Lane	273.66	384.90
Lane-Miles without Counts	20.84	11.70
Estimated VMT (Roads w/out Counts)	5,703	4,503
Estimated Total Vehicle-Miles of Travel (VMT)	122,477	251,673
Total Vehicle-Miles of Capacity (VMC)	195,543	279,408
VMC/VMT Ratio	1.60	1.11

Source: Current arterial street system data Table 88, Appendix C; future arterial street system data from Table 89, Appendix C.

While the comparative ratios provide a reasonable indication that new development is not being charged for a higher level of service, the existing level of service must be adjusted to reflect existing facilities that have not yet been paid for and are included in the fee calculation. To make these adjustments, it is necessary to estimate the value of the existing arterial street system in the service area.

The value of the current arterial street system can be determined based on the growth-related share of the planned arterial street costs and the amount of capacity the new arterial streets will provide. The planned arterial street network will add an estimated 83,865 VMC to the City's arterial street system. The value of the planned arterial street improvements can be determined based on the planned arterial costs and the value of arterial streets currently under construction but not included in the existing level of service. As shown in Table 15, the current cost to add capacity is estimated at \$3,873 per VMC.

<sup>5</sup> The projected build-out at 2040 used in the *Chandler Transportation Study* assumed a population of 304,967 and total employment of 212,038; the build-out projection utilized in this study is based on total population of 287,951 and 2040 employment of 226,289 as of August 1, 2007 - the reduced traffic demand associated with the lower build-out population estimate would be offset by an corresponding increase in traffic demand associated with the increase in the employment forecast.

**Table 15. Arterial Street Cost per Unit of Capacity**

Future Road Capacity (VMC)	279,408
Existing Road Capacity (VMC)	195,543
Added Capacity	83,865
Growth-Related Improvement Costs	\$270,414,320
Encumbrance Balance	\$25,166,294
Capital Carry-forward Balance	\$29,208,730
Total Future Road Costs	\$324,789,344
Cost per Vehicle-Mile of Capacity (VMC)	\$3,873

Source: Existing and future arterial street capacity from Table 14; growth-related improvement costs from Table 11; and encumbrances and carry-forward balance from Table 13.

The level of service related to existing development is based on the current level of infrastructure investment per EDU adjusted to reflect the value of unfunded facilities that are included in the current arterial street inventory. The existing cash balance available in the impact fee fund account is added to the replacement cost since those funds have been paid by existing development. As shown in Table 16, the estimated replacement value is \$759.2 million; based on the existing service units, the replacement value is \$7,907 per EDU. This represents a measure of the existing level of service.

**Table 16. Existing Arterial Street Level of Service**

Existing Road Capacity	195,543
Cost per VMC	\$3,873
Arterial Replacement Value	\$757,338,039
Cash Fund Balance, 6/30/2007	\$26,297,256
Less: Inter-fund Loan	\$7,870,000
Less: Improvement District Credits	\$16,536,156
Net Replacement Value	\$759,229,139
Existing EDUs	96,025
Existing LOS (Replacement Value per EDU)	\$7,907

Source: Existing arterial street capacity from Table 14; cost per VMC from Table 15; cash fund balance from Table 13; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; improvement district credits from Table 12; and existing EDUs from Table 9.

## Net Cost per Service Unit

The arterial street system development fee should not charge new development for a higher level of service than is provided to existing development. Since the replacement value per service unit for the existing arterial street system (\$7,907 per EDU) is greater than the cost of the planned improvement cost (\$4,102 per EDU), the updated system development fee is based on the planned improvements.

**Table 17. Arterial Street Level of Service Analysis**

Existing LOS (Replacement Value per EDU)	\$7,907
Plan-Based Cost per EDU	\$4,102

Source: Existing LOS from Table 16; plan-based cost per EDU from Table 13.

The calculation of the arterial street fee will need to take into account other revenues that will be generated by new development and used to offset the planned improvement costs. As shown in Table 18, the funding includes \$40.5 million from the Regional Transportation Plan (RTP) funds and an additional \$5.6 million from the Maricopa County Department of Transportation (McDOT). The countywide RTP was established in 2004 through Proposition 400 and is funded with a countywide supplemental sales tax. McDOT funds are programmed by the County for specific street segments and are primarily funded from the Highway User Revenue Fund (HURF). HURF is comprised of Arizona's vehicle license taxes, vehicle registration fees and 18-cents-per-gallon tax on gasoline, which are distributed to all jurisdictions based on a formula established by the State Legislature. The City also receives HURF directly from the State, as well as Federal Congestion Management/Air Quality (CMAQ) grants for projects programmed in the current five-year Capital Improvement Program. However, these funds are not programmed for growth-related arterial street improvements; the anticipated HURF funding is programmed for repaving, planning and traffic monitoring projects, and the CMAQ grants are programmed for signal upgrades, transit and bike lane projects. The external funding available for growth-related improvements is adjusted to account for the 12 percent of pass-through traffic. Based on external funding programmed for new projects and new service units, the external funding credit is \$515 per EDU.

**Table 18. External Street Funding Credit**

Project	Year	Funding
Arizona - Ocotillo to Hunt	FY 2011-FY 2013	\$5,895,000
Gilbert - Santan to Hunt	FY 2021	\$18,877,000
Queen Creek - Arizona to Lindsay	FY 2011-FY 2012	\$15,706,000
Subtotal, RTP Funds		\$40,478,000
Riggs Road	FY 2008-FY 2009	\$3,200,000
Queen Creek Road	FY 2008-FY 2009	\$2,368,204
Subtotal, McDOT Funds		\$5,568,204
Net External Funding		\$46,046,204
Growth Share		88%
Total Growth-Related External Funding		\$40,520,660
New EDUs		78,717
External Funding Credit per EDU		\$515

Source: City of Chandler Management Services Department and Public Works Department, Traffic Engineering Division, November 21, 2007; growth share based on assumed pass-through factor of 12 percent; and new EDUs from Table 10.

To avoid double payment issues, the system development fees should also be reduced to account for the amount that new development will pay to retire the debt on past growth-related improvements that are now part of the existing arterial street network. The City's general obligation debt and HURF revenue bonds are issued for non-capacity improvements such as bikeway/pedestrian improvements, transit improvements, drainage projects, lighting and safety improvements and resurfacing, rehabilitation and reconstruction projects. The City has also used bond funding for non-arterial street improvements that are not part of the system development fee; for example the City will be using debt to improve Frye Road, Old Price Road and Airport Boulevard in the current five-year Capital Improvement Program. While the City may program general obligation bonds for future growth-related projects, such bonds will only be utilized if system development fee funds are unavailable to cover project costs at the time of need and will be repaid with future system development fee funds. There is no identifiable debt that has been issued for growth-related arterial street improvements; as a result, no debt credit is necessary. As shown in Table 19, the net cost per unit based on the growth-related costs and external street funding credit is \$3,587 per EDU.

**Table 19. Net Arterial Street Cost per EDU**

Plan-Based Cost per EDU	\$4,102
Less: External Funding Credit	\$515
Net Cost per EDU	\$3,587

Source: Plan-based cost per EDU from Table 13; external funding credit from Table 18.

## Updated Fee Schedule

The maximum potential arterial street system development fees that can be assessed by the City of Chandler based on the data, assumptions and analysis contained in this study are shown in Table 20.

The net cost per unit of development is the product of arterial street service units (EDUs) generated by each land use and the net cost of planned improvements to accommodate each new service unit. For nonresidential uses that cannot readily be designated under a particular land use category, the City has historically used the latest ITE manual to identify the appropriate trip rate associated with a land use and matches it to the closest trip rate of land use categories used in the fee schedule.

**Table 20. Updated Arterial Street System Development Fees**

Land Use	Unit	EDUs/Unit	Net Cost/EDU	Fee/Unit
Single-Family	Dwelling	1.000	\$3,587	\$3,587
Multi-Family	Dwelling	0.614	\$3,587	\$2,202
Retail/Commercial	1000 sq. ft.	3.713	\$3,587	\$13,319
Office	1000 sq. ft.	1.475	\$3,587	\$5,291
Public/Institutional	1000 sq. ft.	0.416	\$3,587	\$1,492
Industrial/Warehouse	1000 sq. ft.	0.659	\$3,587	\$2,364

Source: EDUs per Unit from Table 7; and cost per EDU from Table 19.

The updated fees and current fees are compared in Table 21. Based on the updated cost and credit assumptions utilized in this report, the arterial system development fee would increase by 24 percent for single-family units. Among nonresidential uses, the fees would go down for retail and industrial/warehouse uses, and would increase for office and public/institutional land uses. The retail fee comparison does not reflect the City's subsidy from the General Fund; currently the City provides a subsidy of \$6.93 per square foot (50 percent) for most retail land uses and a subsidy of \$10.40 per square foot (75 percent) for retail land uses that generate fewer than 3 peak-hour trips per 1,000 square feet of retail space.

**Table 21. Comparative Arterial Street System Development Fees**

Land Use	Unit	Current Fee	Proposed Fee	% Change
Single-Family	Dwelling	\$2,896	\$3,587	24%
Multi-Family	Dwelling	\$1,904	\$2,202	16%
Retail/Commercial	1000 sq. ft.	\$13,860	\$13,319	-4%
Office	1000 sq. ft.	\$4,260	\$5,291	24%
Public/Institutional	1000 sq. ft.	\$860	\$1,492	73%
Industrial/Warehouse	1000 sq. ft.	\$3,070	\$2,364	-23%

Source: Current fee from City of Chandler Code, Section 38-13; proposed fee from Table 20.

Based on forecast residential and nonresidential growth projections, overall arterial street system development fee revenue would remain relatively unchanged, decreasing by about 3 percent through build-out if the fees were adopted at the proposed fee level, as shown in Table 22.

**Table 22. Potential Arterial Street System Development Fee Revenue**

Land Use	Unit	New Units	Current Fee Schedule		Potential Fee Schedule		Percent Increase
			Fee/Unit	Revenue	Fee/Unit	Revenue	
Single-Family	Dwelling	9,038	\$2,896	\$26,174,048	\$3,587	\$32,419,306	24%
Multi-Family	Dwelling	6,883	\$1,904	\$13,105,232	\$2,202	\$15,156,366	16%
Retail/Commercial	1000 sq. ft.	8,244	\$13,860	\$114,261,840	\$13,319	\$109,801,836	-4%
Office	1000 sq. ft.	8,908	\$4,260	\$37,948,080	\$5,291	\$47,132,228	24%
Public/Institutional	1000 sq. ft.	1,618	\$860	\$1,391,480	\$1,492	\$2,414,056	73%
Industrial/Warehouse	1000 sq. ft.	31,914	\$3,070	\$97,975,980	\$2,364	\$75,444,696	-23%
<b>Total</b>				<b>\$290,856,660</b>		<b>\$282,368,488</b>	<b>-3%</b>

Note: Retail/Commercial fee does not reflect current retail subsidy of 50-75%.

Source: New units based on current and build-out units from Table 83, Appendix A; current and potential fees from Table 21.

# PARKS

The City of Chandler adopted the community park system development fee in 1997 and adopted the neighborhood park system development fee in 2005. Prior to 2005, the City of Chandler assessed a Residential Development Tax paid by developers for each dwelling unit. As with the other system development fees, both the neighborhood and community park fees were recently updated by City staff. This update provides an opportunity to amend the fees to include the most recent Capital Improvement Program and planned projects through build-out. In addition, this study combines the neighborhood and community park fees into one City-wide park fee. As previously mentioned, this update also includes an analysis of the park level of service.

The locations of existing and planned parks are illustrated in Figure 3 and Figure 4. The City currently has more than 55 regional, community, special-use and neighborhood parks. The exact location of planned parks will not be determined until the City acquires specific parcels; however, the neighborhood and special use map illustrates the amount of land necessary to ensure that residential areas are served by adequate park facilities at build-out and the remaining park development needs. The future community and regional park parcels have already been acquired, although not all of the parks have been developed. An inventory of existing parks, including name, park classification and developed and undeveloped acreage, is presented in Table 90 and Table 91 in Appendix D.

**Figure 3. Existing and Planned Neighborhood and Special-Use Parks**

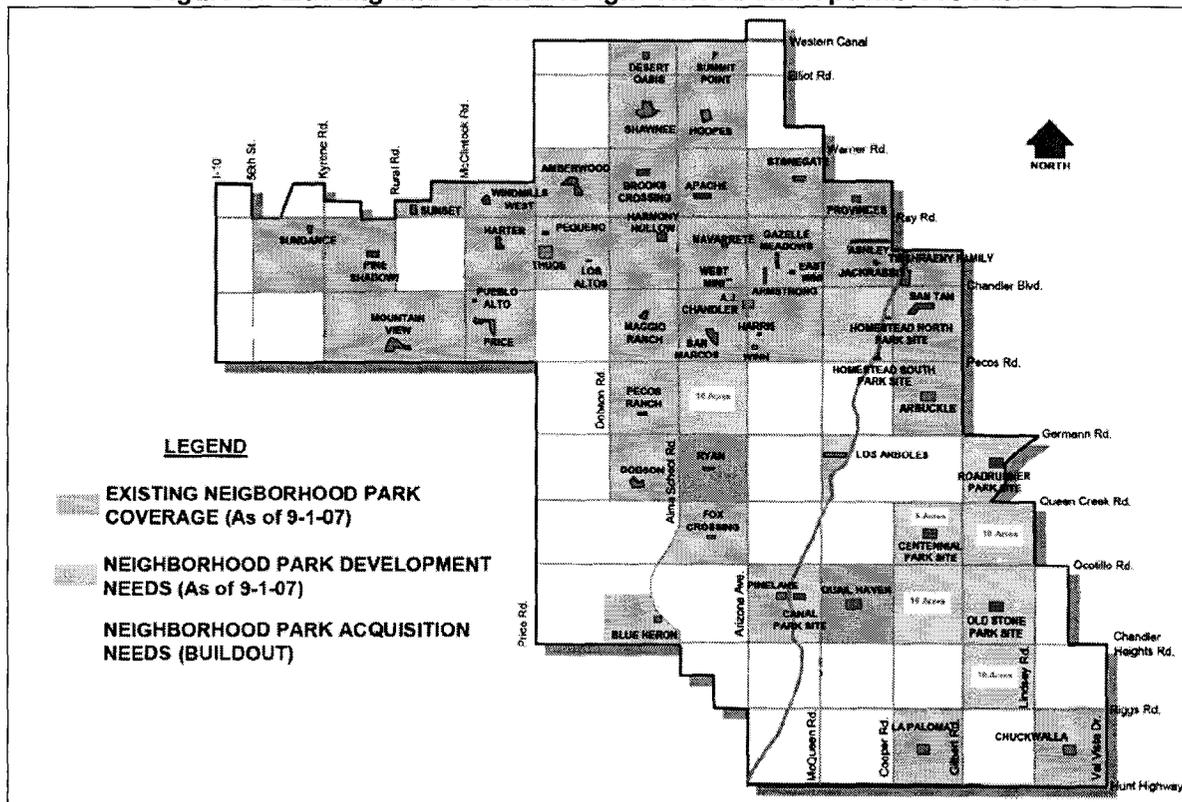
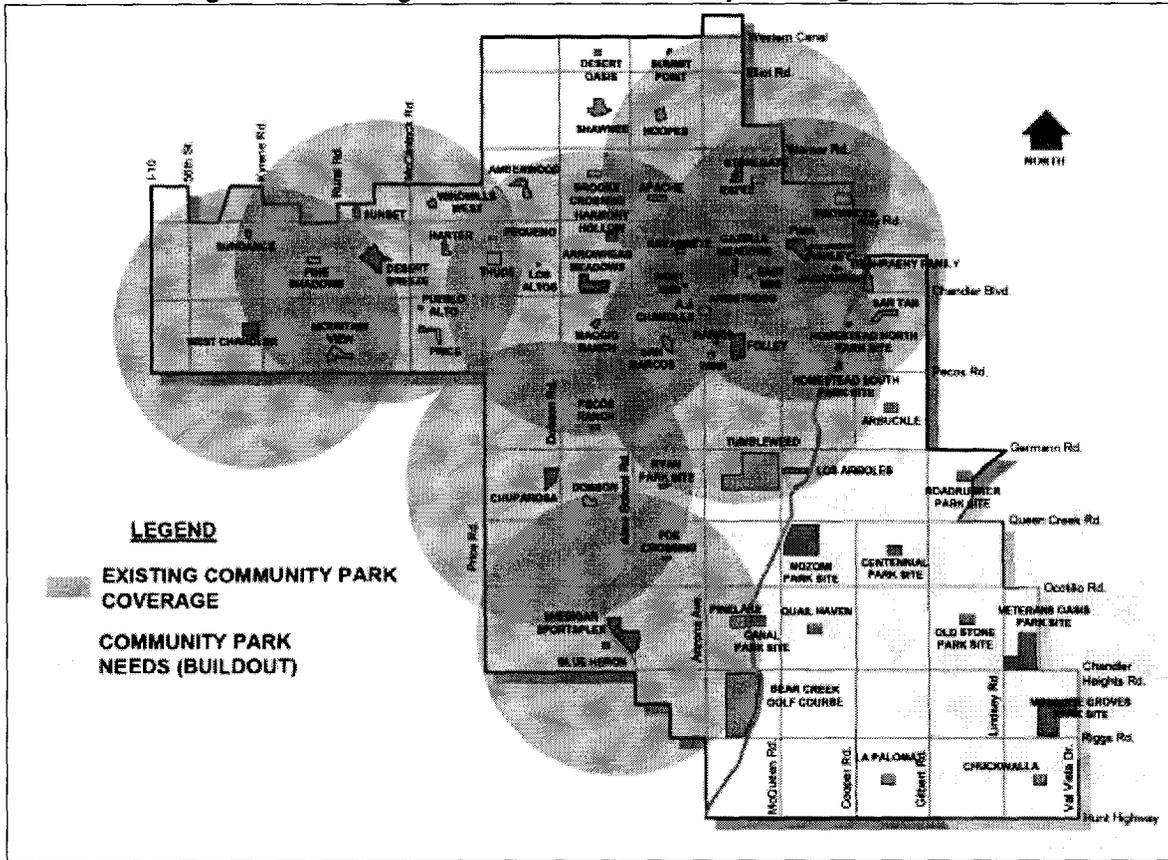


Figure 4. Existing and Planned Community and Regional Parks



## Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for park facilities. This unit of measurement is called a “service unit.” Population is the most common service unit used in park impact fee analysis. The City’s current community and neighborhood park system development fee service unit allocation is based on a 1997 survey that found residents of single-family units were approximately 13 percent more likely to use community parks based on their proportion to total residents at that time. The same research found that multi-family residents were 35 percent less likely to use the same facilities. Consequently, the single-family fee is based on a service unit factor of 1.13 and the multi-family fee is based on a factor of 0.65 per unit.

## Service Unit Multipliers

This update recommends the use of a service unit that avoids the need to update the park usage survey or make assumptions about park usage among residents of different types of units. This service unit is the “equivalent dwelling unit” or EDU, which represents the impact of a typical single-family dwelling. By definition, a typical single-family unit represents, on average, one EDU.

Other types of units each represent a fraction of an EDU, based on their relative average household sizes.

In general, the demand for park facilities is proportional to the number of people in a dwelling unit. Consequently, data on average household size for various types of units is a critical component of a park impact fee. These data are presented and analyzed in Appendix A and are used to develop the EDU multipliers for Chandler's park system development fee update. The EDUs associated with each housing type are shown in Table 23.

**Table 23. Park Equivalent Dwelling Unit Multipliers**

Land Use	Persons/Unit	EDUs/Unit
Single-Family	2.95	1.000
Multi-Family	2.26	0.766

Source: Persons per unit from Table 81, Appendix A.

### Existing and Future Service Units

In order to determine the existing level of service and calculate the park system development fees, it is necessary to determine the existing and future city-wide service units. The existing service unit calculation is based on the EDU factors calculated in this section and an analysis of existing residential development prepared by the City of Chandler Long Range Planning Division. This is accomplished by multiplying the number of existing residential units by the EDUs per unit calculated earlier based on relative household sizes. As shown in Table 24, there are 87,966 park service units (EDUs) in the city.

**Table 24. Existing Park Service Units**

Land Use	Existing Units	EDUs/Unit	Total EDUs
Single-Family	71,155	1.000	71,155
Multi-Family	21,947	0.766	16,811
Total			87,966

Source: Existing units from Table 82, Appendix A; EDUs per unit from Table 23.

The plan-based cost per service unit is developed by dividing the planned improvement costs by the projected growth in service units over the planning horizon. Based on the forecast increase in residential units, the City will add 14,670 EDUs through build-out, as shown in Table 25.

**Table 25. Build-Out Park Service Units**

Land Use	Future Units	EDUs/Unit	Total EDUs
Single-Family	80,262	1.000	80,262
Multi-Family	29,209	0.766	22,374
Total Build-Out Service Units:			102,636
Existing Park Service Units			87,966
New Service Units			14,670

Source: Build-out units from Table 82, Appendix A; EDUs per unit from Table 23; existing park service units from Table 24.

## Planned Improvement Costs

As in the prior study, the park system development fees will be based on the planned facilities necessary to accommodate development through build-out. The City of Chandler plans on developing several park sites and acquiring additional sites during the current CIP planning period. The City plans to develop three additional parks beyond 2012 through build-out. As shown in Table 26, the City has planned \$52.2 million for park improvements that will serve new growth and are eligible for inclusion in the park fee calculation.

**Table 26. Planned Park Improvements**

Neighborhood Park Land Acquisition	\$6,084,481
Homestead North Park Development	\$1,212,750
Homestead South Park Development	\$1,739,339
Canal Park Development	\$1,490,406
Mesquite Groves Development	\$25,508,016
Roadrunner Park Development	\$1,893,326
Future Park Site Development	\$7,980,258
Subtotal, 2007-2012 CIP	\$45,908,576
Park 1 (Pecos, Arizona, Germann, Alma School)	\$2,099,165
Park 2 (Queen Creek, Lindsey, Ocotillo, Gilbert)	\$2,099,165
Park 3 (Ocotillo, Gilbert, Chandler Heights, Cooper)	\$2,099,165
Subtotal, 2012 to Build-out	\$6,297,495
<b>Total, Planned Park Improvements</b>	<b>\$52,206,071</b>

*Source:* 2007-2012 growth-related projects from City of Chandler Capital Improvement Program; other projects from City of Chandler Parks and Recreation Department and project cost from City of Chandler Management Services Department, February 5, 2008.

## Cost per Service Unit

The planned facility costs must be adjusted to account for existing inter-fund loans and general obligation debt that will be paid through future system development fee collections along with system development fee account balances and carry-forward reserves. Any positive system development fee account balance is subtracted from the total net cost, since those funds will be used to pay for a portion of the planned infrastructure and will decrease the amount of fee funding necessary for the planned improvements.

The City utilizes inter-fund loans or general obligation debt issues to fund growth-related projects when sufficient funding is not available in the system development fee account balances. The City issued approximately \$0.5 million in general obligation bonds in 2007 in order to fund recent neighborhood park land acquisition. The land purchased with this debt is included in the existing level of service; however, since the existing neighborhood level of service is adjusted to exclude the value of the outstanding debt (see Table 33), the debt may be paid through future system development fee revenue. The City also utilized an inter-fund loan of \$7.6 million from the general fund and \$17.9 million through general obligation bonds to fund community park development at

Mesquite Groves, Veteran’s Oasis and Nozomi parks. Since the developed portion of these parks funded with the inter-fund and general obligation loans are not included in the existing park level of service, future system development fee revenue may be utilized to repay the general fund loan since the improvements were growth-related and there was not enough available funding in the system development fee balance.

The planned improvement cost is also adjusted to account for the encumbrance and carry-forward balance. The encumbrance and capital carry-forward balances represent projects that are under construction and no longer included in the City’s Capital Improvement Program. Since these projects will serve future development and are unfunded, they are included in the calculation of the fee as a growth-related cost. The neighborhood park impact fee fund account encumbrances are related to remaining contract balances for Arbuckle, Homestead North, Homestead South, Ryan and Tibshraeny parks; the capital carry-forward is related to future park land acquisition. The community park impact fee fund encumbrance and carry-forward are primarily related to the development of Mesquite Groves, Veteran’s Oasis and Nozomi parks. The existing community park impact fee fund cash balance partially reflects the general obligation debt funds that were deposited into the account upon issuance of the bond. The impact fee fund cash balance is subtracted from the growth-related costs since it will be used to offset future costs. The total adjusted planned park improvement costs through build-out are \$80.9 million. As shown in Table 27, the plan-based cost for the combined park fee is \$5,516 per service unit.

**Table 27. Park Improvement Cost per Service Unit**

	Neighborhood Park Fund	Community Park Fund	Total
Growth-Related Improvement Cost			\$52,206,071
Interfund Loan from General Fund	\$0	\$7,566,708	
Fee-Funded General Obligation Debt	\$531,149	\$17,865,000	
Encumbrances for Current Projects	\$1,808,389	\$14,237,236	
Capital Carry-Forward Balance	\$6,239,745	\$3,600,411	
Less: Ending Fund Balance, 6/30/2007	\$3,838,678	\$19,303,599	
Total Impact Fee Fund Adjustments	\$4,740,605	\$23,965,756	\$28,706,361
Adjusted Planned Improvement Cost			\$80,912,432
New Service Units (EDUs)			14,670
Plan-Based Cost per EDU			\$5,516

Source: Growth-related park improvement costs from Table 26; inter-fund loan and general obligation balances from City of Chandler Management Services Department, October 24, 2007; encumbrances, carry-forward and ending fund balances from City of Chandler Management Services Department, November 21, 2007; new service units from Table 25.

## Existing Level of Service

The City’s adopted *Parks and Recreation Master Plan* stipulates that the City should acquire and develop 10 acres of neighborhood parks per square mile of residential development and 25 to 50 acres of community parks to serve residential development within a one- to two-mile radius.<sup>6</sup> To the extent possible, the City has planned parks in developing areas to accommodate growth and preserve the desired level of service. Currently, the City is planning on acquiring three additional

<sup>6</sup> City of Chandler Community Service Department and Arizona State University, *Parks and Recreation Master Plan Update 2000*, p. 10.

neighborhood park sites and has plans to develop nine neighborhood park sites. The City has planned three new community parks through build-out and has acquired the sites for these parks. The City does not have any plans for additional regional or special-use parks.

Existing developed and undeveloped park land is used in developing the overall existing level of service. The existing parks are listed in Appendix D. As summarized in Table 28, the City of Chandler provides current residents with more than 1,191 acres of park land.

**Table 28. Existing Park Summary**

Park Type	Acres		Total
	Developed	Undeveloped	
Neighborhood & Special Use Parks	347.81	51.73	399.54
Community & Regional Parks	389.85	401.96	791.81
<b>Total</b>	<b>737.66</b>	<b>453.69</b>	<b>1,191.35</b>

Source: Neighborhood and special use park land inventory from Table 90, Appendix D; community and regional park land inventory from Table 91, Appendix D.

As noted earlier, impact fees should not be based on a higher level of service than is provided to existing residents. In order to determine the existing and planned level of service, this study considers both the existing and planned park facilities along with their replacement value.

For parks, there are two measures of level of service. The first measure is the provision of raw land for neighborhood and special use parks and community and regional parks. As shown in Table 29, the City currently provides 0.0135 acres of park land per service unit. The City plans on purchasing 25 acres of park land, or 0.0017 acres per unit, which is less than the existing provision of park land.

**Table 29. Existing and Planned Total Park Land per Service Unit**

	Neighborhood/ Special Use Parks	Community/ Regional Parks	Total
Planned Land Purchases (Acres)	25.00	0.00	25.00
New Service Units (EDUs)	14,670	14,670	14,670
Planned Acres per New EDU	0.0017	0.0000	0.0017
Existing Park Land (Acres)	399.54	791.81	1191.35
Existing Service Units (EDUs)	87,966	87,966	87,966
Existing Acres per EDU	0.0045	0.0090	0.0135

Source: Planned land purchases from City of Chandler 2007-2012 CIP, "Neighborhood Park Land Acquisition," project #8PR039; new service units from Table 25; existing park land from Table 28; existing service units from Table 24.

The other measure for the park land level of service is the provision of developed park land, which includes landscaping, picnic ramadas, lighted paths, playgrounds, and sport fields. As shown in Table 30, the City provides 0.0084 acre of developed parks per unit. While the City currently provides a greater level of service for the land component, the planned site development ratio is higher than the existing level of service.

**Table 30. Existing and Planned Developed Park Land per Service Unit**

	Neighborhood/ Special Use Parks	Community/ Regional Parks	Total
Future Park Development (Acres)	73.73	207.40	281.13
New Service Units (EDUs)	14,670	14,670	14,670
Planned Developed Acres per New EDU	0.0050	0.0141	0.0192
Existing Developed Parks (Acres)	347.81	389.85	737.66
Existing Service Units (EDUs)	87,966	87,966	87,966
Existing Developed Acres per EDU	0.0040	0.0044	0.0084

Source: Planned neighborhood and special use park development based on existing undeveloped sites and additional site acquisition planned in the 2007-2012 CIP; future community and regional park development based on development of Mesquite Groves, Nozomi, and Veteran's Oasis park sites; new service units from Table 25; existing developed park land from Table 28; existing service units from Table 24.

An alternative to measuring the level of service with the provision of land is to measure it using the replacement cost of the land and capital facilities provided per unit of development served. In fact, this is what impact fee calculations generally do. The choice of an explicit level of service standard to represent this relationship is generally unnecessary, and can create undesirable policy outcomes. As illustrated in Chandler's build-out plan, a parks and recreation system represents a capital investment in land and other improvements that provides service to residents. Reducing this relationship to a simple ratio of acres of land to population does provide a concrete, measurable indicator. However, it may unintentionally put undue emphasis on the acquisition of park land, at the expense of the provision of recreational amenities and improvements. The expansion of a park system may involve periods of extensive land acquisition, followed by periods that focus on the development of land with park improvements. Adoption of a level of service standard expressed in acres implies that only additional land acquisition can enhance the level of service. In reality, the level of service provided by a park system can be enhanced by improvements to existing land as well as by acquisition of additional land.

As a result, this update examines the existing provision of parks based on the ratio of the replacement value of existing land and facilities to existing development in order to ensure that the park system development fee is not based on a higher level of service than currently provided to City residents.

The existing park land value is based on the existing park land and current land acquisition and park development costs. Land cost are the most difficult to determine because the cost of land varies based on site characteristics. As part of the CIP planning process, the City's budget department developed a parkland acquisition estimate based on a cost of \$236,694 per acre, which reflects the City's assessment of value for the types of sites that will be needed for the planned parks. The neighborhood and special use park improvement cost of \$153,483 per acre is based on the average cost per acre to construct standard amenities, landscape, irrigate and improve at Pinelake, Chuckwalla, Tibshraeny and Arbuckle parks. The community and regional park improvement cost of \$189,333 is based on the cost to develop Mesquite Groves; the development costs exclude the cost of the planned recreation center. As shown in Table 31, the total replacement cost for the City's developed and undeveloped park land is \$409.2 million with the neighborhood and special use parks replacement value of \$148.0 million and the community and regional parks replacement value of \$261.2 million.

**Table 31. Existing Park Replacement Cost**

	Neighborhood/ Special Use Parks	Community/ Regional Parks	Total
Total Acres	399.54	791.81	
Cost/Acre	\$236,694	\$236,694	
Land Value	\$94,568,721	\$187,416,676	\$281,985,397
Developed Acres	347.81	389.85	
Development Cost per Acre	\$153,483	\$189,333	
Total Development Cost	\$53,382,922	\$73,811,470	\$127,194,392
Total	\$147,951,643	\$261,228,146	\$409,179,789

Source: Land cost per acre from City of Chandler 2007-2012 CIP; development costs provided by the City of Chandler, Parks Development and Operations Division and are based on recent bid data used in developing the 2007-2012 CIP; existing park inventory from Table 28.

In addition to the standard improvements, the level of service analysis includes the replacement cost of the City's five aquatic facilities and recreation centers, which are located in Chandler's community and regional parks. The existing aquatic centers include Arrowhead Pool, Folley Pool, West Chandler Aquatic Center, Hamilton Pool and Desert Oasis Aquatic Center. The City is currently constructing a sixth aquatic center located in Mesquite Groves Park; this facility is scheduled for completion in 2008. The City has two recreation centers located in parks, the Snediger Park and Tumbleweed recreation centers. In the past, the City has utilized a mix of funding for the aquatic center and community park recreation center facilities; the City is funding the new Mesquite Groves recreation center and aquatic center through community park system development fees. The replacement cost for the aquatic centers are based on the cost of designing and constructing the Mesquite Groves Aquatic Center. The replacement cost of the Snediger Park recreation center is based on the facility's insured value, and the replacement cost for Tumbleweed is based on the recent construction cost. As shown in Table 32, the park amenity replacement cost is \$60.2 million.

**Table 32. Park Amenities Replacement Cost**

Snediger Park Recreation Center	\$986,580
Tumbleweed Recreation Center	\$14,443,003
Arrowhead Pool	\$8,958,864
Folley Pool	\$8,958,864
Hamilton Aquatic Center	\$8,958,864
Desert Oasis Aquatic Center	\$8,958,864
West Chandler Aquatic Center	\$8,958,864
Total Replacement Value	\$60,223,903

Source: Snediger Recreation Center replacement cost based on City of Chandler Statement of Values, 2007; Tumbleweed replacement cost based on construction cost from City of Chandler Management Services Department, February 29, 2008; pool and aquatic center replacement costs based on design and construction cost for Mesquite Groves Aquatic Center from Management Services Department, January 17, 2008.

The total land and facility cost is divided by the existing service units to determine the per unit capital cost to maintain the park level of service. The value of existing neighborhood and special use park facilities is adjusted to reflect the outstanding general obligation debt, which was issued to help

fund recent neighborhood park sites that are included in the level of service. The community and regional park level of service is not adjusted to reflect the outstanding general obligation debt and inter-fund loan balance related to the impact fee fund because these funds were used to develop Mesquite Groves, Veteran's Oasis and Nozomi parks; the developed site portions of these parks are not included in the level of service. As shown in Table 33, the existing park system replacement cost and level of service is \$5,593 per service unit.

**Table 33. Existing Park Level of Service**

	Neighborhood/ Special Use Parks	Community/ Regional Parks	Total
Existing Park Facilities	\$147,951,643	\$261,228,146	\$409,179,789
Park Amenities	\$0	\$60,223,903	\$60,223,903
Cash Fund Balance, 6/30/2007	\$3,838,678	\$19,303,599	\$23,142,277
Less: Debt for Facilities in LOS	\$531,149	\$0	\$531,149
Total Park Value	\$151,259,172	\$340,755,648	\$492,014,820
Existing Service Units (EDUs)			87,966
Existing LOS (Replacement Value per EDU)			\$5,593

Source: Existing park replacement cost from Table 31; park amenities replacement cost from Table 32; cash fund balance from Table 27; outstanding general obligation debt from City of Chandler, Management Services Department, October 24, 2007; and existing EDUs from Table 24.

## Net Cost per Service Unit

The park system development fee should not charge new development for a higher level of service than is provided to existing development. As shown in Table 34, the replacement value per service unit for the existing park system (\$5,593 per EDU) is greater than the cost of the planned improvement cost (\$5,516 per EDU); thus, the updated system development fee is based on the cost of the planned park improvements.

**Table 34. Park Level of Service Analysis**

Existing LOS (Replacement Value per EDU)	\$5,593
Plan-Based Cost per EDU	\$5,516

Source: Existing level of service per EDU from Table 33; planned cost per EDU from Table 27.

In order to avoid requiring new development to pay more than its proportional share of facility costs, impact fees should be reduced to account for future tax payments that will retire outstanding debt used to develop the existing park facilities. Such an adjustment also conforms to the State's impact fee standards, which requires a municipality to recognize future tax payments that will be contributed by new development for capital costs of the facilities covered by the development fee. A simple method that ensures that new development is not required to pay for existing facilities, through property tax or other funds used for debt retirement, as well as new facilities, is to calculate the credit by dividing the outstanding debt by existing service units. Reducing the system development fee by this amount places new development on an equal footing with existing development in terms of debt funding of past improvements.

The City has issued general obligation debt to fund park system improvements and land acquisition for community parks, regional parks, recreational centers and other amenities that are included in the level of service analysis. As shown in Table 35, the City has \$71.0 million in outstanding debt related to park facilities. The debt excludes the outstanding debt issued in 2007 to supplement the available system development fee balances for planned growth-related projects at Mesquite Groves, Veteran's Oasis and Nozomi parks since these improvements are not included in the existing level of service. The debt total also excludes the fee-funded general obligation debt issued in 2007 to fund neighborhood park site acquisition; the fee calculation already accounts for this debt, so no further credit is necessary. Based on the outstanding park facility debt, the debt credit is \$808 per EDU.

**Table 35. Park Debt Credit**

Issue	Purpose	Balance
1999	Regional Park Development	\$1,448,333
1999	Paseo Trail	\$521,057
1999	Sports Complex	\$5,610
2001	Community Park Development	\$844,290
2001	Regional Park Development	\$55,008
2001	Aquatic Center	\$1,115,000
2002	Community Park Development	\$256,250
2002	Regional Park Development	\$608,594
2002	Recreation Center	\$108,906
2003	Community Park Development	\$1,000,000
2003	Regional Park Development	\$2,000,000
2003	Paseo Trail	\$1,000,000
2003 Refunding	Community Park Development--1993	\$346,400
2003 Refunding	Regional Park Land--1993	\$2,178,600
2003 Refunding	Community Park Land--1996B	\$264,025
2003 Refunding	Paseo Trail--1996B	\$208,613
2003 Refunding	Sports Complex Development--1996B	\$95,831
2005	Regional Park Development	\$1,000,000
2005	Paseo Trail	\$1,000,000
2005	Snedigar Sportsplex	\$250,000
2006	Recreation Center	\$12,991,251
2006	Regional Park Development	\$808,749
2007	Community Park Land	\$92,274
2007	Tumbleweed Park	\$4,841,397
2007	Snedigar Sportsplex	\$3,342,184
2007	Paseo Vista Recreational Area	\$12,851,501
2007	Grind Park	\$733,639
2007	Recreation Centers	\$58,455
2007	Paseo Trail	\$1,234,066
2007	Desert Breeze Park Expansion	\$47,488
2007 Refunding	Community Park Land--1998	\$389,470
2007 Refunding	Sports Complex Development--1998	\$200,758
2007 Refunding	Regional Park Development--1999	\$1,631,667
2007 Refunding	Paseo Construction--1999	\$587,013
2007 Refunding	Sports Complex--1999	\$6,320
2007 Refunding	Community Park Development--2000	\$1,060,000
2007 Refunding	Community Park Land--2000	\$1,800,000
2007 Refunding	Regional Park Development--2000	\$3,325,000

Issue	Purpose	Balance
2007 Refunding	Paseo Trail--2000	\$390,000
2007 Refunding	Aquatic Center--2001	\$2,490,000
2007 Refunding	Community Park Development--2001	\$1,841,710
2007 Refunding	Regional Park Development--2001	\$119,992
2007 Refunding	Regional Park Development--2002	\$4,141,406
2007 Refunding	Community Park Development--2002	\$1,743,750
Total		\$71,034,607
Existing EDUs		87,966
Debt Credit per EDU		\$808

Source: General obligation debt balances from City of Chandler, Management Services Department, December 14, 2007 and January 29, 2008; existing EDUs from Table 24.

The net cost per unit is determined by subtracting the debt credit per EDU from the plan-based cost per EDU. As shown in Table 36, the net cost per unit based on the growth-related costs and debt credit is \$4,708 per EDU.

**Table 36. Park Net Cost Per Service Unit**

Plan-Based Cost per EDU	\$5,516
Debt Credit per EDU	\$808
Net Cost per EDU	\$4,708

Source: Cost per EDU based on plan-based cost per EDU from Table 34; park debt credit from Table 35.

## Updated Fee Schedule

The maximum park system development fees that can be adopted by the City based on this study are derived by multiplying the EDUs associated with each unit by the net cost per EDU, as shown in Table 37.

**Table 37. Updated Park System Development Fees**

Land Use	EDUs/Unit	Cost/EDU	Fee/Unit
Single-Family	1.000	\$4,708	\$4,708
Multi-Family	0.766	\$4,708	\$3,606

Source: EDUs per unit from Table 23; net cost per EDU from Table 36.

The updated park system development fees are compared with current fees in Table 38. The reduction primarily reflects the application of a debt credit, and the variation in the fee reduction by housing type reflects the application of updated service unit multipliers.

**Table 38. Comparative Park System Development Fees**

Land Use	Current Fee			Proposed Fee	Percent Change
	Neighborhood	Community	Total		
Single-Family	\$2,483	\$4,175	\$6,658	\$4,708	-29%
Multi-Family	\$1,429	\$2,402	\$3,831	\$3,606	-6%

Source: Current fee from City of Chandler Code, Section 38-13; updated fees from Table 37.

Based on forecast residential growth projections through build-out, potential park system development fee revenue would decrease by 22 percent if the fee was adopted at the proposed fee levels, as shown in Table 39.

**Table 39. Potential Park System Development Fee Revenue**

Land Use	New Units	Current Fee Schedule		Potential Fee Schedule		Percent Change
		Fee/Unit	Revenue	Fee/Unit	Revenue	
Single-Family	9,107	\$6,658	\$60,634,406	\$4,708	\$42,875,756	-29%
Multi-Family	7,262	\$3,831	\$27,820,722	\$3,606	\$26,186,772	-6%
Total			\$88,455,128		\$69,062,528	-22%

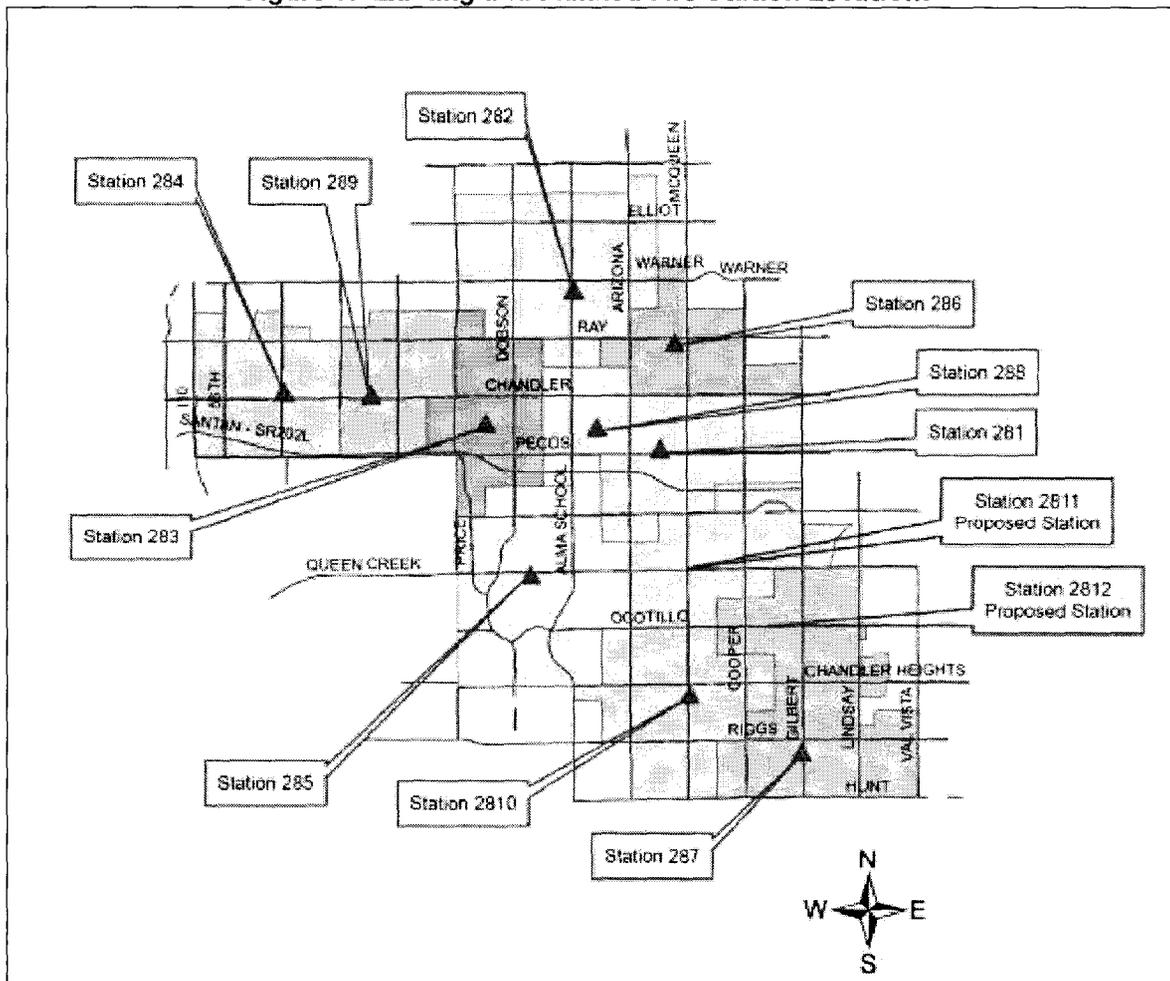
Source: New units based on current and build-out units from Table 82, Appendix A; current and potential fees from Table 38.

# FIRE

The City of Chandler provides a full range of services, including fire prevention, safety education, fire suppression, emergency medical service, disaster preparation and planning, and a variety of technical rescue and special operations to individuals and businesses throughout the incorporated area. The Fire Department operates nine engine companies and two ladder companies out of nine fire stations, with a tenth station scheduled to open in fall of 2007. An eleventh station is planned in the current Capital Improvement Program. The locations of existing and planned fire stations are illustrated in Figure 5.

This section calculates the maximum fire system development fees that could be charged to new development based on the current CIP cost data and planned facilities and the existing level of service. Since 2005, the fire system development fee has included fire engines and related capital equipment, and this update will continue to include those items in the calculation of the system development fee.

**Figure 5. Existing and Planned Fire Station Locations**



## Service Area

The fire system development fee service area currently includes the entire incorporated area of the City. While fire-fighting apparatus are generally dispatched from a station to calls within that station's primary response area, these units may also respond to calls in neighboring response areas if needed. In addition, the headquarters and training facilities are centralized. Consequently, the City's fire facilities constitute an interrelated system that provides service throughout the jurisdiction. For these reasons, this study recommends maintaining a single fire service area that includes all of the incorporated areas of the City.

## Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for fire service. This common unit of measurement is referred to as a "service unit." Service units create the link between the supply of fire capital facilities and the demand for such facilities generated by new development.

The two most common methodologies used in calculating fire impact fees are the "calls-for-service" approach and the "functional population" approach. A third, less common approach, currently utilized by the City, is to allocate the fire infrastructure costs using the future distribution of land uses in Chandler and dividing the appropriate portion of service costs by total residential or nonresidential development. In prior updates, concerns have been expressed that the resulting fee does not differentiate between different types of residential units, specifically, multi-family units and single-family units. The current fee also treats all nonresidential development the same by charging the same rate per square foot regardless of land use.

In developing the methodology for this fire system development fee update, the consultant, in consultation with City staff, decided to switch to the functional population approach. The calls-for-service approach, which uses calls by land use type to make the connection between land use type and demand for fire department services, could not be used since records based on the land use type where the call for service originates are unavailable.

The functional population approach is based on the premise that the demand for fire services is strongly related to the presence of people at the site of a land use. This is reasonable, since the majority of Fire Department calls are related to emergency medical response, rather than structure fires. Functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for fire facilities. For residential development, functional population is simply average household size times the percent of time people are assumed to spend at home. For nonresidential development, functional population is based on a formula that factors trip generation rates, average vehicle occupancy and average number of hours spent by visitors at a land use. The functional population multipliers for various land use types are then converted to equivalent dwelling units (EDUs), based on the functional population of the average single-family detached unit. The calculation of functional population and EDUs are presented in Appendix B.

## Planned Improvements

In the past, the City's calculation of the system development fee included only a portion of new facilities that could be directly attributable to growth. The construction of new fire stations in growth areas are directly attributable to new development and will serve that development. However, growth's share of centralized facilities is not as clear-cut. For example, in funding the new training center expansion, the City has allocated system development fee funding for 36 percent of the training facility cost based on an analysis of the share of future fire personnel attributed to growth. However, in this update the entire cost of expanding the training center is attributed to new development, since the facility will become part of the overall fire department service level that will be provided to development at build-out. The level-of-service analysis conducted as part of this update will ensure that the updated system development fee does not exceed the existing level of service and that the improvements will not remedy existing deficiencies.

As with the prior update, the costs eligible for inclusion in the system development fee update include any land purchases, construction of new facilities and major fire-fighting apparatus necessary to serve growth. The City has no planned new facilities beyond those included in the current Capital Improvement Program. As discussed above, the full expansion costs for the training center are included in the calculation of the fee. As shown in Table 40, the City has planned \$21.9 million in new facilities and system development fee fund expenditures that will serve growth and are eligible for inclusion in the fire system development fee calculation.

**Table 40. Planned Fire Improvements**

	CIP Cost	% Growth	Growth Cost
Southeast Fire Station - Santan/Airport	\$7,130,504	100%	\$7,130,504
Southeast Fire Station - Ocotillo/Gilbert	\$7,045,510	100%	\$7,045,510
Training Center Expansion	\$7,729,992	100%	\$7,729,992
<b>Planned Improvement Costs</b>	<b>\$21,906,006</b>		<b>\$21,906,006</b>

Source: Planned construction costs from City of Chandler 2007-2012 CIP; training center expansion cost excludes municipal arts funding.

## Cost per Service Unit

The cost per service unit is developed by dividing the planned improvement costs by the projected growth in service units through build-out. However, the planned facility costs must be adjusted to account for existing fund balances and carry-forward reserves. Any positive system development fee account balance is subtracted from the total net cost, since those funds may be used to pay for a portion of the planned infrastructure or pay the inter-fund loan and will decrease the amount of fee funding necessary for the planned improvements.

The encumbrances represent the balance owed to contractors for projects that are underway, with most of the balance related to construction of Fire Station #10. The capital carry-forward reserve balance represents the unspent and unencumbered capital project appropriation balance with approximately \$1.0 million associated with the fire administration building improvements and approximately \$4.0 million related to the construction of Fire Station #10. The encumbrances and carry-forward balances represent projects that are under construction and no longer included in the

City's Capital Improvement Program. Since these projects will serve future development and are unfunded, they are included in the calculation as a growth-related cost.

In addition to the encumbrance and fee balance, the growth-related costs are adjusted to reflect the inter-fund loan. The inter-fund loan reflects \$7.1 million borrowed by the system development fee fund from the general fund in order to fund growth-related improvements at Fire Station #10, as well as the fire administration building, mechanical maintenance facility expansion and land for Fire Station #12. Future system development fee revenue may be utilized to repay the inter-fund loan since the improvements were growth-related and there was not enough existing fund balance to fund the facilities at the time of their construction.

The planned improvement cost is adjusted by adding the inter-fund loan, encumbrances and carry-forward balances to the costs and subtracting the cash balance in the impact fee account. As shown in Table 41, the plan-based cost is approximately \$603 per service unit.

**Table 41. Fire Cost per Service Unit**

Planned Improvement Costs	\$21,906,006
Inter-fund Loan from General Fund	\$7,123,657
Encumbrances for Current Projects	\$834,884
Capital Carry-Forward Balance	\$5,026,695
Less: Ending Fund Balance, 6/30/2007	\$5,751,224
Total, Growth-Related Costs	\$29,140,018
New Service Units (EDUs)	48,349
Plan-Based Cost per EDU	\$603

*Source:* Total costs from Table 40; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; encumbrance, carry-forward and ending fund balance from City of Chandler Management Services Department, November 21, 2007; new service units from Table 87, Appendix B.

## Existing Level of Service

The City of Chandler Fire Department planning is based on achieving a response time of four minutes or less for 75 percent of all emergency calls. The new fire stations will be located in the southeastern portion of the City since that area is generating the most emergency calls that are not within the four minute response area of existing stations.

Fire system development fees are designed to charge new development the cost of providing the facilities needed to serve growth provided that the new facilities do not exceed the same level of service provided to existing development. The existing level of service for fire protection is based on the replacement cost of existing facilities and major fire fighting capital equipment. The City currently operates fire-fighting apparatus out of nine fire stations. As mentioned earlier, the tenth station will open in the fall of 2007 and currently operates out of a temporary structure; this fire station is not included in the current level of service since it was funded with an inter-fund loan from the general fund that will be repaid through future system development fee funds.

The value of existing facilities is based on recent cost experience in developing fire stations and land acquisition costs for fire facilities. The City utilizes a prototypical fire station design, which costs

about \$280 per square foot to construct based on the cost to develop Fire Station #9. While land costs vary based on site characteristics, the average acquisition cost has been approximately \$226,000 per acre, as shown in Table 42.

**Table 42. Fire Land Acquisition Costs**

Fire	Year	Orig. Cost	CPI	Current Cost	Acres	Cost/Acre
Desert Breeze Site*	2002	\$319,950	1.163	\$372,102	1.92	\$193,803
Fire Administration Building	2002	\$275,000	1.163	\$319,825	0.42	\$761,488
Fire Administration Building	2002	\$60,000	1.163	\$69,780	0.14	\$498,429
Station #8	2002	\$184,000	1.163	\$213,992	1.84	\$116,300
<b>Total</b>				<b>\$975,699</b>	<b>4.32</b>	<b>\$225,856</b>

\*Site purchased for community park, police and fire facility and approximately 16% of site used for fire station.  
 Source: Parcel description and cost from City of Chandler Management Services Department, November 7, 2007; Desert Breeze site cost and acres from Management Services Department, January 14, 2008; CPI is cost inflation factor based on U.S. Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, Western City Average, All Items (1982-1984=100) for December 2007 from <http://data.bls.gov/cgi-bin/survey/most>.

Table 43 summarizes the City's existing fire facility inventory and replacement costs. The inventory of Fire Department facilities includes Fire Station #10; however, since a portion of the facility was funded with a general fund loan to the system development fee fund, the final calculation of the existing level of service will be adjusted by the outstanding general fund loan to reflect the unfunded portion of the facility.

**Table 43. Existing Fire Building and Land Cost**

Facility	Year Built	Bldg. (s.f.)	Land (ac.)
Chandler Fire Headquarters	1990	11,243	0.46
Fire Training Facility	1998/2005	17,400	87.96
Fire Maintenance Facility	1985	7,800	1.29
Fire Station #1	1990	10,525	1.74
Fire Station #2	1985	7,228	2.91
Fire Station #3	1999	9,662	1.72
Fire Station #4	1985	7,328	1.85
Fire Station #5	1998	8,200	0.79
Fire Station #6	2002	8,000	1.54
Fire Station #7	2003	8,000	1.66
Fire Station #8	2004	8,000	1.84
Fire Station #9	2006	10,200	1.84
Fire Station #10*	2007	8,200	2.81
<b>Total</b>		<b>121,786</b>	<b>108.41</b>
<b>Cost per Sq. Ft./Acre</b>		<b>\$280</b>	<b>\$225,856</b>
<b>Total Value</b>		<b>\$34,100,080</b>	<b>\$24,485,049</b>

\* Station #10 is a temporary station; the permanent station will open in late 2007.  
 Source: Facility square feet from City of Chandler Statement of Values; land from City of Chandler Management Services Department analysis of parcel data, November 28, 2007; square feet cost per unit based Desert Breeze/West Chandler facility construction costs; land cost per acre from Table 42.

In addition to land and buildings, the City's existing level of service includes the fire apparatus that are necessary to perform its duties. The replacement cost of fire-fighting apparatus is based on the current cost of a fully-equipped vehicle. As shown in Table 44, the replacement value of the City's fire equipment is approximately \$12.7 million.

**Table 44. Existing Fire Vehicle Cost**

Equipment Type	Quantity	Unit Cost	Replacement Value
Engine	15	\$539,663	\$8,094,945
Ladder Truck	3	\$1,215,823	\$3,647,469
Ford F550 Utility	1	\$53,642	\$53,642
Heavy Rescue	1	\$586,872	\$586,872
Special Operations Truck	2	\$176,000	\$352,000
<b>Total</b>			<b>\$12,734,928</b>

Source: City of Chandler Fire Department, August 14, 2007; cost based on recent bid and replacement costs.

The total capital cost represented by existing fire facilities and equipment is the sum of building, land, vehicle and capital equipment costs. The value of existing facilities is approximately \$71.3 million, as shown in Table 45. The value of existing facilities is adjusted by the outstanding inter-fund loan balance, which represents unfunded facilities included in the level of service that will be funded by future system development fee collections. Dividing by existing service units yields the cost per service unit. This represents the existing level of service, which is approximately \$569 per EDU.

**Table 45. Existing Fire Level of Service**

Fire Facilities	\$34,100,080
Land Value	\$24,485,049
Fire Equipment	\$12,734,928
Subtotal, Existing Facilities	\$71,320,057
Ending Fund Balance, 6/30/2007	\$5,751,224
Less: Unfunded Facilities*	\$6,724,707
Total Fire System Value	\$70,346,574
Existing Service Units (EDUs)	123,530
Existing LOS (Replacement Value per EDU)	\$569

\*Unfunded facility based on inter-fund loan balance reduced by \$398,950 to reflect funding associated with acquisition of land for Fire Station # 12, which is not included in the existing level of service.

Source: Fire facility and land value from Table 43; fire equipment from Table 44; unfunded facility value based on current outstanding inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; ending fund balance from Table 41; existing EDUs from Table 86, Appendix B.

## Net Cost Per Service Unit

The cost per service unit based on existing facilities is compared with the adjusted cost of planned improvements in order to ensure that new development does not pay for a higher level of service than existing development for fire facilities and equipment. As shown in Table 46, the value of existing fire facilities and equipment is slightly lower than the planned growth-related cost per EDU. Basing the fee on a high-than-existing level of service creates existing deficiencies that must be funded and requires credit against the impact fees for revenue generated by new development that

will be used to remedy the deficiencies. To avoid these complications, the fire system development fee should be based on the existing level of service.

**Table 46. Fire Level of Service Analysis**

Existing LOS (Replacement Value per EDU)	\$569
Plan-Based Cost per EDU	\$603

Source: Existing level of service per EDU from Table 45; net cost per EDU from Table 41.

As noted in the introduction, impact fees should be reduced to account for future funding that will be generated by new development and used to remedy existing deficiencies or to retire outstanding debt on existing facilities that provide service to existing development. The City has issued general obligation debt to partially fund fire department facilities that are included in the existing level of service. The debt credit is determined by dividing the outstanding debt by existing service units. As shown in Table 47, total outstanding debt is approximately \$4.0 million, which results in a debt credit of \$32 per EDU.

**Table 47. Fire Facility Debt**

Issue	Purpose	Balance
2000	Chandler/Alma School Land	\$155,000
2007	Fire Admin. Construction	\$3,611,619
2007	Station #3 Expansion	\$195,863
Total		\$3,962,482
Existing EDUs		123,530
Debt Credit per EDU		\$32

Source: General obligation debt balances from City of Chandler, Management Services Department, December 14, 2007; fire administration building debt reduced by \$1,127,518 to reflect the portion of the facility funded by the system development fee account through the inter-fund loan, which will be funded by future development; existing EDUs from Table 86, Appendix B.

Reducing the system development fee by the debt credit places new development on an equal footing with existing development in terms of debt funding of past improvements. As shown in Table 48, the net cost is \$537 per EDU based on the existing level of service.

**Table 48. Fire Net Cost per Service Unit**

Existing LOS (Replacement Value per EDU)	\$569
Debt Credit per EDU	\$32
Net Cost per EDU	\$537

Source: Cost per EDU based on existing level of service from Table 46; debt credit per EDU from Table 47.

## Updated Fee Schedule

The maximum fire system development fees that can be adopted by the City based on this study are derived by multiplying the service units (EDUs) represented by each impact unit by the net cost per service unit, as shown in Table 49.

**Table 49. Updated Fire System Development Fees**

Land Use	Unit	EDUs/ Unit	Net Cost/EDU	Fee/ Unit
Single-Family	Dwelling	1.000	\$537	\$537
Multi-Family	Dwelling	0.766	\$537	\$411
Retail/Commercial	1000 sq. ft.	1.251	\$537	\$672
Office	1000 sq. ft.	0.952	\$537	\$511
Public/Institutional	1000 sq. ft.	0.323	\$537	\$173
Industrial/Warehouse	1000 sq. ft.	0.306	\$537	\$164

Source: EDUs per unit from Table 84 and Table 85, Appendix B; net cost per EDU from Table 48.

The updated fire system development fees are compared with current fees in Table 50. The increase in retail and office land uses reflects the application of the functional population basis and the relatively higher demand for fire services associated with these land uses based on the presence of people when compared with other nonresidential land uses. Likewise, the reduction for other nonresidential land uses reflects the lower functional population associated with these uses. In addition, the update distinguishes between single-family and multi-family units, since multi-family units have a lower relative functional population than single-family housing.

**Table 50. Comparative Fire System Development Fees**

Land Use	Unit	Current Fee	Proposed Fee	% Change
Single-Family	Dwelling	\$564	\$537	-5%
Multi-Family	Dwelling	\$564	\$411	-27%
Retail/Commercial	1000 sq. ft.	\$330	\$672	104%
Office	1000 sq. ft.	\$330	\$511	55%
Public/Institutional	1000 sq. ft.	\$330	\$173	-48%
Industrial/Warehouse	1000 sq. ft.	\$330	\$164	-50%

Source: Current fee from City of Chandler, Code Section 38-13; proposed fee from Table 49.

Based on forecast residential and nonresidential growth projections through build-out and the system development fees calculated in this report, potential fire system development fee revenue would decrease by 9 percent, as shown in Table 51.

**Table 51. Potential Fire System Development Fee Revenue**

Land Use	Unit	New Units	Current Fee Schedule		Potential Fee Schedule		Percent Change
			Fee/Unit	Revenue	Fee/Unit	Revenue	
Single-Family	Dwelling	9,107	\$564	\$5,136,348	\$537	\$4,890,459	-5%
Multi-Family	Dwelling	7,262	\$564	\$4,095,768	\$411	\$2,984,682	-27%
Retail/Commercial	1000 sq. ft.	9,752	\$330	\$3,218,160	\$672	\$6,553,344	104%
Office	1000 sq. ft.	10,277	\$330	\$3,391,410	\$511	\$5,251,547	55%
Public/Institutional	1000 sq. ft.	2,333	\$330	\$769,890	\$173	\$403,609	-48%
Industrial/Warehouse	1000 sq. ft.	35,755	\$330	\$11,799,150	\$164	\$5,863,820	-50%
<b>Total</b>				<b>\$28,410,726</b>		<b>\$25,947,461</b>	<b>-9%</b>

Source: New units based on current and build-out units from Table 82, Appendix A; current and potential fees from Table 50.

## **POLICE**

The City of Chandler Police Department provides law enforcement patrol and response within the incorporated area. Officers and staff perform their duties from a centralized headquarters and two substations. The Desert Breeze substation was completed in 2006 and a second substation, the Chandler Heights Substation, will be open in 2008.

This section updates the maximum police system development fee that could be charged by the City consistent with legal requirements. As with the other fees, the update includes an analysis of the existing level of service.

### **Service Area**

As with the fire fees, the police system development fee service area currently includes the entire incorporated area of the City. While the Police Department has developed substations to better serve defined geographic areas, the facilities form a system that responds throughout the community where it is needed. Because of the mobile nature of police patrols, new development can reasonably be expected to benefit from additional facilities regardless of where they are constructed. The City's incorporated area will continue to serve as the police service area.

### **Service Unit**

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for service. This common unit of measurement is referred to as a "service unit." As with other fees calculated in this report, the police fee utilizes a common service unit based on the "equivalent dwelling unit" or EDU, which represents the impact of a typical single-family detached dwelling.

As with fire protection, the two most common methodologies used in calculating the demand for law enforcement services are the "calls-for-service" approach and the "functional population" approach. The City's latest system development fee calculations allocated the police infrastructure costs using the future distribution of land uses in Chandler and dividing the appropriate portion of service costs by total residential or nonresidential development.

This study uses functional population in order to be consistent with the other fees calculated in this report and because detailed call data by land use are not available. Police calls are often not directly related to existing land uses; they often occur on streets or in parking lots, where they are related to movement between land uses. While non-attributed incidents can be indirectly attributed to specific land uses, the functional population provides a more consistent and simpler approach to allocating police calls across all land uses based on the number of "full-time equivalent" people present at the site of a land use. The police service units are based on the functional population analysis presented in Appendix B.

## Planned Improvements

The costs eligible for inclusion in the system development fee update include any land purchases, construction of new facilities and growth-related expansion of existing facilities necessary to serve growth. The City plans on utilizing system development fee funding for the police training facilities and expanding the communication center in the current 2007-2012 Capital Improvement Program. There are no additional facilities planned beyond 2012.

While the City does not currently have training facilities, their construction completes the overall provision of police services at build-out. As with the fire department training facility expansion, the facility cost is fully allocated to the system development fee calculation. Since this update includes a level of service analysis and the fee will not exceed the existing cost per service unit, all planned facilities may be funded with future system development fees, provided that the cost per service unit does not exceed the existing level of service. As shown in Table 52, the City's system development fee may be used to offset \$8.0 million of growth-related expenditures.

**Table 52. Planned Police Improvements**

	CIP Cost	% Growth	Growth Cost
Police Driver Training Facility	\$5,516,710	100%	\$5,516,710
Communications Center/Administration Expansion	\$631,789	100%	\$631,789
Police Training Facility	\$1,806,668	100%	\$1,806,668
Planned Improvement Costs	\$7,955,167		\$7,955,167

*Source:* Planned construction costs from City of Chandler 2007-2012 Capital Improvement Program; police driver training facility and police training facility CIP costs exclude municipal arts funding.

## Cost per Service Unit

As in prior updates, the planned capital improvement costs are adjusted by the existing system development fee fund cash balance, since the fund balance will be used to pay for a portion of the future infrastructure and will decrease the amount needed to be collected from fees. The encumbrances and capital carry-forward balances related to projects currently under construction are added to the planned improvement costs, since they will serve future development and are not included in the existing level of service. In addition to the system development fee fund adjustment, the police fee is adjusted to reflect the outstanding inter-fund loan balance. The City's system development fee fund borrowed \$8.5 million from the general fund in order to fund growth-related improvements at the Chandler Heights and Desert Breeze substations. Future system development fee revenue may be utilized to repay the general fund loan, since the improvements were growth-related and were only paid for with general fund money because there were not enough funds available in the system development fee fund.

The average cost per service unit is determined by dividing the total cost of growth-related improvements by the future growth in service units. As shown in Table 53, the growth-related cost is \$350 per service unit.

**Table 53. Police Cost per Service Unit**

Planned Improvement Costs	\$7,955,167
Inter-fund Loan from General Fund	\$8,531,049
Encumbrances for Current Projects	\$4,963,305
Capital Carry-Forward Balance	\$811,166
Less: Ending Fund Balance, 6/30/2007	\$5,337,717
Total, Growth-Related Costs	\$16,922,970
New Service Units (EDUs)	48,349
Plan-Based Cost per EDU	\$350

Source: Total cost from Table 52; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; encumbrances, carry-forward and ending fund balance from City of Chandler Management Services Department, November 21, 2007; new service units from Table 87, Appendix B.

## Existing Level of Service

City of Chandler Police Department planning is based on providing a response time of five minutes for priority one calls and fifteen minutes for priority two calls. The recent construction of substations in the western and southeastern portions of the City were planned to ensure that response times do not fall below an unacceptable level for Chandler residents, since officers will be assigned out of a station closer to the police patrol beat in these areas.

Police system development fees are designed to charge new development the cost of providing the facilities needed to serve growth, provided that the new facilities do not exceed the level of service provided to existing development. The existing level of service for police protection is based on the replacement cost of existing facilities.

The value of existing facilities is based on recent cost experience in developing police substations and land acquisition costs for recent police facilities. The cost to develop a police substation is based on the recent cost of \$280 per square foot to construct and develop the Desert Breeze facility. As shown in Table 54, land costs have averaged approximately \$167,000 per acre for police facilities.

**Table 54. Police Land Acquisition Costs**

Police	Year	Orig. Cost	CPI	Current Cost	Acres	Cost/Acre
Desert Breeze Site*	2002	\$870,975	1.163	\$1,012,944	5.22	\$194,051
Evidence Building	2004	\$575,000	1.113	\$639,975	3.05	\$209,828
Police Driving Track	2006	\$2,000,320	1.044	\$2,088,334	14.15	\$147,585
Total				\$3,741,253	22.42	\$166,871

\* Site purchased for community park, police and fire facility and approximately 44% of site used for police facility.  
Source: Parcel description and cost from City of Chandler Management Services Department, November 7, 2007; CPI is cost inflation factor based on U.S. Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, Western City Average, All Items (1982-1984=100) for December 2007 from <http://data.bls.gov/cgi-bin/surveymost>.

Table 55 summarizes the City's existing police building and land inventory. Vehicles and equipment are not included in the police system development fee calculation or the existing level of service analysis. The level of service includes the land that has already been purchased for the police driving track.

**Table 55. Police Facility and Land Cost**

Facility	Year Built	Bldg. (s.f.)	Land (ac.)
Property & Evidence Building	1976/2003	30,430	1.83
Police Department	1998	67,529	5.85
Chandler Heights Substation	2008	20,000	4.50
Police Driving Track	NA	NA	14.15
Desert Breeze Substation	2006	21,253	5.00
Total		139,212	31.33
Cost per Square Feet/Acre		\$280	\$166,871
Total Value		\$38,979,360	\$5,228,068

Source: Facility square feet from City of Chandler Statement of Values; land from City of Chandler Management Services Department analysis of parcel data, November 28, 2007; square feet cost per unit based Desert Breeze/West Chandler facility construction costs; land cost per acre from Table 54.

The total capital cost represented by existing police facilities is the sum of building replacement costs, land replacement costs and the system development fee cash balance. As mentioned earlier, the value of the existing facilities is reduced to reflect the outstanding inter-fund loan utilized to develop the Chandler Heights and Desert Breeze substations, which are included in the existing level of service. The inter-fund loan for these facilities will be repaid with future system development fee funds. The total land and facility cost is divided by the existing service units to determine the capital cost of \$332 per service unit to maintain the existing police level of service, as shown in Table 56.

**Table 56. Existing Police Level of Service**

Police Facilities	\$38,979,360
Land Value	\$5,228,068
Subtotal, Existing Facilities	\$44,207,428
Ending Fund Balance, 6/30/2007	\$5,337,717
Less: Unfunded Facilities	\$8,531,049
Total Existing Facility Value	\$41,014,096
Existing Service Units (EDUs)	123,530
Existing LOS (Replacement Value per EDU)	\$332

Source: Existing facility value from Table 55; unfunded facility value based on current outstanding inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; existing EDUs from Table 86, Appendix B.

## Net Cost per Service Unit

The cost per service unit based on the existing level of service is compared with the adjusted cost of planned improvements in order to ensure that new development does not pay for a higher level of service than existing development for police facilities. As shown in Table 57, the value of growth-related costs is slightly higher than the existing level-of-service cost per EDU. As a result, the police system development fee will be based on the existing level of service cost per EDU.

**Table 57. Police Level of Service Analysis**

Existing LOS (Replacement Value per EDU)	\$332
Plan-Based Cost per EDU	\$350

Source: Existing level of service cost per EDU from Table 56; plan-based cost per EDU from Table 53.

As noted in the introduction, impact fees should be reduced to account for future funding that will be generated by new development and used to remedy existing deficiencies or to retire outstanding debt of existing facilities that provide the existing level of service. The City has issued general obligation debt to partially fund police facilities that are included in the existing level of service. The debt excludes the outstanding debt issued in 2007 to supplement the available system development fee balances for the planned growth-related projects of the Police Driver Training Facility and Communications Center since these improvements are not included in the existing level of service. The outstanding debt credit is determined by dividing the outstanding debt by existing service units. As shown in Table 58, total outstanding debt is approximately \$7.9 million, which results in a debt credit of \$64 per EDU.

**Table 58. Police Facility Debt**

Issue	Purpose	Balance
1996B	Police Headquarters	\$1,905,000
1998	Police Headquarters	\$650,000
2000	Property Evidence Expansion	\$230,000
2002	Police Driving Track	\$2,000,000
2003 Refunding	Police Headquarters--1996B	\$2,300,000
2007	South Chandler Police Substation	\$456,255
2007 Refunding	Police Headquarters--1998	\$375,000
Total		\$7,916,255
Existing EDUs		123,530
Debt Credit per EDU		\$64

Source: General obligation debt balances from City of Chandler, Management Services Department, December 14, 2007; existing EDUs from Table 86, Appendix B.

Reducing the system development fee by the debt credit places new development on an equal footing with existing development in terms of debt funding of past improvements. As shown in Table 59, the net cost for police facilities is about \$268 per EDU.

**Table 59. Police Net Cost per Service Unit**

Existing Replacement Value per EDU	\$332
Debt Credit per EDU	\$64
Net Cost per EDU	\$268

Source: Plan-based cost per EDU from Table 57; debt credit per EDU from Table 58.

## Updated Fee Schedule

The maximum police system development fees that can be adopted by the City based on this study are derived by multiplying the number of service units (EDUs) represented by each development unit by the net cost per service unit, as shown in Table 60.

**Table 60. Updated Police System Development Fees**

Land Use	Unit	EDUs/Unit	Net Cost/EDU	Fee/Unit
Single-Family	Dwelling	1.000	\$268	\$268
Multi-Family	Dwelling	0.766	\$268	\$205
Retail/Commercial	1000 sq. ft.	1.251	\$268	\$335
Office	1000 sq. ft.	0.952	\$268	\$255
Public/Institutional	1000 sq. ft.	0.323	\$268	\$87
Industrial/Warehouse	1000 sq. ft.	0.306	\$268	\$82

Source: EDUs per unit from Table 84 and Table 85, Appendix B; net cost per EDU from Table 59.

The updated police system development fees are compared with current fees in Table 61. The variation in the fee among land uses is the result of the application of functional population in measuring the service units associated with each land use. The functional population is based on the presence of people at a land use, which results in higher fees for retail and office land uses and lower fees for other nonresidential land uses. In the past, the City has not charged different fees for residential land uses; however, the methodology used in this update allows the City to distinguish the variability in demand for police services between the single-family and multi-family residential land uses.

**Table 61. Comparative Police System Development Fees**

Land Use	Unit	Current Fee	Proposed Fee	% Change
Single-Family	Dwelling	\$241	\$268	11%
Multi-Family	Dwelling	\$241	\$205	-15%
Retail/Commercial	1000 sq. ft.	\$140	\$335	139%
Office	1000 sq. ft.	\$140	\$255	82%
Public/Institutional	1000 sq. ft.	\$140	\$87	-38%
Industrial/Warehouse	1000 sq. ft.	\$140	\$82	-41%

Source: Current fee from City of Chandler Code, Section 38-13; proposed fee from Table 60.

Based on forecast residential and nonresidential growth projections through build-out and the system development fees calculated in this report, potential police system development fee revenue would increase by 7 percent, as shown in Table 62.

**Table 62. Potential Police System Development Fee Revenue**

Land Use	Unit	New Units	Current Fee Schedule		Potential Fee Schedule		Percent Increase
			Fee/Unit	Revenue	Fee/Unit	Revenue	
Single-Family	Dwelling	9,107	\$241	\$2,194,787	\$268	\$2,440,676	11%
Multi-Family	Dwelling	7,262	\$241	\$1,750,142	\$205	\$1,488,710	-15%
Retail/Commercial	1000 sq. ft.	9,752	\$140	\$1,365,280	\$335	\$3,266,920	139%
Office	1000 sq. ft.	10,277	\$140	\$1,438,780	\$255	\$2,620,635	82%
Public/Institutional	1000 sq. ft.	2,333	\$140	\$326,620	\$87	\$202,971	-38%
Industrial/Warehouse	1000 sq. ft.	35,755	\$140	\$5,005,700	\$82	\$2,931,910	-41%
<b>Total</b>				<b>\$12,081,309</b>		<b>\$12,951,822</b>	<b>7%</b>

Source: New units based on current and build-out units from Table 82, Appendix A; current and potential fees from Table 61.

## **PUBLIC BUILDINGS**

This section calculates the updated public building system development fees designed to cover the impact of growth on general government facilities. The City's public buildings system development fee funds administrative buildings, fleet maintenance facilities and other general government facilities not covered by the City's arterial street, park, fire, police, library, water and wastewater system development fees.

### **Service Area**

As with the fire and police system development fees, the public building service area currently includes the City's entire incorporated area. Unlike some system development fee facilities, public buildings are not geographically distributed among all areas of the city. Existing facilities and employment tend to be concentrated geographically near the downtown area. However, where general government facilities are located is irrelevant, since they provide service to the entire city. Consequently, the consultant recommends that the City retain a city-wide service area for the public building system development fees.

### **Service Unit**

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for service. This common unit of measurement is referred to as a "service unit." As with other fees calculated in this report, the public building fee service unit is the "equivalent dwelling unit" or EDU, which represents the impact of a typical single-family detached dwelling.

Generally, there is a link between population and municipal employment, which is, in turn, linked to administrative facility space. Due to this connection, the "functional population" approach is one of the techniques that are widely accepted for use in impact fee studies to estimate the demand for public buildings. To a large extent, the demand for general government services is proportional to the presence of people. As previously discussed, functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and is used for determining the impact of a particular development on the need for public buildings. Functional population can be converted into EDUs, based on the functional population of a single-family detached unit. The functional population and EDU calculations are presented in Appendix B.

### **Planned Improvements**

The costs eligible for inclusion in the system development fee include any land purchases, construction of new facilities and growth-related expansion of existing facilities necessary to serve growth. In the past, however, the City has programmed approximately half of the funding for these

improvements from the public building system development fees, with the other half funded from the general fund.

The City currently leases space for the city hall and will be building a new 120,000 square foot facility. The cost of the new city hall can be entirely attributed to new development provided the fee does not exceed the existing level of service. The public works expansion will expand existing public works space and is also entirely attributable to new development. The City plans to construct a public parking garage in order to replace a surface parking lot, replace the loss of leased parking at the current city hall and accommodate the expansion of facilities. The share of this facility allocated to growth is based on the increase in parking spaces, which was utilized by the City in programming system development fee funding for the project. The City does not have any current inter-fund loans from the general fund to the public building system development fee fund. There are no new fee-eligible public building facilities planned beyond 2012. As shown in Table 63, the City has planned \$71.0 million in new facilities that will serve growth and are eligible for inclusion in the public building system development fee calculation.

**Table 63. Planned Public Building Improvements**

Project	CIP Cost	% Growth	Growth Cost
New City Hall	\$66,525,311	100%	\$66,525,311
Public Works Expansion - Downtown Complex	\$3,836,400	100%	\$3,836,400
Public Parking Garage	\$6,097,600	10%	\$609,760
<b>Planned Improvement Costs</b>	<b>\$76,459,311</b>		<b>\$70,971,471</b>

*Source:* Planned construction costs from City of Chandler 2007-2012 CIP; new City Hall and public works expansion costs exclude municipal arts funding; parking garage growth share assumed based on system development fee funding share of total cost from 2007-2012 CIP.

## Cost per Service Unit

The cost per service unit is developed by dividing the growth-related public building improvement costs by the projected growth in service units through build-out. As with the other fee calculations, the costs are adjusted to account for existing fund balances and carry-forward reserves. The public building system development fee account has only one outstanding encumbrance related to the new city hall project. As shown in Table 64, the net cost of planned facilities attributed to growth is \$1,317 per service unit.

**Table 64. Public Building Cost per Service Unit**

Planned Improvement Costs	\$70,971,471
Encumbrances for Current Projects	\$122,835
Capital Carry-Forward Balance	\$0
Less: Ending Fund Balance, 6/30/2007	\$7,420,124
<b>Total, Growth-Related Costs</b>	<b>\$63,674,182</b>
<b>New Service Units (EDUs)</b>	<b>48,349</b>
<b>Plan-Based Cost per EDU</b>	<b>\$1,317</b>

*Source:* Planned improvement costs from Table 63; encumbrances and fund balance from City of Chandler Management Services Department, November 21, 2007; new service units from Table 87, Appendix B.

## Existing Level of Service

Basic impact fee principles require that the public building system development fees should not exceed the cost to provide the existing level of service. The existing level of service for public buildings can be based on the replacement cost of existing facilities. The facilities included in the existing level of service include the housing and redevelopment building, information technology, the operations yard, and the Public Works and Planning/Development department offices at 215 East Buffalo Street. The City currently leases 34,000 square feet for its city hall in the Chandler Office Center. The City has purchased the site on which the new 120,000-square-foot city hall will be constructed.

The City has been acquiring land in the downtown area for the new city hall; the most recent acquisitions have cost more than \$1.0 million an acre, as shown in Table 65. This should be reasonably representative of the replacement value for land for the City's existing public building facilities, which are all located in the downtown area.

**Table 65. Public Building Land Acquisition Costs**

Facility	Year	Cost	CPI	Current Cost	Acres	Cost/Acre
City Hall	2005	\$103,208	1.080	\$111,465	0.17	\$655,676
City Hall	2007	\$125,000	1.000	\$125,000	0.18	\$694,444
City Hall	2007	\$950,000	1.000	\$950,000	0.68	\$1,397,059
City Hall	2007	\$420,000	1.000	\$420,000	0.34	\$1,235,294
City Hall	2007	\$410,000	1.000	\$410,000	0.47	\$872,340
Total				\$2,016,465	1.84	\$1,095,905

*Source:* Parcel description and cost from City of Chandler Management Services Department, November 7, 2007; CPI is cost inflation factor based on U.S. Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers, Western City Average, All Items (1982-1984=100) for December 2007 from <http://data.bls.gov/cgi-bin/surveymost>.

The replacement value of existing buildings is based on insured values, since the buildings include different construction types and unique features. Table 66 summarizes the City's existing public building and land inventory. Vehicles and equipment are not included in the public building system development fee calculation or the existing level of service analysis.

**Table 66. Existing Public Building Facilities**

Facility	Address	Bldg. Value	Land (ac.)
Maintenance	249 E Chicago St.	\$1,452,898	1.52
Public Works, Planning and Econ. Dev.	215 E Buffalo St.	\$5,701,020	1.06
Housing and Redevelopment	265 E Buffalo	\$547,320	0.10
IT Building	275 E Buffalo	\$2,256,812	0.41
Courts	200 E Chicago	\$4,024,315	0.75
New City Hall	200 S Arizona	\$0	16.84
Traffic Engineering-B	975 E Armstrong	\$1,734,514	0.35
Traffic Engineering-C	975 E Armstrong	\$1,676,866	0.21
Fleet Service	975 E Armstrong	\$1,932,271	0.38
Central Supply	975 E Armstrong	\$1,726,363	0.68
<b>Total</b>		<b>\$21,052,379</b>	<b>22.30</b>
<b>Cost per Unit</b>		<b>NA</b>	<b>\$1,095,905</b>
<b>Total Value</b>		<b>\$21,052,379</b>	<b>\$24,438,682</b>

Source: Facility values from City of Chandler, "2007 Statement of Values," July 24, 2007; land from City of Chandler Management Services Department analysis of parcel data, November 28, 2007; land cost per acre from Table 65.

The existing level of service for public buildings is based on the total value of existing facilities and city-owned land divided by the existing service units based on the functional population. The City does not have any outstanding general obligation bonds that were issued to fund new public building facilities and does not have any outstanding inter-fund loans from the general fund to the system development fee account. The existing level of service for public buildings and the fund balance is valued at \$428 per service unit, as shown in Table 67.

**Table 67. Existing Public Building Level of Service**

Public Building Facilities	\$21,052,379
Land Value	\$24,438,682
<b>Total</b>	<b>\$45,491,061</b>
Ending Fund Balance, 6/30/2007	\$7,420,124
Less: Unfunded Facilities	\$0
<b>Net Total</b>	<b>\$52,911,185</b>
Existing Service Units (EDUs)	123,530
<b>Existing LOS (Replacement Value per EDU)</b>	<b>\$428</b>

Source: Facility and land value from Table 66; ending fund balance from Table 64; existing EDUs from Table 86, Appendix B.

## Net Cost per Service Unit

As shown in Table 68, the value of existing public buildings is lower than the eligible growth-related facility costs per EDU. This is not surprising given the costs associated with building the new city hall; a facility that is not included in the City's existing level of service. As a result, the City's public building system development fee should be based on the lower cost associated with the existing level of service.

**Table 68. Public Building Level of Service Analysis**

Existing LOS (Replacement Value per EDU)	\$428
Plan-Based Cost per EDU	\$1,317

Source: Existing level of service per EDU from Table 67; net cost per EDU from Table 64.

As noted in the introduction, impact fees should be reduced to account for future funding that will be generated by new development and used to remedy existing deficiencies or to retire outstanding debt of existing facilities that help provide the existing level of service to existing development. The City of Chandler has no outstanding general obligation debt for any existing public building facilities included in the level-of-service analysis; thus, no debt-related revenue credits are required in this update. The net cost per service unit used in the system development fee calculation is the same as the existing cost per service unit shown in the previous table.

## Updated Fee Schedule

The maximum public building system development fee schedule that can be adopted by the City based on this study is derived by multiplying the number of service units represented by each development unit by the net cost per service unit, as shown in Table 69. Since the existing level of service value per service unit is less than the planned facility cost per service unit, the updated fee is based on the existing level of service.

**Table 69. Updated Public Building System Development Fees**

Land Use	Unit	EDUs/Unit	Net Cost/EDU	Fee/Unit
Single-Family	Dwelling	1.000	\$428	\$428
Multi-Family	Dwelling	0.766	\$428	\$328
Retail/Commercial	1000 sq. ft.	1.251	\$428	\$535
Office	1000 sq. ft.	0.952	\$428	\$407
Public/Institutional	1000 sq. ft.	0.323	\$428	\$138
Industrial/Warehouse	1000 sq. ft.	0.306	\$428	\$131

Source: EDUs per unit from Table 84 and Table 85, Appendix B; cost per EDU based on the existing level of service from Table 68.

The updated public building system development fees are compared with current fees in Table 70. The fees would decrease for residential, public, industrial and warehouse uses and increase for retail and office uses. These changes are due to the switch to the functional population basis for fee assessment and the introduction of the existing level of service analysis.

**Table 70. Comparative Public Building System Development Fees**

Land Use	Unit	Current Fee	Proposed Fee	% Change
Single-Family	Dwelling	\$573	\$428	-25%
Multi-Family	Dwelling	\$573	\$328	-43%
Retail/Commercial	1000 sq. ft.	\$330	\$535	62%
Office	1000 sq. ft.	\$330	\$407	23%
Public/Institutional	1000 sq. ft.	\$330	\$138	-58%
Industrial/Warehouse	1000 sq. ft.	\$330	\$131	-60%

Source: Current fee from City of Chandler Code, Section 38-13; proposed fee from Table 69.

Based on forecast residential and nonresidential growth projections through build-out and the fees calculated in this report, total public building system development fee revenue would decrease by 28 percent, as shown in Table 71.

**Table 71. Potential Public Building System Development Fee Revenue**

Land Use	Unit	New Units	Current Fee Schedule		Potential Fee Schedule		Percent Increase
			Fee/Unit	Revenue	Fee/Unit	Revenue	
Single-Family	Dwelling	9,107	\$573	\$5,218,311	\$428	\$3,897,796	-25%
Multi-Family	Dwelling	7,262	\$573	\$4,161,126	\$328	\$2,381,936	-43%
Retail/Commercial	1000 sq. ft.	9,752	\$330	\$3,218,160	\$535	\$5,217,320	62%
Office	1000 sq. ft.	10,277	\$330	\$3,391,410	\$407	\$4,182,739	23%
Public/Institutional	1000 sq. ft.	2,333	\$330	\$769,890	\$138	\$321,954	-58%
Industrial/Warehouse	1000 sq. ft.	35,755	\$330	\$11,799,150	\$131	\$4,683,905	-60%
<b>Total</b>				<b>\$28,558,047</b>		<b>\$20,685,650</b>	<b>-28%</b>

Source: New units based on current and build-out units from Table 82, Appendix A; current and potential fees from Table 70.

## **LIBRARY**

The City of Chandler extends free information services and recreational reading material to City residents through four branch libraries. The City of Chandler has not levied a library system development fee since February 1, 2006. As part of the 2005 fee update, the City decided to eliminate the library fee since there were no plans to build any additional library facilities. The remaining system development fee account balance was to be allocated for the acquisition of additional collection materials and construction of youth areas in the Basha and Hamilton libraries. However, the City has now decided to purchase the Sunset Branch library facility, and this is included in the current 2007-2012 Capital Improvement Program. The City currently leases the 20,000-square-foot facility at a yearly rent of more than \$300,000. The City has the option to purchase the facility at market value and has decided that purchasing the facility will reduce annual operating expenditures and improve facility maintenance and services.

While the facility is nominally providing a service to existing development, it is also part of the overall library level of service that will ultimately be provided to all development at build-out. The lease of the facility is analogous to a facility funded with debt. As a result, future system development fees may be utilized to fund the purchase of the existing facility, provided that the system development fee does not exceed the value of the existing City-owned facilities, collection materials and equipment that are provided to existing development. As with the other fee updates, the library fee calculation includes an analysis of the existing level of service.

As is the past practice, library system development fees are appropriately assessed at the jurisdiction level and earmarked for expenditures within a single city-wide benefit district.

### **Service Unit**

As with parks, most library impact fees are assessed only on new residential development. The common unit of measurement that reflects the impact of new development on the demand for capital facilities is called the "service unit." The residential equivalent dwelling units (EDUs) used in the park fee section are also used as the service unit for libraries.

### **Cost per Service Unit**

The City's current 2007-2012 CIP includes approximately \$10.0 million to purchase the Sunset Branch building and land that is currently leased. While the City has programmed general obligation bond funding to purchase this property, the newly-resurrected system development fee could be used to fund the acquisition of this facility. The City will also be spending approximately \$1.0 million to renovate the structure once it is acquired; however, the renovation costs are not eligible system development fee improvements. There are no other planned eligible system development fee expenditures through build-out.

The cost per service unit is developed by dividing the planned library expenditures by the projected growth in service units through build-out. As with the other fee calculations, the costs are adjusted to account for existing fund balances and carry-forward reserves. While the library fee has not been collected since February 2006, some funds remained in the account balance and have been used to fund capital improvements to the existing libraries. The library system development fee account has outstanding encumbrances and carry-forward reserve balances related to improvements at Basha Library. The cost per service unit is developed by dividing the eligible costs by the projected growth in service units through build-out. As shown in Table 72, the cost of planned facilities attributed to growth is \$668 per service unit.

**Table 72. Library Cost Per Service Unit**

Sunset Library Acquisition	\$9,955,000
Encumbrances for Current Projects	\$11,158
Capital Carry-Forward Balance	\$480,000
Less: Ending Fund Balance, 6/30/2007	\$645,633
<b>Total, Growth-Related Costs</b>	<b>\$9,800,525</b>
New Service Units (EDUs)	14,670
<b>Plan-Based Cost per EDU</b>	<b>\$668</b>

Source: Sunset Library acquisition cost from City of Chandler 2007-2012 CIP; encumbrances, capital carry-forward and fund balance from City of Chandler Management Services Department, November 21, 2007; new service units from Table 25.

## Existing Level of Service

The existing level of service for library facilities is based on the replacement cost of City-owned facilities, land, collection materials and furnishing and equipment. The downtown branch is the only fully City-owned library facility. While the Basha and Hamilton branches are co-located at public high schools and the City does not own the land, the City constructed the buildings. The Sunset branch is located in a leased facility.

The value of the facilities is based on the original construction cost adjusted to current dollars. The Sunset branch is not included in the level of service calculation since it is a leased facility. Table 73 summarizes the current value of the library branch buildings.

**Table 73. Library Facilities**

Facility	Address	Year Built	Orig. Cost	CCI Factor	Current Cost
Downtown Branch	22 S. Delaware St.	1995	\$7,369,000	1.479	\$10,898,751
Basha Branch	5990 S. Val Vista	2003	\$1,600,000	1.209	\$1,934,400
Hamilton Branch	3700 S. Arizona	1998	\$500,000	1.367	\$683,500
Sunset Branch*	4930 W. Ray Rd	NA	NA	NA	NA
<b>Total</b>					<b>\$13,516,651</b>

\*Leased facility.

Source: Building value based on original construction cost included in the City's Capital Improvement Program from City of Chandler Management Services Department, December 14, 2007; cost factor based on *Engineering News-Record* (ENR) Construction Cost Index (CCI), January 2008.

The library level of service includes the value of current collection materials, equipment and furnishings. As shown in Table 74, the total replacement cost for all library collection materials, equipment and furnishings is \$13.4 million.

**Table 74. Library Collection, Equipment and Furnishing Value**

Facility	Collections	Furniture/ Equipment	Total
Downtown Branch	\$5,775,000	\$1,015,000	\$6,790,000
Basha Branch	\$1,600,000	\$253,750	\$1,853,750
Hamilton Branch	\$1,720,000	\$152,250	\$1,872,250
Sunset Branch	\$2,600,000	\$304,500	\$2,904,500
<b>Total</b>			<b>\$13,420,500</b>

Source: Building value from City of Chandler, "2007 Statement of Values," July 24, 2007.

The existing level of service for libraries is based on the total value of city-owned facilities, land, collection materials, equipment and furnishings divided by the existing service units. The library land value is based on the downtown branch land site, which is 1.49 acres, and the downtown land value utilized in the public building level of service analysis. The land for the Basha and Hamilton branches is not included in the level of service since these facilities are located on school-owned property. The existing level of service for libraries is valued at \$332 per service unit, as shown in Table 75.

**Table 75. Existing Library Level of Service**

Library Buildings	\$13,516,651
Land Value	\$1,632,898
Collection and Equipment	\$13,420,500
Subtotal	\$28,570,049
Ending Fund Balance	\$645,633
Total Replacement Value	\$29,215,682
Existing Service Units (EDUs)	87,966
Existing LOS (Replacement Value per EDU)	\$332

Source: Library building value from Table 73; collection and equipment from Table 74; land based on downtown branch site of 1.49 acres from City of Chandler Management Services Department analysis of parcel data, November 28, 2007 and downtown land cost of \$1,095,905 per acre from Table 65; ending fund balance from Table 72; existing EDUs from Table 24.

## Net Cost per Service Unit

The cost per service unit based on existing facilities is compared with the adjusted cost of planned improvements in order to ensure that new development does not pay for a higher level of service than existing development for library facilities. As shown in Table 76, the value of existing city-owned facilities, collection materials, equipment and furnishing is lower than the eligible growth-related facility cost per EDU. As a result, the City's library system development fee should be based on the lower cost associated with the existing level of service.

**Table 76. Library Level of Service Analysis**

Existing LOS (Replacement Cost per EDU)	\$332
Plan-Based Cost per EDU	\$668

Source: Existing level of service per EDU from Table 75; growth-related cost per EDU from Table 72.

In order to fund the construction of existing library facilities, the City utilized a mix of general obligation bonds, gifts and impact fees. A debt credit is necessary since the general obligation bonds used to originally fund library construction have outstanding balances. As with the other debt credit calculations, the outstanding library-related debt is divided by the existing service units. As shown in Table 77, based on the outstanding library facility debt, the debt credit is approximately \$99 per EDU.

**Table 77. Library Facility Debt**

Issue	Purpose	Balance
1993	Library Collections	\$350,000
1993	New Library Design	\$250,000
1994	New Library	\$1,450,000
1996	Library Construction	\$925,000
1997 Refunding	Library Construction	\$775,000
1999	Library Construction	\$800,000
2000	Library Collection/Equipment	\$790,000
2003 Refunding	Library Construction--1996	\$3,000,000
2007 Refunding	Library Collection/Equipment--2000	\$395,000
Total		\$8,735,000
Existing EDUs		87,966
Debt Credit per EDU		\$99

Source: General obligation debt balances from City of Chandler, Management Services Department, December 14, 2007; existing EDUs from Table 24.

As shown in Table 78, reducing the cost per service unit based on the existing level of service by the applicable debt credit leaves a net cost of \$233 per EDU for library facilities.

**Table 78. Library Net Cost per Service Unit**

Existing LOS (Replacement Cost per EDU)	\$332
Debt Credit per EDU	\$99
Net Cost per EDU	\$233

Source: Cost per EDU from Table 76; debt credit from Table 77.

## Updated Fee Schedule

The maximum library system development fee schedule that can be adopted by the City based on this study is derived by multiplying the service units associated with each unit of development by the net cost per service unit, as shown in Table 79.

**Table 79. Updated Library System Development Fees**

Land Use	Unit	EDUs/Unit	Net Cost/EDU	Fee/Unit
Single-Family	Dwelling	1.000	\$233	\$233
Multi-Family	Dwelling	0.766	\$233	\$178

Source: EDUs per unit from Table 84, Appendix B; cost per EDU from Table 78.

Based on forecast residential growth projections through build-out, potential library system development fee revenue would provide approximately \$3.4 million, which is approximately one-third of the purchase price of the library facility, as shown in Table 80.

**Table 80. Potential Library System Development Fee Revenue**

Land Use	New Units	Fee/Unit	Revenue
Single-Family	9,107	\$233	\$2,121,931
Multi-Family	7,262	\$178	\$1,292,636
Total			\$3,414,567

Source: New units based on current and build-out units from Table 82, Appendix A; potential fee from Table 79.

## APPENDIX A: POPULATION AND DEMOGRAPHICS

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types in terms of either average household size (average number of persons per occupied dwelling unit) or persons per unit (average number of persons per dwelling unit, including both vacant and occupied units). This analysis utilizes average household size based on the household population in occupied units to determine the impact of dwelling units on the need for capital facilities.

The housing types currently used in the City of Chandler's system development fee ordinance are single-family and multi-family (the City has not had a separate fee schedule for mobile homes). The ordinance does not define single-family or multi-family. In practice, the Development Services Division charges single-family rates for attached dwellings, such as townhomes, regardless of how many units are physically attached to each other if the common wall goes from ground to roof. This study maintains the City's practice of including detached and attached dwelling units and mobile homes in the single-family category. The multi-family category includes all duplex, multi-plex and apartment units. Table 81 presents the total number of housing units, household population and average number of residents per occupied housing unit for the single-family and multi-family residential categories.

**Table 81. Persons per Unit, 2000**

	Total Units	Vacant Units	Occupied Units	Household Population	Avg. HH Size
Single-Family*	52,965	2,361	50,604	149,040	2.95
Multi-Family	13,669	1,915	11,754	26,514	2.26

\*Single-family includes single-family detached, single-family attached and mobile home units.

Source: U.S. Census Bureau, 2000 Census SF-3 (1-in-6 weighted sample data) for City of Chandler.

In order to determine the existing levels of service for the various facilities, it is necessary to estimate the existing and future city-wide housing units and nonresidential development. As shown in Table 82, the city is expected to add 16,369 new residential units and about 58.1 million square feet of nonresidential development through build-out.

**Table 82. Existing and Build-Out Development, City-Wide**

Land Use	Unit	Existing Units	Buildout Units	New Units
Single-Family*	Dwelling	71,155	80,262	9,107
Multi-Family	Dwelling	21,947	29,209	7,262
Total Residential Units		93,102	109,471	16,369
Retail/Commercial	1000 sq. ft.	16,936	26,688	9,752
Office	1000 sq. ft.	4,169	14,446	10,277
Public	1000 sq. ft.	8,672	11,005	2,333
Industrial/Warehouse**	1000 sq. ft.	24,859	60,614	35,755
Total Nonresidential		54,636	112,753	58,117

\*Single-family includes single-family detached, single-family attached and mobile home units.

\*\*Industrial/Warehouse includes hotel/motel land use.

Source: City of Chandler Long Range Planning Division, August 1, 2007.

Since the arterial street system development fees apply only to a sub-area of the city, it is necessary to determine existing and build-out development for the arterial street service area as well. This was done by summing the development in Traffic Analysis Zones that aggregated to the arterial street service area. The results are shown in Table 83.

**Table 83. Existing and Build-Out Development, Arterial Street Service Area**

	Unit	Existing Units	Buildout Units	New Units
Single-Family*	Dwelling	43,677	52,715	9,038
Multi-Family	Dwelling	11,956	18,839	6,883
Total Residential Units		55,633	71,554	15,921
Retail/Commercial	1000 sq. ft.	8,109	16,353	8,244
Office	1000 sq. ft.	2,796	11,704	8,908
Public	1000 sq. ft.	5,546	7,164	1,618
Industrial/Warehouse**	1000 sq. ft.	12,848	44,762	31,914
Total Nonresidential		29,299	79,983	50,684

\*Single-family includes single-family detached, single-family attached and mobile home units.

\*\*Industrial/Warehouse includes hotel/motel land use.

Source: City of Chandler Long Range Planning Division, August 1, 2007; existing and build-out development estimate based on analysis of TAZs included in system development fee service area; in cases where a TAZ fell partially in the street fee, the entire existing and potential development was allocated to the street fee area since further breakdown of TAZ development is not available.

## APPENDIX B: FUNCTIONAL POPULATION

For three of the system development fee updates (fire, police and public buildings), it is appropriate to apply a concept referred to as “functional population” in the impact fee literature. This is a generally-accepted methodology for these facility types and is based on the observation that demand for certain facilities is generally proportional to the presence of people.

To a large extent, the demand for general government services and public safety functions, including fire and police, is proportional to the presence of people. The functional population concept is analogous to the concept of “full-time equivalent” employees. It represents the number of “full-time equivalent” people present at the site of a land use. Functional population is the equivalent number of people occupying a building or land use site on a 24-hours-per-day, 7-days-per-week basis.

Determining residential functional population multipliers is considerably simpler than the nonresidential component. It is assumed that people spend 12 hours per day at home during week days and 20 hours per day during weekends. In total, people are assumed to spend 100 hours per week, or 60 percent of their time, at home. The other 40 percent of their time spent away from home accounts for working, shopping and other away-from-home activities. For residential uses, then, equivalent dwelling units are calculated by first multiplying average household size by 60 percent to determine functional population per unit, then dividing by the functional population per single-family unit to determine equivalent dwelling units. The equivalent dwelling units for single-family and multi-family units are shown in Table 84.

**Table 84. Residential Functional Population and EDU Multipliers**

Housing Type	Avg. HH		Func. Pop./Unit	EDUs/Unit
	Size	Occupancy		
Single-Family	2.95	0.60	1.770	1.000
Multi-Family	2.26	0.60	1.356	0.766

Source: Average household size from Table 81.

The functional population methodology for nonresidential uses is based on national trip generation data compiled by the Institute of Transportation Engineers (ITE). Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a day by 24 hours. Employees are assumed to spend eight hours per day at their place of employment, and visitors are assumed to spend one hour per visit depending on land use. The formula used to derive the nonresidential function population estimates is summarized in Figure 6.

**Figure 6. Nonresidential Functional Population Formula**

<p>Functional population/1000 sf = (employee hours/1000 sf + visitor hours/1000 sf) ÷ 24 hours/day</p> <p>Where:</p> <p>Employee hours/1000 sf = employees/1000 sf x 8 hours/day</p> <p>Visitor hours/1000 sf (retail, office and public/institutional) = visitors/1000 sf x 1 hour/visit</p> <p>Visitor hours/1000 sf (industrial/warehouse) = visitors/1000 sf x ½ hour/visit</p> <p>Visitors/1000 sf = weekday ADT/1000 sf x avg. vehicle occupancy - employees/1000 sf</p> <p>Weekday ADT/1000 sf = one way average daily trips (total trip ends ÷ 2)</p>
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Using this formula and information on trip generation rates from the ITE manual, nonresidential functional population estimates per 1,000 square feet of gross floor area were calculated. These functional population estimates were then converted into equivalent dwelling units by dividing them by the functional population per single-family unit calculated in the preceding table. Table 85 presents the results of these calculations for a number of nonresidential land use categories.

**Table 85. Nonresidential Functional Population and EDU Multipliers**

Land Use	Unit	Trip Rate	Persons/ Trip	Emp./ Unit	Visitors/ Unit	Func. Pop./Unit	EDUs/ Unit
Retail/Commercial	1000 sq. ft.	21.47	1.81	2.04	36.82	2.214	1.251
Office	1000 sq. ft.	5.51	1.14	4.88	1.40	1.685	0.952
Public/Institutional	1000 sq. ft.	3.05	1.63	1.25	3.72	0.572	0.323
Industrial/Warehouse	1000 sq. ft.	3.48	1.14	1.47	2.50	0.542	0.306

Source: Trip rate is one-half average daily trip ends on a weekday from Institute of Transportation Engineers (ITE), *Trip Generation*, 7th Ed., 2003 (public/institutional trip rate based on nursing home); persons per trip are average vehicle occupancies from U.S. Department of Transportation, *National Household Travel Survey*, 2001 for following trip purposes: "family/personal" for retail, "to work" for office, industrial and warehouse and "all personal vehicle trips" for public/institutional; employees per unit for retail, office, public/institutional and industrial based on sample of existing developments in Chandler conducted by the City of Chandler Economic Development Department, 2005; visitors/day is 1-way trips times occupants/trip minus workers/unit; hours/week and days/week assumed; functional population per unit = (workers/unit x worker hours/day + visitors x hours/visit x days/week)/(24 hours/day).

In order to determine the existing levels of service for the various facilities, it is necessary to estimate the existing total functional population and residential equivalent service units for the city. The existing city-wide functional population and service units can be determined based on existing land use data and population ratios for various land use categories. The resulting total functional population and total service units are shown in Table 86.

**Table 86. Total Functional Population and Service Units, 2007**

Land Use Type	Unit	2007		Functional Pop.		Service Units (EDUs)	
		Units		per Unit	Total	per Unit	Total
Single-Family	Dwelling	71,155		1.770	125,944	1.000	71,155
Multi-Family	Dwelling	21,947		1.356	29,760	0.766	16,811
Residential Subtotal					155,704		87,966
Retail/Commercial	1000 sq. ft.	16,936		2.214	37,496	1.251	21,187
Office	1000 sq. ft.	4,169		1.685	7,025	0.952	3,969
Public/Institutional	1000 sq. ft.	8,672		0.572	4,960	0.323	2,801
Industrial/Warehouse	1000 sq. ft.	24,859		0.542	13,474	0.306	7,607
Nonresidential Subtotal					62,955		35,564
<b>Total</b>					<b>218,659</b>		<b>123,530</b>

Source: 2007 residential and nonresidential units from Table 82; residential functional population and EDUs per unit from Table 84; nonresidential functional population and EDUs per unit from Table 85; total service units based on total units and EDUs per unit.

This straight-forward approach to estimating total functional population and service units ensures that there is a strong relationship between the service unit multipliers used in the system development fee schedules and the cost per service unit derived from the existing level of service (essentially by dividing the cost of existing facilities by the existing development served by those facilities, expressed in terms of total service units based on functional population). As shown in Table 87, functional population and related service unit projections have been derived in this analysis from land use projection data provided by the City of Chandler.

**Table 87. Total Functional Population and Service Units, Build-Out**

Land Use Type	Unit	Units	Functional Pop.		Service Units (EDUs)		
			per Unit	Total	per Unit	Total	
Single-Family	Dwelling	80,262		1.770	142,064	1.000	80,262
Multi-Family	Dwelling	29,209		1.356	39,607	0.766	22,374
Residential Subtotal					181,671		102,636
Retail/Commercial	1000 sq. ft.	26,688		2.214	59,087	1.251	33,387
Office	1000 sq. ft.	14,446		1.685	24,342	0.952	13,753
Public/Institutional	1000 sq. ft.	11,005		0.572	6,295	0.323	3,555
Industrial/Warehouse	1000 sq. ft.	60,614		0.542	32,853	0.306	18,548
Nonresidential Subtotal					122,577		69,243
<b>Total, Build-Out</b>					<b>304,248</b>		<b>171,879</b>
<b>Existing Units</b>					<b>218,659</b>		<b>123,530</b>
<b>New Units</b>					<b>85,589</b>		<b>48,349</b>

Source: Build-out residential and nonresidential units from Table 82; residential functional population and EDUs per unit from Table 84; nonresidential functional population and EDUs per unit from Table 85; existing units from Table 86 and total service units based on total units and EDUs per unit.

## APPENDIX C: ARTERIAL STREET INVENTORY

**Table 88. Existing Arterial Street Inventory – Arterial Street Fee Service Area**

Street	From	To	Miles	Lns	Lane- Miles	Count	Capa- city	VMT	VMC
McClintock Rd	Frye	Loop 202	0.50	2	1.00	512	944	256	472
Price	Frye	Loop 202	0.50	6	3.00	NA	3,222	NA	1,611
Price	Loop 202	Germann	1.15	4	4.60	3,133	2,703	3,603	3,108
Price	Germann	Queen Creek	1.00	6	6.00	2,914	3,222	2,914	3,222
Price	Queen Creek	Dobson	0.50	6	3.00	2,435	3,222	1,218	1,611
Dobson	Frye	Pecos	0.50	6	3.00	1,839	3,222	920	1,611
Dobson	Pecos	Loop 202	0.30	6	1.80	1,789	3,222	537	967
Dobson	Loop 202	Willis	0.26	6	1.56	1,644	3,222	427	838
Dobson	Willis	Armstrong Way	0.25	6	1.50	1,268	3,222	317	806
Dobson	Armstrong Way	Germann	0.25	6	1.50	1,520	3,222	380	806
Dobson	Germann	W. Earl Blvd	0.50	6	3.00	1,520	3,222	760	1,611
Dobson	W. Earl Blvd	Queen Creek	0.60	6	3.60	1,184	3,222	710	1,933
Dobson	Queen Creek	Price	0.42	4	1.68	886	2,703	372	1,135
Dobson	Price	Ocotillo	1.00	4	4.00	1,439	2,703	1,439	2,703
Dobson	Ocotillo	End	0.80	4	3.20	NA	2,703	NA	2,162
Alma School	Frye	Pecos	0.50	4	2.00	2,249	2,703	1,125	1,352
Alma School	Pecos	Loop 202	0.30	4	1.20	2,692	2,703	808	811
Alma School	Loop 202	Willis	0.25	4	1.00	3,268	2,703	817	676
Alma School	Willis	Germann	0.50	4	2.00	3,276	2,703	1,638	1,352
Alma School	Germann	Ryan	0.50	4	2.00	3,034	2,703	1,517	1,352
Alma School	Ryan	Queen Creek	0.48	4	1.92	2,942	2,703	1,412	1,297
Alma School	Queen Creek	Ocotillo	1.12	4	4.48	2,662	2,703	2,981	3,027
Alma School	Ocotillo	West Lake Dr	0.53	4	2.12	3,055	2,703	1,619	1,433
Alma School	West Lake Dr	Chandler Heights	0.60	4	2.40	1,755	2,703	1,053	1,622
Alma School	Chandler Heights	Riggs	0.25	2	0.50	1,495	944	374	236
Arizona	Knox	Ray	0.50	6	3.00	2,890	3,222	1,445	1,611
Arizona	Ray	Galveston	0.50	7	3.50	2,765	3,222	1,383	1,611
Arizona	Galveston	Erie	0.25	7	1.75	2,701	3,222	675	806
Arizona	Erie	Chandler	0.25	7	1.75	2,422	3,222	606	806
Arizona	Chandler	Buffalo	0.10	7	0.70	2,062	3,222	206	322
Arizona	Buffalo	Boston	0.16	6	0.96	2,008	3,222	321	516
Arizona	Boston	Frye	0.24	7	1.68	2,033	3,222	488	773
Arizona	Frye	Pecos	0.50	7	3.50	2,155	3,222	1,078	1,611
Arizona	Pecos	Loop 202	0.30	6	1.80	2,440	3,222	732	967
Arizona	Loop 202	Willis	0.23	6	1.38	2,447	3,222	563	741
Arizona	Willis	Germann	0.50	6	3.00	2,237	3,222	1,119	1,611
Arizona	Germann	Ryan	0.50	6	3.00	2,616	3,222	1,308	1,611
Arizona	Ryan	Queen Creek	0.50	6	3.00	2,190	3,222	1,095	1,611
Arizona	Queen Creek	Appleby	0.50	6	3.00	2,243	3,222	1,122	1,611
Arizona	Appleby	Ocotillo	0.50	6	3.00	2,366	3,222	1,183	1,611
Arizona	Ocotillo	Chandler Heights	1.00	4	4.00	2,242	2,703	2,242	2,703
Arizona	Chandler Heights	Riggs	1.00	4	4.00	1,630	2,703	1,630	2,703
Arizona	Riggs	Hunt	1.00	4	4.00	1,048	2,703	1,048	2,703
McQueen	Warner	Highland	0.25	4	1.00	2,396	2,703	599	676
McQueen	Highland	Knox	0.25	4	1.00	2,355	2,703	589	676
McQueen	Knox	Orchid	0.34	4	1.36	2,538	2,703	863	919
McQueen	Orchid	Ray	0.16	4	0.64	2,242	2,703	359	432
McQueen	Ray	Ivanhoe	0.25	4	1.00	1,971	2,703	493	676

**Table 88 Continued**

Street	From	To	Miles	Lns	Lane-Miles	Count	Capacity	VMT	VMC
McQueen	Ivanhoe	Galveston	0.25	4	1.00	2,573	2,703	643	676
McQueen	Galveston	Chandler	0.50	4	2.00	2,371	2,703	1,186	1,352
McQueen	Chandler	Frye	0.50	4	2.00	2,227	2,703	1,114	1,352
McQueen	Frye	Pecos	0.50	6	3.00	2,008	3,222	1,004	1,611
McQueen	Pecos	Willis	0.50	6	3.00	2,016	3,222	1,008	1,611
McQueen	Willis	Loop 202	0.12	6	0.72	1,425	3,222	171	387
McQueen	Loop 202	Germann	0.40	6	2.40	2,307	3,222	923	1,289
McQueen	Germann	Ryan	0.50	6	3.00	2,219	3,222	1,110	1,611
McQueen	Ryan	Queen Creek	0.50	6	3.00	2,295	3,222	1,148	1,611
McQueen	Queen Creek	Ocotillo	1.00	2	2.00	967	944	967	944
McQueen	Ocotillo	Brooks Farm	0.50	2	1.00	755	944	378	472
McQueen	Brooks Farm	Chandler Heights	0.50	2	1.00	484	944	242	472
McQueen	Chandler Heights	Riggs	1.00	2	2.00	627	944	627	944
McQueen	Riggs	City Limits	0.75	2	1.50	375	944	281	708
Cooper	Knox	Orchid	0.50	4	2.00	NA	2,703	NA	1,352
Cooper	Orchid	Ray	0.25	4	1.00	1,700	2,703	425	676
Cooper	Ray	Chandler	1.00	6	6.00	1,280	3,222	1,280	3,222
Cooper	Chandler	Canal	0.12	6	0.72	860	3,222	103	387
Cooper	Canal	Frye	0.33	2	0.66	NA	944	NA	312
Cooper	Frye	Pecos	0.53	3	1.59	1,135	1,640	602	869
Cooper	Pecos	Willis	0.50	3	1.50	NA	1,640	NA	820
Cooper	Willis	Loop 202	0.12	6	0.72	1,052	3,222	126	387
Cooper	Loop 202	Germann	0.40	6	2.40	1,042	3,222	417	1,289
Cooper	Queen Creek	Ocotillo	1.00	2	2.00	601	944	601	944
Cooper	Ocotillo	Alamosa	0.25	2	0.50	NA	944	NA	236
Cooper	Alamosa	Chandler Heights	0.75	2	1.50	198	944	149	708
Cooper	Chandler Heights	Riggs	1.00	2	2.00	452	944	452	944
Cooper	Riggs	Hunt	1.00	4	4.00	725	2,703	725	2,703
Gilbert	Pecos	Loop 202	0.60	6	3.60	1,708	3,222	1,025	1,933
Gilbert	Loop 202	Germann	0.40	6	2.40	1,783	3,222	713	1,289
Gilbert	Germann	Ryan	0.50	3	1.50	1,213	1,640	607	820
Gilbert	Ryan	Queen Creek	0.50	3	1.50	NA	1,640	NA	820
Gilbert	Queen Creek	Ocotillo	1.00	2	2.00	975	944	975	944
Gilbert	Ocotillo	Brooks Farm	0.50	2	1.00	NA	944	NA	472
Gilbert	Brooks Farm	Chandler Heights	0.50	2	1.00	695	944	348	472
Gilbert	Chandler Heights	Riggs	1.00	2	2.00	831	944	831	944
Gilbert	Riggs	Amanda	0.24	4	0.96	866	2,703	208	649
Gilbert	Amanda	Hunt	0.76	3	2.28	NA	1,640	NA	1,246
Lindsay	Ocotillo	Chandler Heights	1.00	2	2.00	450	944	450	944
Lindsay	Chandler Heights	Capricorn	0.75	2	1.50	500	944	375	708
Lindsay	Capricorn	Riggs	0.25	2	0.50	113	944	28	236
Lindsay	Riggs	Hunt	1.00	2	2.00	59	944	59	944
Warner	RR Tracks	McQueen	0.50	4	2.00	2,268	2,703	1,134	1,352
Ray	Arizona	Hamilton	0.50	4	2.00	2,506	2,703	1,253	1,352
Ray	Hamilton	McQueen	0.50	4	2.00	2,128	2,703	1,064	1,352
Ray	McQueen	Cooper	1.00	4	4.00	2,250	2,703	2,250	2,703
Chandler	Arizona	Colorado	0.15	6	0.90	1,592	3,222	239	483
Chandler	Colorado	Delaware	0.10	5	0.50	2,030	2,703	203	270
Chandler	Delaware	Hamilton	0.27	5	1.35	1,940	2,703	524	730
Chandler	Hamilton	McQueen	0.50	5	2.50	1,935	2,703	968	1,352
Chandler	McQueen	Lakeview	0.74	6	4.44	2,211	3,222	1,636	2,384
Chandler	Lakeview	Cooper	0.25	6	1.50	2,365	3,222	591	806

**Table 88 Continued**

Street	From	To	Miles	Lns	Lane- Miles	Count	Capa- city	VMT	VMC
Chandler	Cooper	Cottonwood	0.22	6	1.32	2,455	3,222	540	709
Chandler	Cottonwood	132nd St.	0.28	6	1.68	1,830	3,222	512	902
Chandler	132nd St.	Gilbert	0.50	6	3.00	1,830	3,222	915	1,611
Pecos	Ellis	Dobson	0.50	3	1.50	467	1,640	234	820
Pecos	Dobson	Alma School	1.00	6	6.00	478	3,222	478	3,222
Pecos	Alma School	Arizona	1.00	6	6.00	523	3,222	523	3,222
Pecos	Arizona	RR Tracks	0.27	6	1.62	597	3,222	161	870
Pecos	RR Tracks	Hamilton	0.23	6	1.38	879	3,222	202	741
Pecos	Hamilton	Kingston	0.30	6	1.80	839	3,222	252	967
Pecos	Kingston	McQueen	0.20	6	1.20	562	3,222	112	644
Pecos	McQueen	Cooper	1.00	3	3.00	769	1,640	769	1,640
Pecos	Cooper	Cottonwood	0.25	3	0.75	615	1,640	154	410
Pecos	Cottonwood	Gilbert	0.75	6	4.50	910	3,222	683	2,417
Germann	City Limits	Price	0.25	2	0.50	113	944	28	236
Germann	Price	Dobson	0.75	4	3.00	713	2,703	535	2,027
Germann	Dobson	Comanche	0.75	2	1.50	NA	944	NA	708
Germann	Comanche	Alma School	0.25	4	1.00	788	2,703	197	676
Germann	Alma School	Hartford	0.40	2	0.80	1,185	944	474	378
Germann	Hartford	Arizona	0.60	4	2.40	706	2,703	424	1,622
Germann	Arizona	Crossroads Ctr	0.75	4	3.00	1,420	2,703	1,065	2,027
Germann	Crossroads Ctr	McQueen	0.25	4	1.00	1,210	2,703	303	676
Germann	McQueen	Canal	0.50	4	2.00	653	2,703	327	1,352
Germann	Canal	Cooper	0.50	4	2.00	1,110	2,703	555	1,352
Germann	Cooper	Gilbert	1.10	4	4.40	1,535	2,703	1,689	2,973
Queen Creek	City Limits	Price	0.27	4	1.08	2,095	2,703	566	730
Queen Creek	Price	Dobson	0.45	4	1.80	1,876	2,703	844	1,216
Queen Creek	Dobson	Alma School	1.30	4	5.20	1,572	2,703	2,044	3,514
Queen Creek	Alma School	Hartford	0.50	4	2.00	1,407	2,703	704	1,352
Queen Creek	Hartford	Arizona	0.50	4	2.00	NA	2,703	NA	1,352
Queen Creek	Arizona	McQueen	1.00	2	2.00	935	944	935	944
Queen Creek	McQueen	Airport	0.15	2	0.30	776	944	116	142
Queen Creek	Airport	Cooper	0.85	2	1.70	1,142	944	971	802
Queen Creek	Cooper	Gilbert	1.00	2	2.00	625	944	625	944
Queen Creek	Gilbert	Lindsay	1.00	2	2.00	775	944	775	944
Ocotillo	Dobson	Alma School	0.80	2	1.60	1,819	944	1,455	755
Ocotillo	Alma School	Sandpiper	0.90	4	3.60	1,138	2,703	1,024	2,433
Ocotillo	Sandpiper	Appleby	0.25	4	1.00	1,150	2,703	288	676
Ocotillo	Appleby	Arizona	0.25	4	1.00	835	2,703	209	676
Ocotillo	Arizona	McQueen	1.00	2	2.00	823	944	823	944
Ocotillo	McQueen	124th	0.50	2	1.00	1,055	944	528	472
Ocotillo	124th	Cooper	0.50	2	1.00	616	944	308	472
Ocotillo	Cooper	Redwood	0.25	2	0.50	NA	944	NA	236
Ocotillo	Redwood	Gilbert	0.75	2	1.50	583	944	437	708
Ocotillo	Gilbert	Lindsay	1.00	2	2.00	438	944	438	944
Ocotillo	Lindsay	148th St.	0.50	2	1.00	400	944	200	472
Chandler Heights	Alma School	Arizona	1.00	4	4.00	730	2,703	730	2,703
Chandler Heights	Arizona	McQueen	1.00	2	2.00	967	944	967	944
Chandler Heights	McQueen	Adams	1.00	2	2.00	973	944	973	944
Chandler Heights	Adams	Lindl	0.60	2	1.20	NA	944	NA	566
Chandler Heights	Lindl	Cooper	0.40	2	0.80	967	944	387	378
Chandler Heights	Cooper	Gilbert	0.96	2	1.92	671	944	644	906

**Table 88 Continued**

Street	From	To	Miles	Lns	Lane-Miles	Count	Capa-city	VMT	VMC
Chandler Heights	Gilbert	Lindsay	1.00	2	2.00	608	944	608	944
Chandler Heights	Lindsay	Val Vista	1.00	2	2.00	550	944	550	944
Riggs	Arizona	median	0.60	2	1.20	1,535	944	921	566
Riggs	median	McQueen	0.40	4	1.60	2,118	2,703	847	1,081
Riggs	McQueen	Championship	1.00	2	2.00	1,400	944	1,400	944
Riggs	Championship	Cooper	1.00	4	4.00	1,313	2,703	1,313	2,703
Riggs	Cooper	Emmett	0.50	4	2.00	1,393	2,703	697	1,352
Riggs	Emmett	Gilbert	0.50	4	2.00	1,105	2,703	553	1,352
Riggs	Gilbert	South Mountain	0.30	4	1.20	1,518	2,703	455	811
Riggs	South Mountain	Lindsay	0.70	3	2.10	857	1,640	600	1,148
Riggs	Lindsay	Sun Groves	0.50	3	1.50	787	1,640	394	820
Riggs	Sun Groves	Black Hill	0.25	4	1.00	1,520	2,703	380	676
Riggs	Black Hill	Val Vista	0.25	4	1.00	1,703	2,703	426	676
<b>Total</b>			<b>91.40</b>		<b>340.87</b>			<b>116,774</b>	<b>195,543</b>
<b>Total, Lane-Miles w/Counts</b>			<b>84.66</b>		<b>320.03</b>			<b>116,774</b>	<b>183,650</b>

Source: Current arterial street sections based on existing arterial streets in arterial street service area; roadway segments and lengths scaled by Duncan Associates; road cross-section information provided by City of Chandler Department of Public Works; 2007 peak hour traffic count from City of Chandler Department of Public Works, August 17, 2007; lane-miles are the product of segment length and number of lanes; capacity for road sections from Parsons/Brinckerhoff, *Chandler Transportation Study*, November 2002, Table VI-5 multiplied by City of Chandler peak-hour k-factor of .085 (Parsons/Brinckerhoff, p. 48), except 3-lane capacity from Florida Department of Transportation; VMT is the product of miles and peak hour count; VMC is the product of miles and capacity.

**Table 89. Future Arterial Street Inventory – Arterial Street Fee Service Area**

Road	From	To	Miles	Lns	Lane-		Count	Capa- city	VMT	VMC
					Miles	Count				
McClintock Rd	Frye	Loop 202	0.50	6	3.00	2,465	3,222	1,233	1,611	
Price	Frye	Loop 202	0.50	6	3.00	NA	3,222	NA	1,611	
Price	Loop 202	Germann	1.15	6	6.90	5,100	3,222	5,865	3,705	
Price	Germann	Queen Creek	1.00	6	6.00	3,995	3,222	3,995	3,222	
Price	Queen Creek	Dobson	0.50	6	3.00	3,400	3,222	1,700	1,611	
Dobson	Frye	Pecos	0.50	6	3.00	3,400	3,222	1,700	1,611	
Dobson	Pecos	Loop 202	0.30	6	1.80	3,570	3,222	1,071	967	
Dobson	Loop 202	Willis	0.26	6	1.56	3,570	3,222	928	838	
Dobson	Willis	Armstrong Way	0.25	6	1.50	3,570	3,222	893	806	
Dobson	Armstrong Way	Germann	0.25	6	1.50	3,570	3,222	893	806	
Dobson	Germann	W. Earl Blvd	0.50	6	3.00	3,400	3,222	1,700	1,611	
Dobson	W. Earl Blvd	Queen Creek	0.60	6	3.60	3,400	3,222	2,040	1,933	
Dobson	Queen Creek	Price	0.42	4	1.68	1,190	2,703	500	1,135	
Dobson	Price	Ocotillo	1.00	6	6.00	3,315	3,222	3,315	3,222	
Dobson	Ocotillo	End	0.80	4	3.20	NA	2,703	NA	2,162	
Alma School	Frye	Pecos	0.50	6	3.00	3,230	3,222	1,615	1,611	
Alma School	Pecos	Loop 202	0.30	6	1.80	3,825	3,222	1,148	967	
Alma School	Loop 202	Willis	0.25	6	1.50	3,825	3,222	956	806	
Alma School	Willis	Germann	0.50	6	3.00	3,825	3,222	1,913	1,611	
Alma School	Germann	Ryan	0.50	6	3.00	3,570	3,222	1,785	1,611	
Alma School	Ryan	Queen Creek	0.48	6	2.88	3,570	3,222	1,714	1,547	
Alma School	Queen Creek	Ocotillo	1.12	6	6.72	3,400	3,222	3,808	3,609	
Alma School	Ocotillo	West Lake Dr	0.53	6	3.18	2,975	3,222	1,577	1,708	
Alma School	West Lake Dr	Chandler Heights	0.60	6	3.60	2,975	3,222	1,785	1,933	
Alma School	Chandler Heights	Riggs	0.25	3	0.75	2,040	1,640	510	410	
Arizona	Knox	Ray	0.50	7	3.50	4,760	3,222	2,380	1,611	
Arizona	Ray	Galveston	0.50	7	3.50	4,165	3,222	2,083	1,611	
Arizona	Galveston	Erie	0.25	7	1.75	4,165	3,222	1,041	806	
Arizona	Erie	Chandler	0.25	7	1.75	4,165	3,222	1,041	806	
Arizona	Chandler	Buffalo	0.10	7	0.70	3,570	3,222	357	322	
Arizona	Buffalo	Boston	0.16	6	0.96	3,570	3,222	571	516	
Arizona	Boston	Frye	0.24	7	1.68	3,570	3,222	857	773	
Arizona	Frye	Pecos	0.50	7	3.50	3,570	3,222	1,785	1,611	
Arizona	Pecos	Loop 202	0.30	6	1.80	4,165	3,222	1,250	967	
Arizona	Loop 202	Willis	0.23	6	1.38	4,165	3,222	958	741	
Arizona	Willis	Germann	0.50	6	3.00	4,165	3,222	2,083	1,611	
Arizona	Germann	Ryan	0.50	6	3.00	4,165	3,222	2,083	1,611	
Arizona	Ryan	Queen Creek	0.50	6	3.00	4,165	3,222	2,083	1,611	
Arizona	Queen Creek	Appleby	0.50	6	3.00	3,570	3,222	1,785	1,611	
Arizona	Appleby	Ocotillo	0.50	6	3.00	3,570	3,222	1,785	1,611	
Arizona	Ocotillo	Chandler Heights	1.00	6	6.00	2,975	3,222	2,975	3,222	
Arizona	Chandler Heights	Riggs	1.00	6	6.00	2,380	3,222	2,380	3,222	
Arizona	Riggs	Hunt	1.00	4	4.00	1,870	2,703	1,870	2,703	
McQueen	Warner	Highland	0.25	6	1.50	4,675	3,222	1,169	806	
McQueen	Highland	Knox	0.25	6	1.50	4,675	3,222	1,169	806	
McQueen	Knox	Orchid	0.34	6	2.04	4,675	3,222	1,590	1,095	
McQueen	Orchid	Ray	0.16	6	0.96	4,675	3,222	748	516	
McQueen	Ray	Ivanhoe	0.25	6	1.50	3,995	3,222	999	806	

**Table 89 Continued**

Road	From	To	Miles	Lns	Lane-Miles	Count	Capa-city	VMT	VMC
McQueen	Ivanhoe	Galveston	0.25	6	1.50	3,995	3,222	999	806
McQueen	Galveston	Chandler	0.50	6	3.00	3,995	3,222	1,998	1,611
McQueen	Chandler	Frye	0.50	6	3.00	3,655	3,222	1,828	1,611
McQueen	Frye	Pecos	0.50	6	3.00	3,655	3,222	1,828	1,611
McQueen	Pecos	Willis	0.50	6	3.00	4,080	3,222	2,040	1,611
McQueen	Willis	Loop 202	0.12	6	0.72	4,080	3,222	490	387
McQueen	Loop 202	Germann	0.40	6	2.40	4,080	3,222	1,632	1,289
McQueen	Germann	Ryan	0.50	6	3.00	4,505	3,222	2,253	1,611
McQueen	Ryan	Queen Creek	0.50	6	3.00	4,505	3,222	2,253	1,611
McQueen	Queen Creek	Ocotillo	1.00	6	6.00	3,400	3,222	3,400	3,222
McQueen	Ocotillo	Brooks Farm	0.50	6	3.00	2,465	3,222	1,233	1,611
McQueen	Brooks Farm	Chandler Heights	0.50	6	3.00	2,465	3,222	1,233	1,611
McQueen	Chandler Heights	Riggs	1.00	4	4.00	1,445	2,703	1,445	2,703
McQueen	Riggs	City Limits	0.75	4	3.00	850	2,703	638	2,027
Cooper	Knox	Orchid	0.50	6	3.00	NA	3,222	NA	1,611
Cooper	Orchid	Ray	0.25	6	1.50	NA	3,222	NA	806
Cooper	Ray	Chandler	1.00	6	6.00	3,230	3,222	3,230	3,222
Cooper	Chandler	Canal	0.12	6	0.72	2,805	3,222	337	387
Cooper	Canal	Frye	0.33	6	1.98	2,805	3,222	926	1,063
Cooper	Frye	Pecos	0.53	6	3.18	2,805	3,222	1,487	1,708
Cooper	Pecos	Willis	0.50	6	3.00	2,975	3,222	1,488	1,611
Cooper	Willis	Loop 202	0.12	6	0.72	2,975	3,222	357	387
Cooper	Loop 202	Germann	0.40	6	2.40	2,975	3,222	1,190	1,289
Cooper	Queen Creek	Ocotillo	1.00	4	4.00	1,700	2,703	1,700	2,703
Cooper	Ocotillo	Alamosa	0.25	4	1.00	1,530	2,703	383	676
Cooper	Alamosa	Chandler Heights	0.75	4	3.00	1,530	2,703	1,148	2,027
Cooper	Chandler Heights	Riggs	1.00	4	4.00	1,275	2,703	1,275	2,703
Cooper	Riggs	Hunt	1.00	4	4.00	850	2,703	850	2,703
Gilbert	Pecos	Loop 202	0.60	6	3.60	2,295	3,222	1,377	1,933
Gilbert	Loop 202	Germann	0.40	6	2.40	3,740	3,222	1,496	1,289
Gilbert	Germann	Ryan	0.50	6	3.00	3,995	3,222	1,998	1,611
Gilbert	Ryan	Queen Creek	0.50	6	3.00	3,995	3,222	1,998	1,611
Gilbert	Queen Creek	Ocotillo	1.00	6	6.00	2,975	3,222	2,975	3,222
Gilbert	Ocotillo	Brooks Farm	0.50	4	2.00	2,380	2,703	1,190	1,352
Gilbert	Brooks Farm	Chandler Heights	0.50	4	2.00	2,380	2,703	1,190	1,352
Gilbert	Chandler Heights	Riggs	1.00	4	4.00	1,530	2,703	1,530	2,703
Gilbert	Riggs	Amanda	0.24	4	0.96	1,020	2,703	245	649
Gilbert	Amanda	Hunt	0.76	4	3.04	1,020	2,703	775	2,054
Lindsay	Ocotillo	Chandler Heights	1.00	4	4.00	1,870	2,703	1,870	2,703
Lindsay	Chandler Heights	Capricorn	0.75	4	3.00	1,615	2,703	1,211	2,027
Lindsay	Capricorn	Riggs	0.25	4	1.00	1,615	2,703	404	676
Lindsay	Riggs	Hunt	1.00	4	4.00	255	2,703	255	2,703
Warner	RR Tracks	McQueen	0.50	6	3.00	3,910	3,222	1,955	1,611
Ray	Arizona	Hamilton	0.50	6	3.00	3,995	3,222	1,998	1,611
Ray	Hamilton	McQueen	0.50	6	3.00	3,995	3,222	1,998	1,611
Ray	McQueen	Cooper	1.00	6	6.00	2,975	3,222	2,975	3,222
Chandler	Arizona	Colorado	0.15	6	0.90	3,060	3,222	459	483
Chandler	Colorado	Delaware	0.10	6	0.60	3,060	3,222	306	322
Chandler	Delaware	Hamilton	0.27	6	1.62	3,060	3,222	826	870
Chandler	Hamilton	McQueen	0.50	6	3.00	3,060	3,222	1,530	1,611
Chandler	McQueen	Lakeview	0.74	6	4.44	2,975	3,222	2,202	2,384
Chandler	Lakeview	Cooper	0.25	6	1.50	2,975	3,222	744	806

**Table 89 Continued**

Road	From	To	Miles	Lns	Lane- Miles	Count	Capa- city	VMT	VMC
Chandler	Cooper	Cottonwood	0.22	6	1.32	2,890	3,222	636	709
Chandler	Cottonwood	132nd St.	0.28	6	1.68	2,890	3,222	809	902
Chandler	132nd St.	Gilbert	0.50	6	3.00	2,890	3,222	1,445	1,611
Pecos	Ellis	Dobson	0.50	4	2.00	1,615	2,703	808	1,352
Pecos	Dobson	Alma School	1.00	6	6.00	3,485	3,222	3,485	3,222
Pecos	Alma School	Arizona	1.00	6	6.00	3,570	3,222	3,570	3,222
Pecos	Arizona	RR Tracks	0.27	6	1.62	3,485	3,222	941	870
Pecos	RR Tracks	Hamilton	0.23	6	1.38	3,485	3,222	802	741
Pecos	Hamilton	Kingston	0.30	6	1.80	3,485	3,222	1,046	967
Pecos	Kingston	McQueen	0.20	6	1.20	3,485	3,222	697	644
Pecos	McQueen	Cooper	1.00	6	6.00	2,550	3,222	2,550	3,222
Pecos	Cooper	Cottonwood	0.25	6	1.50	2,550	3,222	638	806
Pecos	Cottonwood	Gilbert	0.75	6	4.50	2,550	3,222	1,913	2,417
Germann	City Limits	Price	0.25	4	1.00	NA	2,703	NA	676
Germann	Price	Dobson	0.75	4	3.00	1,700	2,703	1,275	2,027
Germann	Dobson	Comanche	0.75	6	4.50	2,465	3,222	1,849	2,417
Germann	Comanche	Alma School	0.25	6	1.50	2,465	3,222	616	806
Germann	Alma School	Hartford	0.40	6	2.40	3,655	3,222	1,462	1,289
Germann	Hartford	Arizona	0.60	6	3.60	3,655	3,222	2,193	1,933
Germann	Arizona	Crossroads Ctr	0.75	6	4.50	3,740	3,222	2,805	2,417
Germann	Crossroads Ctr	McQueen	0.25	6	1.50	3,740	3,222	935	806
Germann	McQueen	Canal	0.50	6	3.00	2,890	3,222	1,445	1,611
Germann	Canal	Cooper	0.50	6	3.00	2,890	3,222	1,445	1,611
Germann	Cooper	Gilbert	1.10	6	6.60	2,890	3,222	3,179	3,544
Queen Creek	City Limits	Price	0.27	6	1.62	3,655	3,222	987	870
Queen Creek	Price	Dobson	0.45	6	2.70	3,145	3,222	1,415	1,450
Queen Creek	Dobson	Alma School	1.30	6	7.80	2,720	3,222	3,536	4,189
Queen Creek	Alma School	Hartford	0.50	6	3.00	3,740	3,222	1,870	1,611
Queen Creek	Hartford	Arizona	0.50	6	3.00	3,740	3,222	1,870	1,611
Queen Creek	Arizona	McQueen	1.00	6	6.00	3,570	3,222	3,570	3,222
Queen Creek	McQueen	Airport	0.15	6	0.90	2,890	3,222	434	483
Queen Creek	Airport	Cooper	0.85	6	5.10	2,890	3,222	2,457	2,739
Queen Creek	Cooper	Gilbert	1.00	6	6.00	2,550	3,222	2,550	3,222
Queen Creek	Gilbert	Lindsay	1.00	6	6.00	2,720	3,222	2,720	3,222
Ocotillo	Dobson	Alma School	0.80	6	4.80	3,060	3,222	2,448	2,578
Ocotillo	Alma School	Sandpiper	0.90	4	3.60	1,700	2,703	1,530	2,433
Ocotillo	Sandpiper	Appleby	0.25	4	1.00	1,700	2,703	425	676
Ocotillo	Appleby	Arizona	0.25	4	1.00	1,700	2,703	425	676
Ocotillo	Arizona	McQueen	1.00	4	4.00	2,125	2,703	2,125	2,703
Ocotillo	McQueen	124th	0.50	4	2.00	1,870	2,703	935	1,352
Ocotillo	124th	Cooper	0.50	4	2.00	1,870	2,703	935	1,352
Ocotillo	Cooper	Redwood	0.25	4	1.00	1,530	2,703	383	676
Ocotillo	Redwood	Gilbert	0.75	4	3.00	1,530	2,703	1,148	2,027
Ocotillo	Gilbert	Lindsay	1.00	4	4.00	1,615	2,703	1,615	2,703
Ocotillo	Lindsay	148th St.	0.50	4	2.00	1,020	2,703	510	1,352
Chandler Heights	Alma School	Arizona	1.00	4	4.00	2,040	2,703	2,040	2,703
Chandler Heights	Arizona	McQueen	1.00	4	4.00	2,380	2,703	2,380	2,703
Chandler Heights	McQueen	Adams	1.00	4	4.00	1,870	2,703	1,870	2,703
Chandler Heights	Adams	Lindl	0.60	4	2.40	1,870	2,703	1,122	1,622
Chandler Heights	Lindl	Cooper	0.40	4	1.60	1,870	2,703	748	1,081
Chandler Heights	Cooper	Gilbert	0.96	4	3.84	1,530	2,703	1,469	2,595

**Table 89 Continued**

Road	From	To	Miles	Lns	Lane- Miles	Count	Capa- city	VMT	VMC
Chandler Heights	Gilbert	Lindsay	1.00	4	4.00	1,870	2,703	1,870	2,703
Chandler Heights	Lindsay	Val Vista	1.00	4	4.00	1,615	2,703	1,615	2,703
Riggs	Arizona	median	0.60	6	3.60	2,550	3,222	1,530	1,933
Riggs	median	McQueen	0.40	6	2.40	2,550	3,222	1,020	1,289
Riggs	McQueen	Championship	1.00	6	6.00	2,465	3,222	2,465	3,222
Riggs	Championship	Cooper	1.00	6	6.00	2,465	3,222	2,465	3,222
Riggs	Cooper	Emmett	0.50	6	3.00	2,380	3,222	1,190	1,611
Riggs	Emmett	Gilbert	0.50	6	3.00	2,380	3,222	1,190	1,611
Riggs	Gilbert	South Mountain	0.30	6	1.80	2,550	3,222	765	967
Riggs	South Mntn	Lindsay	0.70	6	4.20	2,550	3,222	1,785	2,255
Riggs	Lindsay	Sun Groves	0.50	6	3.00	2,380	3,222	1,190	1,611
Riggs	Sun Groves	Black Hill	0.25	6	1.50	2,380	3,222	595	806
Riggs	Black Hill	Val Vista	0.25	6	1.50	2,380	3,222	595	806
<b>Total</b>			<b>91.40</b>		<b>493.33</b>			<b>247,170</b>	<b>279,408</b>
<b>Total, Lane-Miles w/Counts</b>			<b>89.10</b>		<b>481.63</b>			<b>247,170</b>	<b>272,542</b>

Source: Planned arterial street sections from Parsons/Brinckerhoff, *Chandler Transportation Study*, "2040 Lane Needs," Figure VIII-3, p. 75; forecast peak hour traffic count based on *Chandler Transportation Study*, 2040 Daily Traffic Forecast, Figure VII-4, p. 65 multiplied by peak-hour k-factor of 0.85 (*Chandler Transportation Study*, p. 48); lane-miles are the product of segment length and number of lanes; capacity for road sections from *Chandler Transportation Study*, Table VI-5 multiplied by City of Chandler peak-hour k-factor of .085, except 3-lane capacity from Florida Department of Transportation; VMT is the product of miles and peak hour count; VMC is the product of miles and capacity.

## APPENDIX D: PARK INVENTORY

**Table 90. Existing Neighborhood and Special Park Inventory**

Park Name	Acres	
	Developed	Undeveloped
A.J. Chandler	3.00	
Amberwood	18.16	
Apache	9.47	
Arbuckle	9.51	
Ashley Trail	2.60	
Boys & Girls Club	2.18	
Brooks Crossing	8.10	
Chuckwalla	4.45	
Desert Oasis Aquatic	0.72	
Dobson	12.44	
East Mini	0.25	
Fox Crossing	4.95	
Gazelle Meadows	8.99	
Harmony Hollow	6.92	
Harris	0.81	
Harter	8.60	
Hoopes	12.80	
Jackrabbit	4.57	
La Paloma	13.07	
Los Altos	0.75	
Los Arboles	11.35	
Maggio Ranch	5.60	
Mountain View	19.00	
Navarrete	5.00	
Pecos Ranch	10.23	
Pequeno	4.73	
Pinelake	5.21	
Pine Shadows	5.42	
Price	12.10	
Provinces	6.25	
Pueblo Alto	0.25	
Quail Haven	9.75	
Ryan	13.89	
San Marcos	14.74	
San Tan	14.16	
Shawnee	17.51	
Stonegate	8.37	
Summit Point	0.29	
Sundance	3.51	
Sunset	5.06	
Thude	22.30	
Tibshraeny Family	13.00	
West Mini	0.25	
Windmills West	6.50	
Winn	1.00	
Armstrong		3.00
Blue Heron Park Site		3.00
Canal Park Site		9.34
Centennial Park Site		7.87
Homestead North Park Site		7.60
Homestead South Park Site		10.90
Roadrunner Park Site		10.02
<b>Total</b>	<b>347.81</b>	<b>51.73</b>

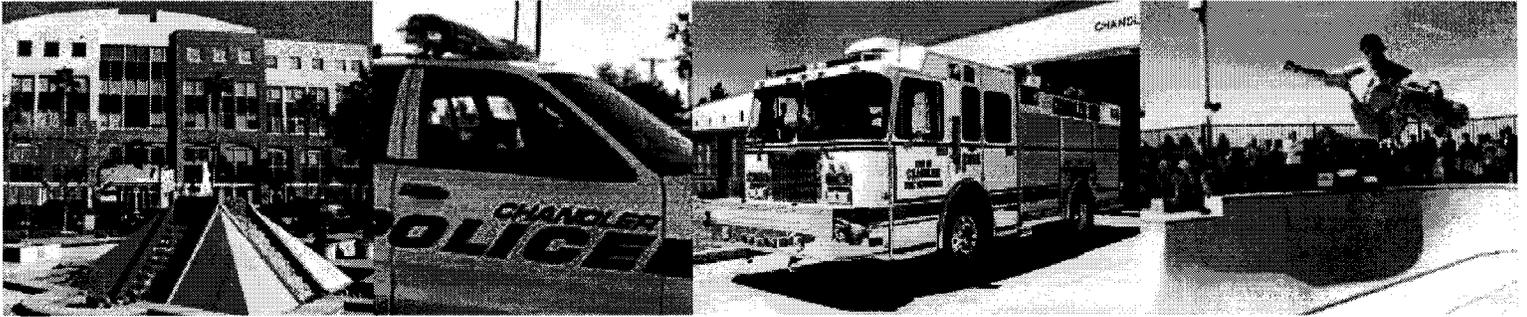
Source: City of Chandler Community Services Department, July 24, 2007.

**Table 91. Existing Community and Regional Park Inventory**

Park Name	Acres	
	Developed	Undeveloped
Arrowhead Meadows	30.81	
Chuparosa	28.00	
Desert Breeze	38.00	3.37
Espee	33.00	
Folley	23.92	
Paseo	13.00	
Pima	31.75	
Snedigar Sportsplex	70.37	20.00
Tumbleweed	101.00	105.19
West Chandler	20.00	
Mesquite Groves Park Site		104.40
Nozomi Park Site		70.00
Paseo Vista Park Site		66.00
Veterans Oasis Park Site		33.00
<b>Total</b>	<b>389.85</b>	<b>401.96</b>

Source: City of Chandler Community Services Department, July 24, 2007.

# City of Chandler, Arizona



## Non-Utility Infrastructure Improvements Plan

**duncan** | associates

*March 2008*

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## **INTRODUCTION**

In 2007, the Arizona State Legislature passed Senate Bill 1423, which amended State law relating to municipal impact fees. Among the provisions included in the bill, the revised statute requires municipalities to adopt an infrastructure improvements plan, which provides a list and schedule of planned infrastructure that will be funded with the development fee.

The revised statute requires that “before the assessment of a new or modified fee, the governing body of the municipality shall adopt or amend an infrastructure improvements plan.” The infrastructure improvements plan must include an estimate of future facilities that will be required as a result of new development, a forecast of the infrastructure costs and a schedule of planned infrastructure construction. This report provides the infrastructure improvements plan required by State law for each of the City’s non-utility system development fees.

## ARTERIAL STREETS

The infrastructure improvements plan in Table 1 provides a list of planned capital improvements and other expenditures that are eligible to be funded by the arterial streets system development fee. Eligible expenditures include planned street improvements funded with impact fees in the 2007-2012 Capital Improvement Program, planned improvements beyond 2012, the allocable share of the system development fee study cost and the outstanding inter-fund loan that may be repaid with future system development fee collections. Some of the project costs differ from those used in calculating the system development fee since the 2007-2012 CIP costs include an inflation adjustment and actual right-of-way (ROW) costs while the costs included in the arterial street fee are deflated to the 2007 cost and are based on a ROW acquisition cost estimate of \$3 per square foot. The planned expenditures also include system development fee carry-forward and encumbrance balances for projects that are currently under construction.

**Table 1. Arterial Street Infrastructure Improvements Plan**

Expenditure	2007-2012	Beyond 2012	Total
Alma School - Frye to Germann	\$0	\$7,240,000	\$7,240,000
Alma School - Germann to Ocotillo	\$0	\$9,125,000	\$9,125,000
Alma School - Ocotillo to Chandler Heights	\$0	\$6,790,000	\$6,790,000
Alma School - Chandler Heights to City Limit	\$0	\$3,165,000	\$3,165,000
Arizona - Knox to Ray	\$0	\$90,000	\$90,000
Arizona - Pecos to Ocotillo	\$0	\$2,300,000	\$2,300,000
Arizona Ave. - Ocotillo to Riggs (8ST543)	\$5,362,000	\$6,840,000	\$12,202,000
Arizona Ave. - Riggs to Hunt	\$0	\$5,002,000	\$5,002,000
Chandler Blvd - Colorado to McQueen Road (8ST297)	\$15,160,000	\$0	\$15,160,000
Chandler Heights - Alma School to Arizona	\$0	\$1,100,000	\$1,100,000
Chandler Heights - Arizona to McQueen (8ST608)	\$13,520,000	\$0	\$13,520,000
Chandler Heights - McQueen to Val Vista (8ST642)	\$8,295,000	\$19,135,000	\$27,430,000
Cooper - North City Limit to Ray	\$0	\$2,740,000	\$2,740,000
Cooper - Queen Creek to Riggs (8ST643)	\$3,870,000	\$10,430,000	\$14,300,000
Dobson - Queen Creek to Ocotillo	\$0	\$7,900,000	\$7,900,000
Germann - Arizona Ave to .25 E of Airport Blvd	\$0	\$4,185,000	\$4,185,000
Gilbert - Germann to Queen Creek (8ST482)	\$8,290,000	\$0	\$8,290,000
Gilbert Road - Queen Creek to Hunt Hwy (8ST596)	\$40,000,000	\$0	\$40,000,000
Lindsay - Ocotillo to Riggs	\$0	\$17,395,000	\$17,395,000
Lindsay - Riggs to Hunt	\$0	\$4,045,000	\$4,045,000
McClintock - Frye to Santan	\$0	\$1,960,000	\$1,960,000
McQueen - Warner to Chandler	\$0	\$4,725,000	\$4,725,000
McQueen - Chandler to Pecos	\$0	\$7,070,000	\$7,070,000
McQueen Road - Queen Creek to Riggs (8ST478)	\$26,885,000	\$0	\$26,885,000
McQueen - Riggs to Hunt Highway	\$0	\$3,015,000	\$3,015,000
Ocotillo - Dobson to Alma School	\$0	\$4,300,000	\$4,300,000
Ocotillo Rd. - Arizona to McQueen (8ST607)	\$16,175,000	\$0	\$16,175,000
Ocotillo - Cooper to 148th St. (8ST641)	\$7,720,000	\$15,485,000	\$23,205,000
Queen Creek - McQueen to Lindsay (8ST548)	\$29,430,000	\$0	\$29,430,000
Ray - Arizona to Cooper	\$0	\$6,230,000	\$6,230,000
Riggs - West City Limit to Arizona	\$0	\$3,725,000	\$3,725,000
Warner - UPRR to McQueen	\$0	\$4,915,000	\$4,915,000
New Traffic Signals (8ST322)	\$2,443,000	\$0	\$2,443,000

<b>Expenditure</b>	<b>2007-2012</b>	<b>Beyond 2012</b>	<b>Total</b>
Arizona Ave - Ocotillo to Hunt Hwy (Carry-Forward)	\$470,000	\$0	\$470,000
Arizona Ave - Ray to Elliot (Encumbrance)	\$67,754	\$0	\$67,754
Asphaltic Pavement & Concrete Crushing (Encumbrance)	\$200	\$0	\$200
Chandler Blvd - California to Colorado (Encumbrance)	\$17,274	\$0	\$17,274
Chandler Blvd - Colorado to McQueen (Enc. & Carry-Forward)	\$1,841,937	\$0	\$1,841,937
Cooper - Consolidated Canal to Germann (Enc. & Carry-Forward)	\$10,398,442	\$0	\$10,398,442
Germann - Price to Arizona (Enc. & Carry-Forward)	\$12,401,808	\$0	\$12,401,808
Gilbert - Germann to Queen Creek (Enc. & Carry-Forward)	\$3,791,164	\$0	\$3,791,164
Gilbert - Pecos to Germann (Enc. & Carry-Forward)	\$205,847	\$0	\$205,847
McQueen - Pecos to Queen Creek (Encumbrance)	\$9	\$0	\$9
Pecos - Dobson to McQueen (Encumbrance)	\$12	\$0	\$12
Pecos - McQueen to Gilbert (Enc. & Carry-Forward)	\$9,364,628	\$0	\$9,364,628
Price - Santan Fwy to Germann (Enc. & Carry-Forward)	\$3,759,161	\$0	\$3,759,161
Queen Creek - Price to McQueen (Enc. & Carry-Forward)	\$10,353,186	\$0	\$10,353,186
Riggs - Arizona to Gilbert (Enc. & Carry-Forward)	\$151,455	\$0	\$151,455
Riggs - Gilbert to Val Vista (Enc. & Carry-Forward)	\$861,035	\$0	\$861,035
New Traffic Signals (Enc. & Carry-Forward)	\$666,560	\$0	\$666,560
Street Construction (Enc. & Carry-Forward)	\$17,123	\$0	\$17,123
Traffic Control System (Carry-Forward)	\$7,429	\$0	\$7,429
Inter-fund Loan	\$3,935,000	\$3,935,000	\$7,870,000
System Development Fee Study	\$9,060	\$0	\$9,060
<b>Total</b>	<b>\$235,469,084</b>	<b>\$162,842,000</b>	<b>\$398,311,084</b>

Source: City of Chandler 2007-2012 Capital Improvement Program; funding beyond 2012 based on planned improvements included in the system development fee calculation less amount of funding programmed in 2007-2012 CIP; encumbrance and carry-forward project cost balances provided by City of Chandler, Management Services Department, January 30, 2008; system development fee study cost based on 1/6<sup>th</sup> share of total study cost of \$54,360.

## PARKS

The infrastructure improvements plan for parks provide a list of planned capital improvements and other expenditures that are eligible to be funded by the system development fees. Eligible expenditures include planned park improvements funded with impact fees in the 2007-2012 Capital Improvement Program, planned park improvements beyond 2012, the allocable share of the system development fee study cost and inter-fund and general obligation debt that may be repaid with system development fee funding. The park infrastructure improvements plan is shown in Table 2. The planned expenditures also include system development fee carry-forward and encumbrance balances for projects that are currently under construction and for pending land purchases.

**Table 2. Park Infrastructure Improvements Plan**

Expenditure	2007-2012	Beyond 2012	Total
Neighborhood Park Land Acquisition (8PR039)	\$6,084,481	\$0	\$6,084,481
Homestead North Park Site Development (8PR389)	\$1,212,750	\$0	\$1,212,750
Homestead South Park Site Development (8PR390)	\$1,739,339	\$0	\$1,739,339
Canal Park Development (8PR399)	\$1,490,406	\$0	\$1,490,406
Roadrunner Park Development (8PR400)	\$1,893,326	\$0	\$1,893,326
Future Park Site Development (8PR557)	\$7,980,258	\$0	\$7,980,258
Arbuckle Park (Enc. & Carry-Forward)	\$1,830,394	\$0	\$1,830,394
Canal Park (Encumbrance)	\$147,325	\$0	\$147,325
Chuckwalla Park (Encumbrance)	\$239,757	\$0	\$239,757
Homestead North Park (Carry-Forward)	\$142,470	\$0	\$142,470
Homestead South Park (Carry-Forward)	\$204,332	\$0	\$204,332
Pine Lakes Park (Encumbrance)	\$3,557	\$0	\$3,557
Ryan Park (Enc. & Carry-Forward)	\$367,553	\$0	\$367,553
Tibshraeny Park (Encumbrance)	\$147,029	\$0	\$147,029
Neighborhood Park Development (Encumbrance)	\$46,678	\$0	\$46,678
Neighborhood Park Land Acq. (Enc. & Carry-Forward)	\$4,919,039	\$0	\$4,919,039
System Development Fee Study	\$9,060	\$0	\$9,060
Future Park #1	\$0	\$2,099,165	\$2,099,165
Future Park #2	\$0	\$2,099,165	\$2,099,165
Future Park #3	\$0	\$2,099,165	\$2,099,165
General Obligation Debt	\$177,050	\$354,099	\$531,149
<b>Subtotal, Neighborhood &amp; Special Parks</b>	<b>\$28,634,804</b>	<b>\$6,651,594</b>	<b>\$35,286,398</b>
Mesquite Groves Development (8PR396)	\$25,508,016	\$0	\$25,508,016
Community Park Development (Encumbrance)	\$54,283	\$0	\$54,283
Community Park Land Acq. (Enc. & Carry-Forward)	\$61,855	\$0	\$61,855
Mesquite Groves Park (Enc. & Carry-Forward)	\$9,559,096	\$0	\$9,559,096
Nozomi Park (Carry-Forward)	\$2,652,988	\$0	\$2,652,988
Veteran's Oasis Park (Encumbrance)	\$5,509,425	\$0	\$5,509,425
Interfund Loan	\$5,404,790	\$2,161,918	\$7,566,708
System Development Fee Study	\$9,060	\$0	\$9,060
General Obligation Debt	\$5,955,000	\$11,910,000	\$17,865,000
<b>Subtotal, Community &amp; Regional Parks</b>	<b>\$54,714,513</b>	<b>\$14,071,918</b>	<b>\$68,786,431</b>
<b>Total, All Parks</b>	<b>\$83,349,317</b>	<b>\$20,723,512</b>	<b>\$104,072,829</b>

Source: City of Chandler 2007-2012 Capital Improvement Program; other future projects from City of Chandler Parks Development and Operations Division; general obligation payment from City of Chandler Management Services Department, October 24, 2007; encumbrance and carry-forward project cost balances provided by City of Chandler, Management Services Department, January 30, 2008; system development fee study cost based on 1/6<sup>th</sup> share of total study cost of \$54,360.

## FIRE

The infrastructure improvements plan provides a list of planned capital improvements and other expenditures that are eligible to be funded by the fire system development fee. Eligible expenditures include planned fire department improvements funded with impact fees in the 2007-2012 Capital Improvement Program, the allocable share of the fee study cost and inter-fund loans that may be repaid with system development fee funding. The fire infrastructure improvements plan is shown in Table 3; there are currently no planned improvements that will be constructed beyond 2012. The planned expenditures also include system development fee carry-forward and encumbrance balances for projects that are currently under construction and for pending land purchases.

**Table 3. Fire Infrastructure Improvements Plan**

Expenditure	2007-2012	Beyond 2012	Total
Southeast Fire Station - Santan/Airport (8F1600)	\$7,130,504	\$0	\$7,130,504
Southeast Fire Station - Ocotillo/Gilbert (8F1611)	\$7,045,510	\$0	\$7,045,510
Training Center Expansion (8F1634)	\$7,729,992	\$0	\$7,729,992
Fire Administration (Enc. & Carry-Forward)	\$1,127,518	\$0	\$1,127,518
Mechanical Maint. Facility (Enc. & Carry-Forward)	\$104,953	\$0	\$104,953
Training Center Expansion (Encumbrance)	\$500	\$0	\$500
Station #10 (Enc. & Carry-Forward)	\$4,591,107	\$0	\$4,591,107
Station #12 Land Acquisition (Carry-Forward)	\$37,501	\$0	\$37,501
Interfund Loan	\$2,580,495	\$4,543,162	\$7,123,657
System Development Fee Study	\$9,060	\$0	\$9,060
<b>Total</b>	<b>\$30,357,140</b>	<b>\$4,543,162</b>	<b>\$34,900,302</b>

*Source* City of Chandler 2007-2012 Capital Improvement Program less municipal arts funding; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; encumbrance and carry-forward project cost balances provided by City of Chandler, Management Services Department, January 30, 2008; system development fee study cost based on 1/6<sup>th</sup> share of total study cost of \$54,360.

## POLICE

The infrastructure improvements plan in Table 4 provides a list of planned capital improvements and other expenditures that are eligible to be funded by the police system development fee. Eligible expenditures include planned police department improvements funded with impact fees in the 2007-2012 Capital Improvement Program, the allocable share of the system development fee study cost and inter-fund loans that may be repaid with future system development fee revenue. There are currently no planned improvements that will be constructed beyond 2012. The planned expenditures also include system development fee carry-forward and encumbrance balances for projects that are currently under construction.

**Table 4. Police Infrastructure Improvements Plan**

<b>Expenditure</b>	<b>2007-2012</b>	<b>Beyond 2012</b>	<b>Total</b>
Police Driver Training Facility (8PD035)	\$5,516,710	\$0	\$5,516,710
Communications Center/Admin. Expansion (8PD410)	\$631,789	\$0	\$631,789
Police Training Facility (8PD579)	\$1,806,668	\$0	\$1,806,668
Chandler Heights Substation (Enc. & Carry-Forward)	\$5,758,381	\$0	\$5,758,381
Desert Breeze Substation (Encumbrance)	\$16,090	\$0	\$16,090
Interfund Loan	\$3,327,045	\$5,204,004	\$8,531,049
System Development Fee Study	\$9,060	\$0	\$9,060
<b>Total</b>	<b>\$17,065,743</b>	<b>\$5,204,004</b>	<b>\$22,269,747</b>

*Source:* City of Chandler 2007-2012 Capital Improvement Program less municipal arts funding; inter-fund loan balance from City of Chandler Management Services Department, October 24, 2007; system development fee study cost based on 1/6<sup>th</sup> share of total study cost of \$54,360.

## PUBLIC BUILDINGS

The infrastructure improvements plan in Table 5 provides a list of planned capital improvements and other expenditures that are eligible to be funded by the public buildings system development fee. Eligible expenditures include the share of planned public buildings anticipated to be funded with system development fees in the 2007-2012 Capital Improvement Program, and the allocable share of the system development fee study cost that may be repaid with system development fee funding. There are currently no planned improvements that will be constructed beyond 2012 and no outstanding inter-fund loan balances. The planned expenditures also include the system development fee encumbrance balances for the City Hall project, which is currently under construction.

**Table 5. Public Building Infrastructure Improvements Plan**

<b>Expenditure</b>	<b>2007-2012</b>	<b>Beyond 2012</b>	<b>Total</b>
City Hall (8GG075)	\$33,493,921	\$0	\$33,493,921
Public Works Expansion, Downtown Complex (8GG609)	\$1,931,200	\$0	\$1,931,200
Public Parking Garage (8GG614)	\$609,760	\$0	\$609,760
City Hall (Encumbrance)	\$122,835	\$0	\$122,835
System Development Fee Study	\$9,060	\$0	\$9,060
<b>Total</b>	<b>\$36,166,776</b>	<b>\$0</b>	<b>\$36,166,776</b>

*Source:* City of Chandler 2007-2012 Capital Improvement Program; system development fee study cost based on 1/6<sup>th</sup> share of total study cost of \$54,360.

## LIBRARY

The infrastructure improvements plan provides a list of planned capital improvements and other expenditures that are eligible to be funded by the system development fee. As shown in Table 6, the only planned expenditure through build-out is the Sunset Library acquisition. The study cost of \$5,400 associated with library portion of the system development fee study is funded through general fund revenue and is not included in the infrastructure improvements plan. There are currently no planned improvements that will be constructed beyond 2012 and no outstanding inter-fund loan balances. The planned expenditures also include system development fee carry-forward and encumbrance balances for the Basha and Hamilton youth areas that are currently under construction.

**Table 6. Library Infrastructure Improvements Plan**

<b>Expenditure</b>	<b>2007-2012</b>	<b>Beyond 2012</b>	<b>Total</b>
Sunset Library Acquisition (8LI556)	\$9,955,000	\$0	\$9,955,000
Basha and Hamilton Youth Areas (Enc. & Carry-Forward)	\$491,158	\$0	\$491,158
System Development Fee Study	\$0	\$0	\$0
<b>Total</b>	<b>\$10,446,158</b>	<b>\$0</b>	<b>\$10,446,158</b>

Source: City of Chandler 2007-2012 Capital Improvement Program.