RESOLUTION NO. 33-14

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, ADOPTING DEVELOPMENT FEES IN COMPLIANCE WITH STATE LAW.

WHEREAS, Arizona's enabling legislation for development fees, A.R.S. § 9-463.05 (the "Development Fee Statute") requires the City to produce three integrated documents prior to assessing development fees: (i) land use assumptions ("LUA"), (ii) an infrastructure improvements plan ("IIP"), and (iii) a development fee study based upon the LUA/IIP. The Development Fee Statute also requires a two-phase adoption process, whereby the LUA and IIP are reviewed, refined and adopted before the development fee study is addressed; and

WHEREAS, in accordance with the Development Fee Statute, (i) the LUA and IIP were released to the public, (ii) the City Council held a public hearing on January 21, 2014, to receive public comment on the LUA/IIP and (iii) the City Council approved Resolution 14-14 on March 4, 2014, adopting the LUA/IIP and giving notice of its intent to assess development fees; and

WHEREAS, in accordance with the Development Fee Statute, the City Council held a public hearing on the document entitled Land Use Assumptions, Infrastructure Improvements Plan and Preliminary Development Fees, dated March 6, 2014, prepared by TischlerBise (the "Preliminary Development Fee Study"); and

WHEREAS, the Preliminary Development Fee Study has been updated to include comments received from the public, including representatives of the development community (the updated document is referred to as the "Final Development Fee Study"); and

WHEREAS, the City Council desires to conclude the second phase of the development fee adoption process by approving the Final Development Fee Study.

NOW THEREFORE, BE IT RESOLVED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, as follows:

Section 1. The recitals above are hereby incorporated as if fully set forth herein.

Section 2. The Final Development Fee Study is hereby adopted in substantially the form and substance of Exhibit A, attached hereto and incorporated herein by reference.

Section 3. In accordance with the Development Fee Statute, the development fees set forth in the Final Development Fee Report shall not be effective until 75 days after the date of this Resolution.

Section 4. The Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to take all steps necessary to carry out the purpose and intent of this Resolution.

PASSED AND ADOPTED by the Mayor and City Council of the City of Buckeye, Arizona, this 13th day of May, 2014.

Jackie A. Meck, Mayor

ATTEST:

Lucinda J. Aja, City Clerk

APPROVED AS TO FORM:

Scott W. Ruby, City Attorney

AJM:DKK 2157884.1 5/1/2014

LAND USE ASSUMPTIONS, INFRASTRUCTURE IMPROVEMENTS PLAN, AND DEVELOPMENT FEES

Prepared for:

City of Buckeye, Arizona

May 13, 2014

Alternative A

TischlerBise
Fiscal, Economic & Planning Consultants

4701 Sangamore Road, Suite S240
Bethesda, MD 20816
301.320.6900
www.tischlerbise.com

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EXECUTIVE SUMMARY

Arizona's enabling legislation for development fees (ARS § 9-463.05) calls for three integrated products: 1) Land Use Assumptions for at least 10 years (found in Appendix C), 2) Infrastructure Improvements Plan (abbreviated IIP contained within each public facility section of this report), and 3) Development Fees (summarized below and discussed in detail in each public facility section). All three products are contained in this document (Development Fee Study), but the State now requires a two-phase adoption process. The land use assumptions and IIP were reviewed, refined, and approved before focusing on the development fees.

In contrast to many General Plans and Master Plans for specific types of infrastructure, the projections of demand for necessary public services or facility expansions required by new service units set forth in the IIP is limited to 10 years. Another important change in the legislation is the requirement that fees be based on the same Level-Of-Service (LOS) provided to existing development. LOS to existing development may increase, but not by means of development fees. A final highlight of the enabling legislation is specific limitations on necessary public services. For example, only 10,000 square feet of a new library may be funded with development fees.

Buckeye's Development Fee Study includes the necessary public services listed below:

- Parks and Recreational Facilities
- Library Facilities
- Streets
- Public Safety Facilities
- Water Facilities
- Wastewater Facilities

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fees represent future development's proportionate share of infrastructure capacity. Development fees may only be used for capital improvements or debt service for growth-related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement or correcting existing deficiencies.

Arizona Development Fee Enabling Legislation

Arizona Revised Statutes § 9-463.05 governs how development fees are calculated for municipalities in Arizona. During the state legislative session of 2011, Senate Bill 1525 (SB 1525) was introduced which significantly amended the development fee enabling legislation. The changes included:

- Amending existing development fee programs by January 1, 2012.
- Abandoning existing development fee programs by August 1, 2014.
- New development fee program structure revolving around Land Use Assumptions and Infrastructure Improvements Plan.
- New adoption procedures for the Land Use Assumptions, Infrastructure Improvements Plan, and development fees.
- New definitions, including "necessary public services" which defines what categories and types of infrastructure may be funded with development fees.
- Time limitations in development fee collections and expenditures.
- New requirements for credits, "grandfathering" rules, and refunds.

As documented in this report, the City of Buckeye (City) has complied with Arizona's development fee enabling legislation and applicable legal precedents. Development fees are proportionate and reasonably related to the capital improvement demands of new development. Specific costs have been identified using local data and current dollars. With input from City staff, TischlerBise determined demand indicators for each type of infrastructure and calculated proportionate share factors to allocate costs by type of development. This report documents the formulas and input variables used to calculate the development fees for each type of public facility. Development fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Necessary Public Services

Under the new requirements of the development fee enabling legislation, development fees may be only used for construction, acquisition or expansion of public facilities that are necessary public services. "Necessary public service" means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated by or on behalf of the municipality:

- Water Facilities
- Wastewater Facilities
- Storm Water, Drainage, and Flood Control Facilities
- Library Facilities
- Streets Facilities
- Fire and Police Facilities
- Neighborhood Parks and Recreational Facilities
- Any facility that was financed before June 1, 2011 and that meets the following requirements:
    1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
    2. After August 1, 2014, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2011 to finance construction of the facility.

Infrastructure Improvements Plan

Development fees must be calculated pursuant to an Infrastructure Improvements Plan (IIP). For each necessary public service that is the subject of a development fee, Subsection 9-463.05(E) requires that the IIP shall include:

> *Element #1: A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed on this state, as applicable.*
>
> *Element #2: An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable.*
>
> *Element #3: A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable.*
>
> *Element #4: A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial.*
>
> *Element #5: The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria.*
>
> *Element #6: The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.*
>
> *Element #7: A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development, as required in subsection B, paragraph 12 of this section.*

Evaluation of Credits

New development should not be required to pay twice for the cost of new facilities – once through development fees and again through other taxes or fees that are used to fund the same facilities. To avoid such potential double-payment, development fees may be reduced, and such a reduction is referred to as an offset or revenue credit that is incorporated into the development fee calculation. In general, offsets are only required for funding that is dedicated for capacity-expanding improvements of the type addressed by the development fee. A municipality is not required to use general fund revenue to pay for growth-related improvements.

SB 1525 amended the "offset" provision in the state enabling act to add a mandate regarding construction contracting excise tax, as highlighted in the following provision ARS § 9-463.05(B)(12)):

> *The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development.* ***Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection.***

Because the City does not charge a construction excise tax at a rate higher than for other types of business activities, no such offset is required.

Qualified Professionals

Qualified professionals must prepare the IIP, using generally-accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education, or experience." TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure funding, user fee and cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

Calculation Methodologies

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (usually referred to as system improvements). There are three general methods for calculating development fees. The choice of a particular method depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each method has advantages and disadvantages in a particular situation, and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating development impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss three basic methods for calculating development fees and how those methods can be applied.

- The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- The incremental expansion method documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. By definition there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share to maintain current standards for growth-related infrastructure. Fee revenue will be used to expand or provide additional facilities, as needed to keep pace with new development.
- The plan-based method allocates costs for a specified set of improvements to a specified amount of service units. Improvements are typically identified in a facility master plan and development potential is identified by the land use assumptions. There are two options for determining the cost per service unit: 1) total cost of a public facility can be divided by total demand units (average cost approach), or 2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost approach).

Figure 1 summarizes the methods and cost components for each type of infrastructure included in Buckeye's IIP and development fee update. The table below also indicates the service areas applicable to each type of infrastructure. Proposed service areas are mapped in Figure 2.

Figure 1 – Development Fee Methods and Cost Components

Type of Fee	*Cost Recovery (past)*	*Incremental Expansion (present)*	*Plan-Based (future)*	*Service Areas*
1. Parks & Recreation		Community Centers, Park Land plus Improvements	Pool	Central East
2. Library	Central East Library		North Library	Central East and North (separate)
3. Streets			I-10 Interchange Improvements	Central North, Central West, and Central East (combined)
4. Public Safety		Police Building Space, Vehicles and Equipment	Fire Stations	North, Central North, Central West, and Central East (combined)
5. Water	Developer Reimbursements		Production and Distribution	North, Central North, Central West, and Central East (separate)
6. Wastewater	Developer Reimbursements		Collection, Treatment, and Reclamation	North, Central North, Central West, and Central East (separate)

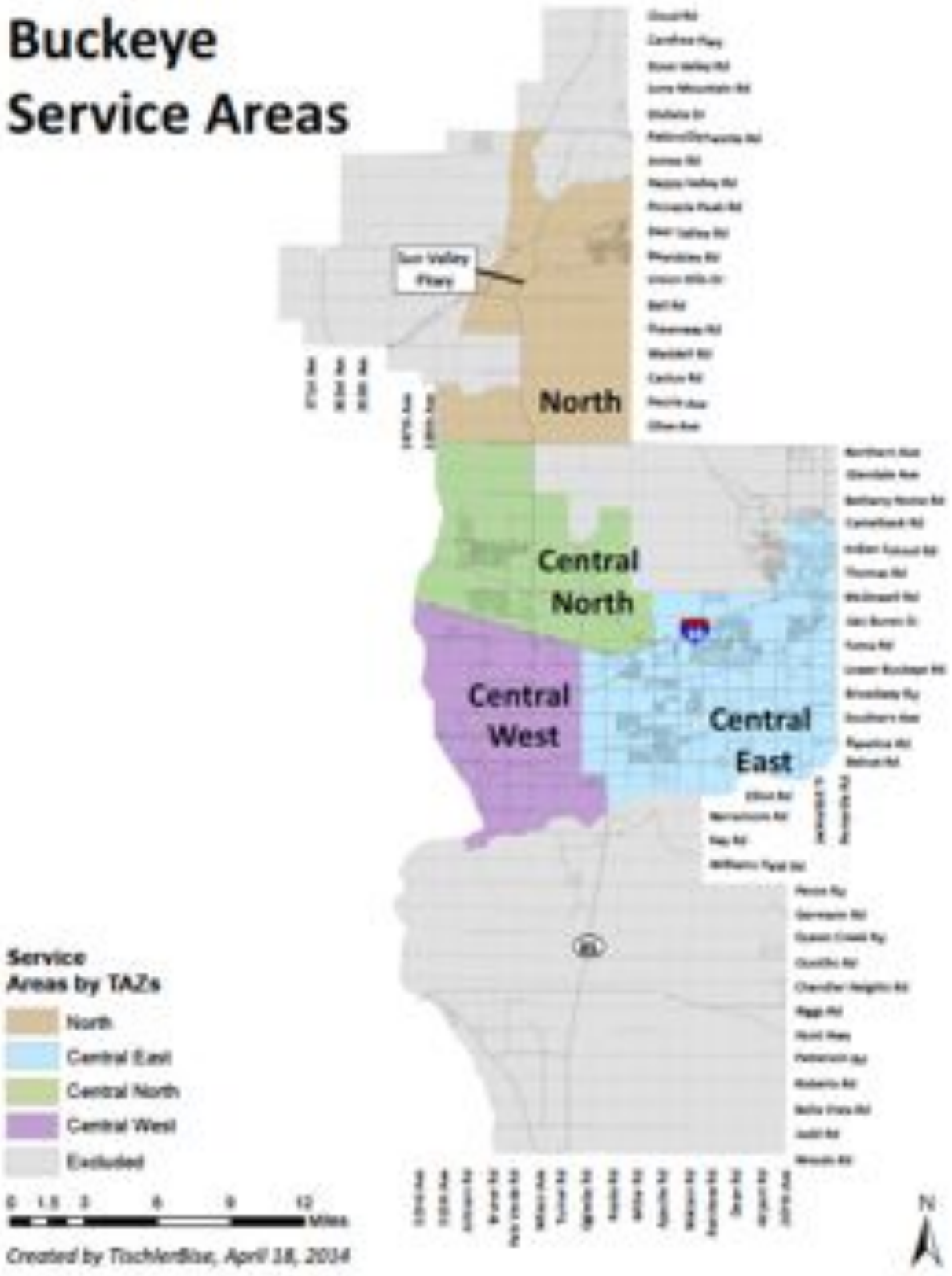
Service Areas

Arizona's enabling legislation requires a determination of service areas, within which a substantial nexus exists between public facilities and the development being served. Buckeye currently collects citywide development fees for parks/recreation, libraries, streets, police, and fire facilities. Water and sewer development fees are currently collected in Zones 1-3 and the utility fees vary by zone.

Proposed service areas are comprised of Traffic Analysis Zones (TAZs), designated by gray polygons in the map below, that provide demographic data used to analyze the demand for infrastructure. The service areas for water and wastewater facilities share the same geographic pattern and nomenclature, but private water companies reduce the City's water service area. Over the next five years, no significant development is expected in any of the TAZs shaded light gray in the proposed service area map (see Figure2). These areas are excluded from the service area of all public facilities.

Due to changes in Arizona's enabling legislation, TischlerBise recommends four "service areas," as shown below. The major change from the current fees is splitting Zone 3 into separate service areas. North of Northern Avenue is now referred to as the "North" service area. South of Northern Avenue to I-10, and generally west of the White Tank Mountains, is now referred to as "Central North." The master planned communities of Sundance and Blue Horizons are now combined with Central Buckeye and referred to as the "Central East" service area.

Figure 2 – Map of Service Areas



Proposed Development Fees

Proposed fees for single-unit residential development are summarized in Figure 3, including fees for each type of infrastructure and service area. Proposed fees for water and wastewater facilities assume the smallest meter size. Apartment buildings with multiple units in a single structure are likely to require larger water meters, so it is not realistic to add per unit fees for parks, libraries, streets, and public safety, to the meter-size fees for water and wastewater.

Single-unit changes by service area, from current fees to proposed fees, are shown under each subtotal in the table below (both absolute and percentage change). Proposed fees decrease for residential development in all areas except the Central East service area. The most significant increases in proposed fees are for water and wastewater facilities.

Figure 3 – Current and Proposed Fees for Single-Unit Residential

Current Single Unit Residential (per dwelling)*	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$1,109	$1,109	$1,109	$1,109
Libraries	$165	$165	$165	$165
Streets	$246	$246	$246	$246
Public Safety	$1,684	$1,684	$1,684	$1,684
Subtotal	$3,204	$3,204	$3,204	$3,204
Water + Resources	$4,766	$4,766	$2,574	$3,689
Wastewater + Reclaimed	$4,440	$4,440	$5,988	$4,169
Subtotal	$9,206	$9,206	$8,562	$7,858
Total	**$12,410**	**$12,410**	**$11,766**	**$11,062**

* *Assumes smallest meter size.*

Single Unit Residential (per dwelling)* **Alternative A**	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$0	$0	$0	$1,374
Libraries	$339	$0	$0	$622
Streets	$0	$252	$252	$252
Public Safety	$2,098	$2,098	$2,098	$2,098
Subtotal	$2,437	$2,350	$2,350	$4,346
$ Change	($767)	($854)	($854)	$1,142
% Change	-24%	-27%	-27%	36%
Water + Resources	$4,680	$3,268	$10,152	$7,800
Wastewater + Reclaimed	$5,187	$5,862	$9,596	$3,865
Subtotal	$9,867	$9,130	$19,748	$11,665
$ Change	$661	($76)	$11,186	$3,807
% Change	7%	-1%	131%	48%
Total	**$12,304**	**$11,480**	**$22,098**	**$16,011**
$ Change	($106)	($930)	$10,332	$4,949
% Change	-1%	-7%	88%	45%

* *Assumes smallest meter size.*

Fees for nonresidential development, per thousand square feet of floor area, are summarized in the area shaded light red for commercial and light gray for industrial (see Figure 4). Proposed fees for water and wastewater facilities assume the smallest meter size (see area shaded light blue). Because development fees for parks, libraries, streets, and public safety are imposed per thousand square feet of floor area, in contrast to fees for utilities that are imposed by meter size, TischlerBise provided two sets of subtotals to indicated the cumulative change by service area. Changes from current fees are shown under each subtotal (both absolute and percentage change). The proposed fees for parks, libraries, streets, and public safety decrease in all service areas. For water and wastewater, the proposed fees increase in all service areas except the Central North.

Figure 4 – Current and Proposed Fees for Commercial and Industrial

Current Commercial (per 1,000 Sq Ft)*	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$0	$0	$0	$0
Libraries	$0	$0	$0	$0
Streets	$1,619	$1,619	$1,619	$1,619
Public Safety	$1,970	$1,970	$1,970	$1,970
Subtotal	$3,589	$3,589	$3,589	$3,589
Water + Resources	$4,766	$4,766	$2,574	$3,689
Wastewater + Reclaimed	$4,440	$4,440	$5,988	$4,169
Subtotal	$9,206	$9,206	$8,562	$7,858

** Assumes 25,000 Sq Ft and smallest meter size.*

Commercial (per 1,000 Sq Ft)* **Alternative A**	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$0	$0	$0	$109
Libraries	$52	$0	$0	$42
Streets	$0	$318	$318	$318
Public Safety	$1,028	$1,028	$1,028	$1,028
Subtotal	$1,080	$1,346	$1,346	$1,497
$ Change	($2,509)	($2,243)	($2,243)	($2,092)
% Change	-70%	-62%	-62%	-58%
Water + Resources	$4,680	$3,268	$10,152	$7,800
Wastewater + Reclaimed	$5,187	$5,862	$9,596	$3,865
Subtotal	$9,867	$9,130	$19,748	$11,665
$ Change	$661	($76)	$11,186	$3,807
% Change	7%	-1%	131%	48%

** Assumes smallest meter size.*

Current Industrial (per 1,000 Sq Ft)*	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$0	$0	$0	$0
Libraries	$0	$0	$0	$0
Streets	$232	$232	$232	$232
Public Safety	$1,380	$1,380	$1,380	$1,380
Subtotal	$1,612	$1,612	$1,612	$1,612
Water + Resources	$4,766	$4,766	$2,574	$3,689
Wastewater + Reclaimed	$4,440	$4,440	$5,988	$4,169
Subtotal	$9,206	$9,206	$8,562	$7,858

** Assumes Light Industrial and smallest meter size.*

Industrial (per 1,000 Sq Ft)* **Alternative A**	*North*	*Central North*	*Central West*	*Central East*
Parks and Recreation	$0	$0	$0	$49
Libraries	$23	$0	$0	$19
Streets	$0	$44	$44	$44
Public Safety	$245	$245	$245	$245
Subtotal	$268	$289	$289	$357
$ Change	($1,344)	($1,323)	($1,323)	($1,255)
% Change	-83%	-82%	-82%	-78%
Water + Resources	$4,680	$3,268	$10,152	$7,800
Wastewater + Reclaimed	$5,187	$5,862	$9,596	$3,865
Subtotal	$9,867	$9,130	$19,748	$11,665
$ Change	$661	($76)	$11,186	$3,807
% Change	7%	-1%	131%	48%

** Assumes smallest meter size.*

Figure 5 provides a summary of non-utility development impact fees for all service areas in Buckeye.

Figure 5 – Non-Utility Development Impact Fee Schedule

Development Type	*Parks & Recreation*	*Library*	*Streets*	*Public Safety*	*Total*
North					
Residential (per unit)					
Single Dwelling	$0	$339	$0	$2,098	$2,437
Age-Restricted and 2+ Dwellings per Structure	$0	$265	$0	$1,639	$1,904
Nonresidential (per 1,000 square feet of building)					
Industrial	$0	$23	$0	$245	$268
Commercial	$0	$52	$0	$1,028	$1,080
Institutional	$0	$26	$0	$420	$446
Office & Other Services	$0	$87	$0	$848	$935
Central North					
Residential (per unit)					
Single Dwelling	$0	$0	$252	$2,098	$2,350
Age-Restricted and 2+ Dwellings per Structure	$0	$0	$176	$1,639	$1,815
Nonresidential (per 1,000 square feet of building)					
Industrial	$0	$0	$44	$245	$289
Commercial	$0	$0	$318	$1,028	$1,346
Institutional	$0	$0	$127	$420	$547
Office & Other Services	$0	$0	$137	$848	$985
Central West					
Residential (per unit)					
Single Dwelling	$0	$0	$252	$2,098	$2,350
Age-Restricted and 2+ Dwellings per Structure	$0	$0	$176	$1,639	$1,815
Nonresidential (per 1,000 square feet of building)					
Industrial	$0	$0	$44	$245	$289
Commercial	$0	$0	$318	$1,028	$1,346
Institutional	$0	$0	$127	$420	$547
Office & Other Services	$0	$0	$137	$848	$985
Central East					
Residential (per unit)					
Single Dwelling	$1,374	$622	$252	$2,098	$4,346
Age-Restricted and 2+ Dwellings per Structure	$1,074	$486	$176	$1,639	$3,375
Nonresidential (per 1,000 square feet of building)					
Industrial	$49	$19	$44	$245	$357
Commercial	$109	$42	$318	$1,028	$1,497
Institutional	$54	$21	$127	$420	$622
Office & Other Services	$182	$70	$137	$848	$1,237

PARKS AND RECREATIONAL FACILITIES IIP

ARS § 9-463.05(T)(7)(g) defines the facilities and assets which can be included in the Parks and Recreational Facilities IIP.

> *"Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include vehicles, equipment or that portion of any facility that is used for amusement parks, aquariums, aquatic centers, auditoriums, arenas, arts and cultural facilities, bandstand and orchestra facilities, bathhouses, boathouses, clubhouses, community centers greater than three thousand square feet in floor area, environmental education centers, equestrian facilities, golf course facilities, greenhouses, lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools."*

The infrastructure improvements plan includes components for parks, pools, and community centers. The City has documented existing infrastructure standards and will use an incremental expansion cost method for parks and pools, with a more conservative plan-based approach for community centers.

Parks and Recreation Service Area

Existing parks and recreation facilities are generally located in the central area of Buckeye. Given the requirement to allocate a portion of infrastructure cost to nonresidential development, TischlerBise recommends that Buckeye's IIP and development fees for parks and recreational facilities be limited to the Central East service area. A smaller service area will ensure nonresidential development benefits from parks and recreation improvements. Please see the land use assumptions (Appendix C) for a map and description of service areas.

Excluded Costs

Development fees in Buckeye exclude costs to upgrade, update, improve, expand, correct or replace necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The City's comprehensive Capital Improvement Plan (CIP) addresses the cost of these excluded items.

Current Use and Available Capacity

In FY 12/13, a cumulative total of 16,979 people participated in multiple programs offered through the Buckeye Community Center. Also, 214,158 people visited the Saide Recreation Center and participated in various recreation programs. In FY 12/13, approximately 160,000 people visited Earl Edgar Recreational Facility and Sundance Park for youth, adult, and non-profit sports leagues (e.g. Little League and Pop Warner). Attendance for special events at Buckeye community parks in FY 12/13 totaled 6,000. During the last fiscal year, 24,053 patrons used the pool during open swim hours (May to early September), with another 1,028 persons enrolled in swim lessons. In Buckeye, parks and recreational facilities are fully utilized and there is no available capacity for future development.

Proportionate Share for Parks and Recreation Facilities

ARS § 9-463.05(B)(3) requires development fees to not exceed a proportionate share of the cost of necessary public services needed to serve new development. As shown in Figure PR1, TischlerBise recommends daytime population as a reasonable indicator of the potential demand for parks and recreational facilities, from both residential and nonresidential development. According to the U.S. Census Bureau web application OnTheMap, there were 4,753 inflow commuters traveling to Buckeye for work in 2011. The proportionate share is based on cumulative impact days per year with the number of residents potentially impacting parks and recreation facilities 365 days per year. Inflow commuters potentially impact parks and recreation facilities 200 days per year, assuming 4 workdays per week multiplied by 50 weeks a year.

Figure PR1 – Daytime Population

Daytime Population in 2011			*Cumulative Impact Days per Year*			*Cost Allocation*	
Jurisdiction	*Residents*	*Inflow Commuters*	*Residential**	*Nonresidential***	*Total*	*Residential*	*Nonresidential*
Buckeye	52,334	4,753	19,101,910	950,600	20,052,510	95%	5%

** Days per Year = 365* *200 ** 4 Days per Week x 50 Weeks per Year*

Existing Parks and Standards

As specified in ARS § 9-463.05(B)(4), development fees in Buckeye are based on the same level of service provided to existing development. Figure PR2 inventories existing parks in Buckeye that are roughly the same size as future parks that will be funded with development fees. Consistent with Arizona's enabling legislation, large regional parks are excluded from development fees. Also, Buckeye excluded small parks that might not provide a substantial nexus to the entire service area, including Buckeye City Park (9 acres) and Bayless Park (8 acres). The average size of the parks listed below is 26.5 acres. Because Buckeye will limit development fee funding to mid-size parks that are roughly 20-30 acres, smaller parks are considered to be project-level improvements.

For residential development, Buckeye will use peak population to derive current infrastructure standards for parks. Figure PR2 indicates the allocation of park acreage to 2013 service units in the Central East service area. Buckeye has provided 1.0 acres of improved parks for every thousand residents within the service area. The cost factor for parks improvements is $173,000 per acre, based on recent Phase I expenditure for Sundance Park. This cost factor was confirmed by the developer of Tartesso Sports Park (21 acres), which averaged $186,000 per acre for design and improvements.

In the 2009 development fee update, the City assumed a land cost of $115,000 for parks, but a more conservative estimate of $80,000 per acre is recommended for the 2014 update. With development fee funding, Buckeye plans to construct one additional 30-acre park over the next ten years, costing approximately $255 for each additional resident and $32 for each additional job in the Central East service area.

Figure PR2 – Existing Parks and Infrastructure Standards

Existing Parks	*Improved Acres*
Sundance Park (Phase 1)	30.0
Earl Edgar Park	23.0
TOTAL	53.0
Average Acres per Park =>	26.5

Allocation Factors for Park Improvements

Improvements Cost per Acre*	$173,000
Land Cost per Acre**	$80,000
Total Cost per Average-Size Park	$6,700,000
Residential Proportionate Share	95%
Nonresidential Proportionate Share	5%
Central East Peak Population in 2013	50,677
Central East Jobs in 2013	11,299

Infrastructure Standards for Park Improvements

	Park Acres	*Improvemnts plus Land Cost*
Residential (per person)	0.0010	$254.52
Nonresidential (per job)	0.0002	$32.41

** Based on Town of Buckeye expenditure of $5.2 million for improvements at Sundance Park.*
*** The 2009 development fee update assumed $115,000 per acre for land. A more conservative estimate is recommended for the 2014 update.*

Needs Analysis for Parks

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure PR3, projected peak population and jobs in the Central East service area determine the need for additional parks. Buckeye plans to build one additional 30-acre park over the next ten years. The ten-year, growth-related capital cost for parks (land plus improvements) is approximately $7.59 million. Buckeye intends to build a park similar to Sundance Community Park, with sport fields, a restroom/concession building, large playground, a dog park, picnic areas and other amenities.

Figure PR3 – Parks Needed to Accommodate Growth

		Park Needs Analysis		
	Year	*Central East Peak Population*	*Central East Jobs*	*Acres of Improved Parks*
Base	2013	50,677	11,299	53.0
Year 1	2014	52,690	12,148	55.2
Year 2	2015	54,772	13,074	57.5
Year 3	2016	56,927	14,083	59.9
Year 4	2017	59,152	15,185	62.3
Year 5	2018	61,449	16,388	64.9
Year 6	2019	63,826	17,703	67.6
Year 7	2020	66,281	19,142	70.3
Year 8	2021	70,541	20,430	74.9
Year 9	2022	74,781	21,719	79.4
Year 10	2023	79,006	23,007	83.9
Ten-Yr Increase		28,329	11,708	30.9
		Projected Expenditure for 30-acre Park =>		$7,590,000

Existing Standards for Pools

Buckeye currently has one swimming pool that serves a peak population of 50,677 and 11,299 jobs in the Central East service area. The cost of Phoenix metro-area pools has increased over time. For example, the City of Glendale spent approximately $3.3 million to construct Rose Lane pool in 2004. In comparison, the City of Gilbert plans to construct a new pool at Campo Verde High School within the next five years at an estimated cost of $8 million. According to Buckeye staff, $6 million is reasonable cost estimate for the next pool to be constructed by the City. To maintain current infrastructure standards for pools, Buckeye needs to spend approximately $117 per additional person and $15 per additional job in the Central East service area.

Figure PR4 – Swimming Pool Standards in Buckeye

Allocation and Cost Factors for Pools	
Estimated Pool Cost	$6,000,000
Residential Proportionate Share	95%
Nonresidential Proportionate Share	5%
Central East Peak Population in 2013	50,677
Central East Jobs in 2013	11,299

Infrastructure Standards	*Pools*	*Pool Cost*
Residential (per person)	0.000019	$116.70
Nonresidential (per job)	0.000004	$14.86

Needs Analysis for Pools

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure PR5, projected service units in the Central East service area are used to determine the need for pools. To maintain the current standard, Buckeye will construct an additional pool within the next ten years, but development fees will only fund 58% of the capital cost. The ten-year, growth-share for the new pool is approximately $3.48 million, with the funding gap of $2.52 million requiring other City revenues or funding from development fees collected through the end of FY13-14. The next pool will be part of the second phase of Sundance Park and be similar in size to the pool located in downtown Buckeye. The new pool will feature a deep-end with slide and diving board, swimming lanes, and a zero depth area for younger children. The pool will have a building with changing rooms, offices for staff and lifeguards, storage for pool equipment and chemicals, a program room, and concession area.

Figure PR5 – Growth-Related Need for Additional Pool

		Need for Pools		
		Central East	*Central East*	*Pools*
	Year	*Peak Population*	*Jobs*	
Base	2013	50,677	11,299	1.00
Year 1	2014	52,690	12,148	1.04
Year 2	2015	54,772	13,074	1.08
Year 3	2016	56,927	14,083	1.13
Year 4	2017	59,152	15,185	1.18
Year 5	2018	61,449	16,388	1.22
Year 6	2019	63,826	17,703	1.27
Year 7	2020	66,281	19,142	1.33
Year 8	2021	70,541	20,430	1.41
Year 9	2022	74,781	21,719	1.50
Year 10	2023	79,006	23,007	1.58
	Ten-Yr Increase	28,329	11,708	0.58
	Development Fee Funding for Additional Pool =>			$3,480,000
	Other Funding =>			$2,520,000

Standards for Community Centers in Buckeye

Figure PR6 inventories existing community centers in Buckeye. For residential development, Buckeye will use Central East peak population and jobs to derive infrastructure standards. Buckeye has provided 0.35 square feet of community centers per person and 0.08 square feet per job.

WCS Municipal Engineers and Planners (WCS) and City staff researched the cost of typical recreation buildings in the Phoenix metro area and recommend a cost factor of $300 per square foot. In comparison, Gilbert is spending $386 per square foot to construct Crossroads Community Center, which will be similar to other existing centers in that community. To maintain current infrastructure standards in the Central East service area, Buckeye would need to construct more than three additional community centers. Buckeye is taking a conservative approach and planning to construct two community centers (3,000 square feet each) within the next ten years. These centers have an average cost of approximately $60 for each additional person and $8 for each additional job in the Central East service area.

Figure PR6 – Infrastructure Standards for Community Centers

Existing Community Centers	*Square Feet*
Senior / Community Center (201 E Centre)	8,000
Saide Center (1003 E Eason)	8,000
Sundance Center (22865 Lower Buckeye)	2,800
Total	18,800

Allocation Factors for Community Centers

Cost per Square Foot	$300
Residential Proportionate Share	95%
Nonresidential Share	5%
Central East Peak Population in 2013	50,677
Central East Jobs in 2013	11,299

Infrastructure Standards	*Square Feet*	*Cost**
Residential (per person)	0.35	$60.36
Nonresidential (per job)	0.08	$7.68

** Based on two community centers (3,000 Sq Ft each).*

Needs Analysis for Community Centers

As shown in Figure PR7, projected population and jobs in the Central East service area determine the need for community centers. To maintain current standards, Buckeye would need 10,958 square feet of community centers over the next ten years. Because Arizona's enabling legislation limits development fee funding of community centers to 3,000 square feet, Buckeye is planning to only construct two centers. The ten-year, growth-related capital cost for two community centers is $1.8 million. These centers will have a large multi-purpose room, restrooms, and a kitchen. The facilities will offer a variety of programs, such as special interest classes, senior programs, and recreation activities.

Figure PR7 – Community Centers Needed to Accommodate Growth

		Community Center Needs		
	Year	*Central East Peak Population*	*Central East Jobs*	*Square Feet of Community Centers*
Base	2013	50,677	11,299	18,800
Year 1	2014	52,690	12,148	19,580
Year 2	2015	54,772	13,074	20,391
Year 3	2016	56,927	14,083	21,234
Year 4	2017	59,152	15,185	22,110
Year 5	2018	61,449	16,388	23,020
Year 6	2019	63,826	17,703	23,967
Year 7	2020	66,281	19,142	24,952
Year 8	2021	70,541	20,430	26,560
Year 9	2022	74,781	21,719	28,162
Year 10	2023	79,006	23,007	29,758
Ten-Yr Increase		28,329	11,708	10,958
		Growth-Related Cost at Current Standards =>		$3,287,000
		Cost of two Community Centers (3,000 Sq Ft each) =>		$1,800,000

Parks and Recreation Development Fees

Infrastructure standards and cost factors for parks and recreation facilities are summarized in the upper portion of Figure PR8. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in an occupied dwelling (also known as a household) provides the necessary conversion. For nonresidential development, parks and recreation development fees are based on jobs per thousand square feet of floor area. Updated development fees are shown in the column with light green shading. Proposed development fees are 24-29 percent higher for residential development.

Including the cost of professional services related to preparation of the Development Fee Study into the fee calculation is specifically authorized in Arizona's enabling legislation. As explained further in Appendix B, the cost of professional services is allocated to the projected increase in service units over the next five years, which matches the mandatory update cycle for development fees. For parks and recreation facilities, TischlerBise recommends a 1% reduction to ensure future development fee revenue does not exceed the expected cost of growth-related infrastructure.

Figure PR8 – Parks and Recreation Service Units and Fees

Fee Component	*Cost per Person*	*Cost per Job*	
Parks (land + improvements)	$254.52	$32.41	
Pools	$116.70	$14.86	
Community Centers	$60.36	$7.68	
Professional Services	$2.38	$0.26	
Revenue Credit	($4.34)	($0.55)	1%
TOTAL	$429.62	$54.66	

Residential (per housing unit)

Type	*Persons per Household**	*Proposed Fee*	*Current Fee*	*$ Change*	*% Change*
Single Dwelling Unit	3.20	$1,374	$1,109	$265	24%
Age-Restricted and 2+ Dwellings per Structure	2.50	$1,074	$832	$242	29%

** See land use assumptions (Figure C8).*

Nonresidential (per 1,000 square feet of building)

Type	*Jobs per 1,000 Sq Ft***	*Proposed Fee*	*Current Fee*	*$ Change*
Industrial	0.91	$49	$0	$49
Commercial	2.00	$109	$0	$109
Institutional	1.00	$54	$0	$54
Office & Other Services	3.33	$182	$0	$182

*** See land use assumptions (Figure C10).*

Projected Revenue from Parks and Recreation Fees

Appendix A contains the forecast of revenues required by Arizona's enabling legislation. As shown in Figure PR9, projected development fee revenue matches the growth share of parks and recreation facilities (i.e. approximately $12.9 million over the next ten years). The table below indicates Buckeye should receive approximately $12.9 million in parks and recreation development fee revenue over the next ten years, if actual development matches the land use assumptions documented in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue.

In addition to development fees, Buckeye will need $2.52 million from other funding sources to construct an additional pool within the next ten years. At the end of FY12-13, the development fee fund balance was approximately $3.92 million for parks.

Figure PR9 – Parks and Recreation Development Fee Revenue

Ten-Year Costs for Parks and Recreation	*Growth Share*	*Other Funding*
Parks (land + improvements)	$7,590,000	$0
Pool (58% of total)	$3,480,000	$2,520,000
Community Centers (2 @ 3,000 Sq Ft each)	$1,800,000	$0
Total (rounded)	$12,900,000	$2,520,000

Parks and Recreation Development Fee Revenue from Central East Service Area

		Single Unit (94%) $1,374 per housing unit	*2+ Units (6%)* $1,074 per housing unit	*Industrial* $49 per 1000 Sq Ft	*Commercial* $109 per 1000 Sq Ft	*Institutional* $54 per 1000 Sq Ft	*Office & Other Services* $182 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	15,075	962	2,230	1,230	1,830	1,500
Year 1	2014	15,674	1,000	2,500	1,360	1,950	1,560
Year 2	2015	16,293	1,040	2,800	1,510	2,070	1,630
Year 3	2016	16,934	1,081	3,140	1,680	2,210	1,700
Year 4	2017	17,596	1,123	3,520	1,860	2,350	1,770
Year 5	2018	18,279	1,167	3,950	2,060	2,500	1,850
Year 6	2019	18,986	1,212	4,430	2,280	2,670	1,930
Year 7	2020	19,717	1,259	4,970	2,530	2,840	2,020
Year 8	2021	20,984	1,339	5,330	2,690	2,890	2,200
Year 9	2022	22,245	1,420	5,700	2,840	2,940	2,380
Year 10	2023	23,502	1,500	6,060	3,000	2,980	2,560
Ten-Yr Increase		8,427	538	3,830	1,770	1,150	1,060
Projected Fees =>		$11,600,000	$600,000	$200,000	$200,000	$100,000	$200,000
						Total Projected Revenues (rounded) =>	$12,900,000

LIBRARY FACILITIES IIP

ARS § 9-463.05(T)(7)(d) defines the library facilities considered to be necessary public services.

> *"Library facilities of up to ten thousand square feet that provide a direct benefit to development, not including equipment, vehicles or appurtenances."*

Buckeye has documented existing infrastructure standards and will use a cost recovery method to reimburse the City for the library at Sundance Crossing, with a plan-based method used to fund a portion of a new library to be located in the north service area.

Library Service Areas

During FY14-15, when the updated development fees become effective, the City will have two libraries located in Central East Buckeye, which is one service area for library facilities. Also, Buckeye is planning to construct a new library in the north service area within the next ten years.

Excluded Costs

Development fees in Buckeye exclude costs to upgrade, update, improve, expand, correct or replace necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The portion of the library needed to serve existing population and jobs in the north service area was excluded from the development fees. Other City revenues will cover the cost of this existing deficiency.

Current Use and Available Capacity

In FY 12/13, 143,085 patrons visited the Historic Buckeye library, with a total of 146,292 circulation transactions. Additionally, 10,771 attended library programs with 22,525 logging into public computers at the library. With the opening of Sundance Crossing library in 2014, library buildings will be adequate to accommodate new development in Central East Buckeye through 2018.

The demand for a north library is evident from City records indicating 693 active library-card holders currently live in zip code 85396. Also, Buckeye has an additional 1,376 library-card holders from zip code 85396 that are currently marked inactive. Patrons must renew their cards every year to stay active.

Proportionate Share for Library Facilities

ARS § 9-463.05(B)(4) requires development fees to not exceed a proportionate share of the cost of necessary public services needed to serve new development. As shown in Figure L1, TischlerBise recommends daytime population as a reasonable indicator of the potential demand for library facilities, from both residential and nonresidential development. According to the U.S. Census Bureau web application OnTheMap, there were 4,753 inflow commuters traveling to Buckeye for work in 2011. The proportionate share is based on cumulative impact days per year with the number of residents potentially impacting parks and recreation facilities 365 days per year. Inflow commuters potentially impact parks and recreation facilities 200 days per year, assuming 4 workdays per week multiplied by 50 weeks a year. Based on daytime population, 95% of the demand for library facilities is due to residential development, with nonresidential development accounting for 5% of the infrastructure demand.

Figure L1 – Daytime Population

Daytime Population in 2011			*Cumulative Impact Days per Year*			*Cost Allocation*	
Jurisdiction	*Residents*	*Inflow Commuters*	*Residential**	*Nonresidential***	*Total*	*Residential*	*Nonresidential*
Buckeye	52,334	4,753	19,101,910	950,600	20,052,510	95%	5%

** Days per Year = 365 200 ** 4 Days per Week x 50 Weeks per Year*

Existing Library Facilities

Figure L2 inventories library buildings in Buckeye that will be operational during the next fiscal year when revised development fees are effective. The Sundance Crossing building is currently undergoing tenant improvements and will be operational about the time updated development fees become effective. The total floor area of library building space will be needed to serve projected peak population and jobs in the Central East service area through 2018. As shown at the bottom of the last table in Figure L2 below, infrastructure standards decline as population and jobs increase over time.

For residential development, Buckeye will use peak population to derive library infrastructure standards. Figure L2 indicates the allocation of library building space to 2018 service units. For the purpose of development fees, Buckeye's library infrastructure standard is 0.36 square feet of library building per person and 0.07 square feet per job expected in the Central East service area by 2018. To recover the cost of expenditure on Sundance Crossing library (i.e. $1.8 million), Buckeye needs to recover $196.20 for each additional person and $21.33 from each additional job expected in the Central East service area over the next four years.

Figure L2 – Central East Library Buildings and Standards

Location	*2014*	*2018*
Historic Buckeye	6,400	6,400
Sundance Crossing	16,700	16,700
TOTAL	23,100	23,100

Allocation Factors	*2014*	*2018*
Residential Share	95%	95%
Nonresidential Share	5%	5%
Central East Peak Population	52,690	61,449
Central East Jobs	12,148	16,388

Infrastructure Standards	*2014 Sq Ft*	*2018 Sq Ft*	*Capital Cost*
Residential (per person)	0.42	0.36	$196.20
Nonresidential (per job)	0.10	0.07	$21.33

Library Needs

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for infrastructure over the planning horizon. As shown in Figure L3, projected population and jobs in the Central East service area drive the need for library space. Buckeye has already provided 23,100 square feet of library buildings, which can accommodate projected development in the Central East service area through 2018. Buckeye spent $2.5 million purchasing Sundance Crossing and will be spending approximately $4.65 million to complete interior construction. Given the library's share of the total building (i.e. 16,700 of 66,000 square feet), Buckeye will recover $1,810,000 for expenditures on the Sundance Crossing library.

Figure L3 – Cost Recovery for Central East Library

	Central East Library Needs		
Year	*Central East Peak Population*	*Central East Jobs*	*Square Feet of Library*
2014	52,690	12,148	19,673
2015	54,772	13,074	20,482
2016	56,927	14,083	21,323
2017	59,152	15,185	22,195
2018	61,449	16,388	23,100
Four-Year Increase =>	8,759	4,239	
	Cost Recovery for Library* =>		$1,810,000

** Source: Town of Buckeye, based on expenditures for library space in Sundance Crossing, including interior build out.*

Because there is no existing library in the North service area, Buckeye has planned the need for a new library using the same LOS standards as documented above for the Central East service area. Based on the 2018 standards of 0.36 square feet per person and 0.07 square feet per job, Buckeye will construct a new library of approximately 7,000 square feet, which will be adequate to accommodate projected development through 2023. At an estimated cost of $300 per square foot of building space, for both construction and site acquisition, Buckeye will spend approximately $2.11 million on the new North library. As shown at the bottom of Figure L4, existing development will pay for approximately $780,000 or 37% of the total cost. Development fees collected over the next nine years will pay for 63% of the cost. If a developer elects to construct the new north library, Buckeye will be able to reimburse approximately $2.1 million from a combination of the current fund balance for library development fees and future development fees collected from the North service area. As of June 30, 2013, Buckeye's library fee fund had a balance of approximately $1.68 million.

Figure L4 – Planned Library in North

Location	*2014*	*2023*
New North Library	0	7,019
	Cost per Square Foot* =>	$300
	Planned Cost =>	$2,110,000

** Source: Town of Buckeye 2012 development fees, including land.*

Infrastructure Standards	*2014 Sq Ft*	*2018 Sq Ft***	*Capital Cost****
Residential (per person)	0.00	0.36	$106.14
Nonresidential (per job)	0.00	0.07	$26.61

*** Same LOS as Central East.*

**** Based only on growth share of total cost over nine years.*

	North Library Needs		
Year	*North Peak Population*	*North Jobs*	*Square Feet of Library*
2014	7,088	852	2,591
2015	7,774	962	2,844
2016	8,526	1,099	3,122
2017	9,347	1,276	3,428
2018	10,245	1,521	3,766
2019	11,231	1,884	4,144
2020	12,305	2,455	4,567
2021	14,520	2,754	5,380
2022	16,751	3,052	6,197
2023	18,992	3,351	7,019
Nine-Year Increase =>	11,904	2,498	4,428

Funding from New Development =>	$1,330,000	63%
Funding from Existing Development =>	$780,000	37%
Total Planned Cost =>	$2,110,000	

Library Development Fees

Infrastructure standards and cost factors for Central East libraries are summarized in the upper portion of Figure L5. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in an occupied dwelling (also known as a household) provides the necessary conversion. For nonresidential development, library development fees are based on jobs per thousand square feet of floor area. Central East development fees for library facilities are shown in the column with light purple shading. Central East library development fees for residential development are significantly greater than current fees. Buckeye does not currently impose a library development fee on nonresidential development.

Including the cost of professional services related to preparation of the Development Fee Study into the fee calculation is specifically authorized in Arizona's enabling legislation. As explained further in Appendix B, the cost of professional services is allocated to the projected increase in service units over the next 4-5 years, which matches the mandatory update cycle for development fees. For library facilities, TischlerBise included a 2% revenue credit to ensure projected development fee revenue does not exceed the cost recovery amount for the library at Sundance Crossings, as discussed further below.

Figure L5 – Central East Library Fee Schedule

Central East Service Area

	Cost per Person	*Cost per Job*	
Cost Recovery for Library Space	$196.31	$21.34	
Professional Services	$2.16	$0.27	
Revenue Credit	($3.97)	($0.43)	2%
TOTAL	$194.50	$21.18	

Residential (per housing unit)

Type	*Persons per Household**	*Proposed Fee*	*Current Fee*	*$ Change*	*% Change*
Single Dwelling Unit	3.20	$622	$165	$457	277%
Age-Restricted and 2+ Dwellings per Structure	2.50	$486	$124	$362	292%

** See land use assumptions (Figure C8).*

Nonresidential (per 1,000 square feet of building)

Type	*Jobs per 1,000 Sq Ft***	*Proposed Fee*	*Current Fee*	*$ Change*
Industrial	0.91	$19	$0	$19
Commercial	2.00	$42	$0	$42
Institutional	1.00	$21	$0	$21
Office & Other Services	3.33	$70	$0	$70

*** See land use assumptions (Figure C10).*

Proposed library development fees for the North service area are shown in Figure L6, representing an increase of 105-114% from current amounts.

Figure L6 – North Library Fee Schedule

	Cost per Person	*Cost per Job*	
Planned Library	$106.14	$26.61	
Professional Services	$2.16	$0.27	
Revenue Credit	($2.17)	($0.54)	2%
TOTAL	$106.13	$26.34	

Residential (per housing unit)

Type	*Persons per Household**	*Proposed Fee*	*Current Fee*	*$ Change*	*% Change*
Single Dwelling Unit	3.20	$339	$165	$174	105%
Age-Restricted and 2+ Dwellings per Structure	2.50	$265	$124	$141	114%

** See land use assumptions (Figure C8).*

Nonresidential (per 1,000 square feet of building)

Type	*Jobs per 1,000 Sq Ft***	*Proposed Fee*	*Current Fee*	*$ Change*
Industrial	0.91	$23	$0	$23
Commercial	2.00	$52	$0	$52
Institutional	1.00	$26	$0	$26
Office & Other Services	3.33	$87	$0	$87

*** See land use assumptions (Figure C10).*

Projected Revenue from Library Fees

Appendix A contains the forecast of revenues required by Arizona's enabling legislation. As shown in Figure L7, Central East library development fee revenue approximately matches Buckeye expenditure on library space at Sundance Crossing (i.e. $1.81 million).

Figure L7 – Central East Library Development Fee Revenue

Cost Recovery for Sundance Crossing Library

Total (rounded) $1,810,000

Library Development Fee Revenue from Central East Service Area

	Single Unit (94%) $622 per housing unit	*2+ Units (6%)* $486 per housing unit	*Industrial* $19 per 1000 Sq Ft	*Commercial* $42 per 1000 Sq Ft	*Institutional* $21 per 1000 Sq Ft	*Office & Other Services* $70 per 1000 Sq Ft
Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
2014	15,674	1,000	2,500	1,360	1,950	1,560
2015	16,293	1,040	2,800	1,510	2,070	1,630
2016	16,934	1,081	3,140	1,680	2,210	1,700
2017	17,596	1,123	3,520	1,860	2,350	1,770
2018	18,279	1,167	3,950	2,060	2,500	1,850
Four-Year Increase	2,605	167	1,450	700	550	290
Projected Fees =>	$1,620,000	$81,000	$28,000	$29,000	$12,000	$20,000
					Total Projected Revenues (rounded) =>	$1,800,000

In the North service area, the City will provide approximately $800,00 from the current library fee fund balance to cover existing development's share of the new library. At the end of FY12-13, Buckeye had a balance of approximately $1.68 million in the library development fee fund.

Figure L8 indicates Buckeye should receive approximately $1.3 million in future library development fee revenue from the North service area, if actual development approximates the land use assumptions documented in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue.

Figure L8 – North Library Development Fee Revenue

Planned North Library

Total Cost (rounded)	$2,110,000
Existing Development Share	$780,000
Future Development Share	$1,330,000

Library Development Fee Revenue from North Service Area

	Single Unit (94%)	*2+ Units (6%)*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
	$339 per housing unit	$265 per housing unit	$23 per 1000 Sq Ft	$52 per 1000 Sq Ft	$26 per 1000 Sq Ft	$87 per 1000 Sq Ft
Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
2014	2,108	135	10	10	10	250
2015	2,312	148	10	10	20	270
2016	2,536	162	10	20	30	300
2017	2,781	177	10	50	50	340
2018	3,047	195	10	90	90	370
2023	5,649	361	10	420	370	640
Nine-Yr Increase	3,541	226	0	410	360	390
Projected Fees =>	$1,200,000	$60,000	$0	$21,000	$9,000	$34,000
					Total Projected Revenues (rounded) =>	$1,320,000

STREET FACILITIES IIP

ARS § 9-463.05(T)(7)(e) defines the facilities and assets which can be included in the Street Facilities IIP.

> *"Street facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon."*

Buckeye's IIP is based on improvements to I-10 interchanges and the cost of preparing the Street Facilities IIP and development fees. The streets fee is derived from trip generation rates, trip rate adjustment factors, average trip length weighting factors, and lane capacity. Each component is described below.

Service Area for Streets

The IIP and development fees for street facilities combines the Central North, Central West, and Central East service areas. A single IIP and fee schedule is applicable to all three areas.

Existing Infrastructure

Lane miles of arterials and improved I-10 interchanges are used to document existing infrastructure standards in the Central service areas. A lane mile is a rectangular area that is one travel lane wide and one mile long. Buckeye currently has five I-10 interchanges, with three (Airport Rd, Watson Rd, and Sun Valley Pkwy) considered adequate for the next ten years and two (Jackrabbit Rd and Miller Rd) requiring capacity expansion to accommodate projected development.

Excluded Costs

Development fees in Buckeye exclude costs to upgrade, update, improve, expand, correct or replace necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The City's comprehensive CIP will address the cost of these excluded items.

Forecast of Service Units

Buckeye will use average weekday Vehicle Miles of Travel (VMT) as the service units for documenting existing infrastructure standards and allocating the cost of future improvements. TischlerBise created an aggregate travel model to convert development units within Buckeye's four service areas to vehicle trips and vehicle miles of travel. Figure S1 summarizes the input variables for the travel model. Trip generation rates, expressed as average weekday Vehicle Trip Ends (VTE), are from the Institute of Transportation Engineers (ITE). HU is an abbreviation for housing unit. KSF is an abbreviation for square feet of nonresidential floor area, expressed in thousands. Each input variables is described further below.

Currently, there are approximately 91.8 lane miles of arterials in Buckeye's four service areas with at least four travel lanes. All local, collector, and two-lane arterial streets are considered project-level improvements. The City will continue to require project level improvements, such as turn lanes and signals for ingress/egress and half-street construction of adjacent arterials. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. This progression of travel up and down the functional classification chain limits the average trip length

determination, for the purpose of development fees, to the following question, "What is the average vehicle trip length on system improvements (i.e. facilities funded by development fees)?"

With 91.8 lane miles of 4+ lane streets in Buckeye and a lane capacity standard of 7,500 vehicles per lane per day, existing major streets have approximately 688,500 vehicle miles of capacity (i.e. 7,500 vehicles per lane over the entire 91.8 lane miles). To derive the average utilization (i.e., average trip length expressed in miles) of the major streets, we divide vehicle miles of capacity by vehicle trips attracted to development in Buckeye. As shown below, development in Buckeye's four service areas currently attracts 164,449 average weekday vehicle trips. Dividing 688,500 vehicle miles of capacity by existing average weekday vehicle trips yields an un-weighted average trip length of approximately 4.2 miles. However, the calibration of average trip length includes the same adjustment factors used in the development fee calculations (i.e. journey-to-work commuting, commercial pass-by adjustment, and average trip length adjustment by type of land use). With these refinements, the weighted-average trip length is 3.9 miles.

Figure S1 – Four Service Area Travel Demand Model

Buckeye, Arizona	*ITE Code*	*Dev Type*	*Weekday VTE*	*Dev Unit*	*Trip Adj*	*Trip Length Wt Factor*
R1	210	Single Units	9.52	HU	64%	1.21
R2	220	2+ Units	6.65	HU	64%	1.21
NR1	150	Industrial	3.56	KSF	50%	0.73
NR2	820	Commercial	42.70	KSF	33%	0.66
NR3	520	Institutional	15.43	KSF	33%	0.73
NR4	710	Office	11.03	KSF	50%	0.73
Avg Trip Length (miles)	3.90					
Capacity Per Lane	7,500					

Year->	*Base*	*1*	*2*	*3*	*4*	*5*	*10*	*10-Year*
Four Service Areas	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*	*Increase*
Single Units (94%)	18,912	19,842	20,822	21,853	22,939	24,083	33,472	14,560
2+ Units (6%)	1,207	1,267	1,329	1,395	1,464	1,537	2,137	930
Industrial KSF	2,310	2,620	2,960	3,370	3,860	4,430	7,910	5,600
Commercial KSF	1,350	1,500	1,690	1,900	2,160	2,470	4,420	3,070
Institutional KSF	1,970	2,100	2,250	2,430	2,630	2,860	3,980	2,010
Office KSF	1,980	2,100	2,200	2,320	2,460	2,590	3,870	1,890
Single Unit Res Trips	115,227	120,893	126,864	133,146	139,763	146,733	203,938	
2+ Units ResTrips	5,137	5,392	5,656	5,937	6,231	6,541	9,095	
Industrial Trips	4,112	4,664	5,269	5,999	6,871	7,885	14,080	
Commercial Trips	19,023	21,137	23,814	26,773	30,437	34,805	62,282	
Institutional Trips	10,031	10,693	11,457	12,373	13,392	14,563	20,266	
Office Trips	10,920	11,582	12,133	12,795	13,567	14,284	21,343	
Total Inbound Vehicle Trips	164,449	174,360	185,193	197,023	210,259	224,811	331,004	
Vehicle Miles of Travel (VMT)	688,316	727,040	768,821	813,978	863,599	917,465	1,324,164	635,848
LANE MILES	91.8	96.9	102.5	108.5	115.2	122.3	176.6	84.8
Lane Miles per 10,000 VMT	1.33	1.33	1.33	1.33	1.33	1.33	1.33	
Veh Trips to Nonres Dev	44,085	48,075	52,672	57,940	64,266	71,537	117,971	

Trip Generation Rates

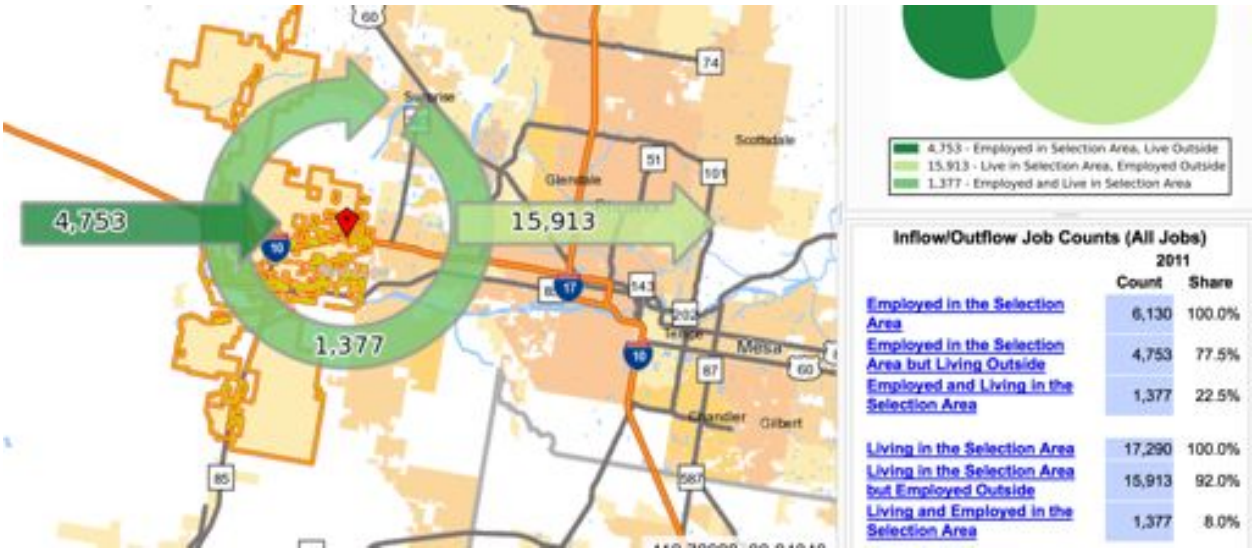
Buckeye development fees for streets are derived using average weekday VTE. Trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 2012). A VTE represents a vehicle either entering or exiting a development (as if a traffic counter were

placed across a driveway). To calculate street fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%. As discussed further below, the fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Adjustments for Commuting Patterns and Pass-By Trips

Residential development has a larger trip adjustment factor of 64% to account for commuters leaving Buckeye for work. In other words, residential development is assigned all inbound trips plus 14% of outbound trips to account for job locations outside of Buckeye, calculated as follows. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31% of production trips (i.e., all out-bound trips). As shown in Figure S2, the Census Bureau's web application OnTheMap indicates that approximately 92% of resident workers traveled outside the jurisdiction for work in 2011. In combination, these factors (0.31 x 0.50 x 0.92 = 0.14) support the additional 14% allocation of trips to residential development.

Figure S2 - Inflow/Outflow Analysis



For commercial development, the trip adjustment factor is less than 50% because retail development attracts vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For an average shopping center, ITE data indicate 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66% multiplied by 50%, or approximately 33% of the trip ends.

Many institutional land uses, like schools, also have significant pass-by and diverted link trips as children are dropped off and picked up by parents on their way to some other primary destination. Given this travel pattern, TischlerBise utilized the pass-by adjustment for institutional development.

Trip Length Weighting Factor by Type of Land Use

The streets fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6 of the 2009 National Household Travel Survey, vehicle trips from residential development are approximately 121% of the average trip length. The residential trip length adjustment factor includes data on home-based work trips, social, and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 66% of the average trip length while other nonresidential development typically accounts for trips that are 73% of the average for all trips.

Lane Capacity

To be consistent with adopted design guidelines, City staff recommends using 7,500 vehicles per lane per day in Buckeye. As shown in the Table 1 of the Buckeye Street Design Guidelines (inserted below), this standard is the upper range for major collectors, and a mid-range value for arterials.

Table 1 Street Design Elements

Cross-section	Major Arterial	Arterial	Major Collector
	Urban	Urban	Urban
Minimum ROW	140	120	110
Through Lanes	6	4	4
B/C to B/C Dimensions (ft)	108	84	84
Median Width, R- Raised, P- painted (ft)	20 R	20 R	20 R
ADT per lane (vpd)	5,800 – 9100	5,800 – 8,700	3,750 – 7,500

Travel Demand and Infrastructure Standards

At the bottom of Figure S3 are projections of VMT over 10 years in the three Central Service Areas. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length[1]. With three I-10 interchanges adequate for current traffic volumes, the existing infrastructure standard is 0.05 I-10 interchanges per 10,000 VMT. To maintain the existing infrastructure standard, Buckeye will need to improve two additional I-10 interchanges over the next ten years.

[1] Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire urban area, are derived from traffic counts on particular road segments multiplied by the length of that road segment. For the purpose of development fees, VMT calculations are based on attraction (inbound) trips to development located in the service area, with the trip lengths calibrated to the road network considered to be system improvements. This refinement eliminates pass-through or external- external trips, and travel on roads that are not system improvements (e.g. interstate highways).

Figure S3 – Ten-Year Travel Demand in Central Buckeye

Year->	*Base*	*1*	*2*	*3*	*4*	*5*	*10*	*10-Year*
Three Central Areas	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*	*Increase*
Single Units (94%)	16,990	17,733	18,510	19,318	20,159	21,034	27,823	10,833
2+ Units (6%)	1,084	1,132	1,181	1,233	1,287	1,343	1,776	692
Industrial KSF	2,300	2,610	2,950	3,360	3,850	4,420	7,900	5,600
Commercial KSF	1,350	1,490	1,680	1,880	2,110	2,380	4,000	2,650
Institutional KSF	1,960	2,090	2,230	2,400	2,580	2,770	3,610	1,650
Office KSF	1,760	1,850	1,930	2,020	2,120	2,220	3,230	1,470
Single Unit Res Trips	103,517	108,044	112,778	117,701	122,825	128,156	169,520	
2+ Units ResTrips	4,614	4,818	5,026	5,248	5,477	5,716	7,559	
Industrial Trips	4,094	4,646	5,251	5,981	6,853	7,868	14,062	
Commercial Trips	19,023	20,996	23,673	26,491	29,732	33,537	56,364	
Institutional Trips	9,980	10,642	11,355	12,221	13,137	14,105	18,382	
Office Trips	9,706	10,203	10,644	11,140	11,692	12,243	17,813	
Total Vehicle Trips	150,934	159,348	168,727	178,781	189,716	201,624	283,700	
Vehicle Miles of Travel (VMT)	626,934	659,207	694,432	731,917	772,187	815,475	1,123,797	496,863
I-10 Interchanges	3.0	3.2	3.3	3.5	3.7	3.9	5.4	2.4
I-10 Interchanges per 10,000 VMT	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
								Growth Share
							Based on increase in VMT =>	44%

Infrastructure Improvements Plan for Streets

WCS worked with Buckeye engineering staff to estimate the cost of growth-related improvements listed in Figure S4. The need for improvements is based on traffic studies and quantitative measures, like volume to capacity ratios. The recommended improvements are located in areas expected to experience congestion problems, like the I-10 corridor. As traffic flows from larger travel sheds to this major east-west highway, congestion occurs much like a funnel that tapers to fit into a bottleneck.

As shown in Figure S4, the IIP for Buckeye includes improvements at two I-10 interchanges, including capacity expansion of the connecting arterial segments. The total ten-year cost of street facilities is $9.75 million, with 44% to be funded by future development fees. The remaining $5.44 million will be paid from the existing streets development fee fund balance that has already been collected for interchange improvements, plus additional other City revenues or grants. At the end of FY12-13, Buckeye had a streets development fee fund balance of approximately $3.51 million.

Figure S4 – Ten-Year Plan for Street Improvements

Roadway Name	*Extent*	*Description*	*Project Cost*	*Growth Share*	*Development Fee Portion*
Jackrabbit Trail & I-10	Interchange Improvements	Signalization and capacity expansion	$4,750,000	44%	$2,100,000
Miller Rd & I-10	Interchange Improvements	Interchange Capacity Expansion and Signals	$5,000,000	44%	$2,211,000
		Total	$9,750,000	44%	$4,311,000
				Funding from Other Revenue =>	$5,439,000

Development Fees for Streets

Figure S5 indicates 2013 and 2023 development units in the three Central service areas (at the top), with the increase in average weekday VMT in the middle of the table. The service unit index compares VMT by type of land use to the travel demand for a single residential unit. Current and proposed fees are shown at the bottom of Figure S5. Proposed fees are approximately the equal to current fees for residential development and decrease of 64-73% for nonresidential development. To derive the streets fee by type of development, multiply its proportionate share factor (based on the ten-year increase in VMT as shown in the right column in the middle section) by the total cost of improvements and divide by the increase in development units. For example, the fee for a single residential unit is 0.627*$4,365,192 / 10,833 or $252 per unit (truncated)

Figure S5 – Streets Development Fee Schedule for Central Buckeye

Average Weekday Vehicle Miles of Travel in Central Buckeye (North, West, and East)

Development Type (1)	*2013 Dev Units (2)*	*2023 Dev Units (2)*	*Additional Dev Units 2013-2023*
Single Housing Units (94%)	16,990	27,823	10,833
2+ Housing Units (6%)	1,084	1,776	692
Industrial KSF	2,300	7,900	5,600
Commercial KSF	1,350	4,000	2,650
Institutional KSF	1,960	3,610	1,650
Office & Other Services KSF	1,760	3,230	1,470
Housing Unit Total	18,074	29,599	11,525
Nonres KSF Total	7,370	18,740	11,370

(1) A single housing unit include detached, attached (townhouse), and mobile home; KSF = square feet of floor area in thousands.
(2) Land Use Assumptions (see Appendix C).
(3) Trip Generation, Institute of Transportation Engineers, 2012. Retail and institutional include 34% pass-by adjustment.
(4) Assumes average trip length of 3.9 miles.

Cost Allocation for Street Facilities

Development Type	*Avg Wkdy Veh Trip Ends per Dev Unit (3)*	*Trip Adj Factors*	*Trip Length Weighting Factor*	*Vehicle Miles of Travel per Dev Unit*	*Service Unit Index*	*Ten-Year VMT Increase*	*Proportionate Share by Type of Dev*
Single Housing Unit	9.52	64%	121%	28.75	1.00	311,470	62.68722%
2+ Units per Structure	6.65	64%	121%	20.08	0.70	13,898	2.79718%
Industrial	3.56	50%	73%	5.07	0.18	28,379	5.71161%
Commercial	42.70	33%	66%	36.27	1.26	96,116	19.34459%
Institutional	15.43	33%	73%	14.50	0.50	23,919	4.81409%
Office & Other Services	11.03	50%	73%	15.70	0.55	23,081	4.64530%
					TOTAL	496,863	100.00000%

Streets Development Fee Schedule for Central Buckeye (North, West, East)

Development Type	*Current Fees*	*Proposed Fees*	*$ Change*	*% Change*
Single Dwelling Unit	$246	$252	$6	2%
Age-Restricted and 2+ Dwellings per Structure	$124	$176	$52	42%
Industrial	$165	$44	($121)	-73%
Commercial	$976	$318	($658)	-67%
Institutional	$379	$127	($252)	-66%
Office & Other Services	$379	$137	($242)	-64%
		Professional Services =>	$54,192	
		Cost of Streets IIP =>	$4,311,000	
		Total Ten-Year Growth Cost =>	$4,365,192	

Projected Revenue from Street Fees

Appendix A contains the forecast of revenues required by Arizona's enabling legislation. The revenue projection shown below assumes implementation of the proposed street fees and that development in the three Central service areas over the next ten years is consistent with the land use assumptions described in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue. The street fee revenue projection in Figure S6, approximately $4.35 million over ten years, approximates the cost of planned system improvements to be funded with development fees.

In addition to future development fees, Buckeye must contribute approximately $5.44 million from other funding sources. At the end of FY12-13, Buckeye had a streets development fee fund balance of approximately $3.5 million, which was collected specifically for I-10 interchange improvements.

Figure S6 – Projected Street Fee Revenue

Ten-Year Cost of Street Improvements (rounded)

Growth Share	*Other Funding*	*Total*
$4,370,000	$5,440,000	$9,810,000

Projected Street Fee Revenue from three Central Service Areas

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$252 per housing unit	$176 per housing unit	$44 per 1000 Sq Ft	$318 per 1000 Sq Ft	$127 per 1000 Sq Ft	$137 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	16,990	1,084	2,300	1,350	1,960	1,760
Year 1	2014	17,733	1,132	2,610	1,490	2,090	1,850
Year 2	2015	18,510	1,181	2,950	1,680	2,230	1,930
Year 3	2016	19,318	1,233	3,360	1,880	2,400	2,020
Year 4	2017	20,159	1,287	3,850	2,110	2,580	2,120
Year 5	2018	21,034	1,343	4,420	2,380	2,770	2,220
Year 6	2019	21,948	1,401	5,110	2,700	2,980	2,330
Year 7	2020	22,900	1,462	5,950	3,110	3,200	2,450
Year 8	2021	24,545	1,567	6,590	3,400	3,340	2,710
Year 9	2022	26,186	1,671	7,250	3,700	3,480	2,970
Year 10	2023	27,823	1,776	7,900	4,000	3,610	3,230
Ten-Yr Increase		10,833	692	5,600	2,650	1,650	1,470
Fee Revenue =>		$2,730,000	$120,000	$250,000	$840,000	$210,000	$200,000
						Total Streets Fee Revenue (rounded) =>	$4,350,000

PUBLIC SAFETY FACILITIES IIP

ARS § 9-463.05(T)(7)(f) defines the police and fire facilities eligible for development fee funding. The City of Buckeye will refer to these as "public safety facilities."

> *"Fire and Police facilities, including all appurtenances, equipment and vehicles. Fire and Police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training firefighters or officers from more than one station or substation."*

The City of Buckeye will use an incremental expansion cost method for police buildings and public safety vehicles and equipment. For fire buildings, Buckeye will use a plan-based approach, which creates an existing deficiency that will have to be funded by revenues other than development fees collected after August 1, 2014.

Service Area

To hasten response times, public safety responders are typically dispatched from the closest facility, with multiple locations responding if warranted. Buckeye has several police buildings and six existing fire stations, with a dispatch system that assigns calls to secondary responders if needed. Thus, all developed areas within the City of Buckeye are served by an integrated public safety system. Buckeye's service area for public safety development fees includes the North, Central North, Central West, and Central East service areas, as discussed further in the Land Use Assumptions (see Appendix C). For the purposed of development fees, Verrado and numerous scattered "County Islands" (i.e. unincorporated areas with Buckeye's Municipal Planning Area) are excluded from the service area.

Proportionate Share

ARS § 9-463.05(B)(3) states the development fee shall not exceed a proportionate share of the cost of necessary public services needed to serve new development. In Buckeye, public safety (i.e. police and fire) infrastructure standards, projected needs, and development fees are based on both residential and nonresidential development. As shown in Figure PS1, functional population was used to allocate public safety infrastructure and costs to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. Residents who don't work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Buckeye are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside Buckeye are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2011 functional population data for Buckeye, the cost allocation for residential development is 82%, while nonresidential development accounts for 18% of the demand for public safety infrastructure.

Figure PS1 – Functional Population

		Demand Units in 2011		Demand Hours/Day	Person Hours
Residential					
	Population*	52,334			
67%	Residents Not Working	35,044		20	700,880
33%	Resident Workers**	17,290			
8%	Worked in City**		1,377	14	19,278
92%	Worked Outside City**		15,913	14	222,782
			Residential Subtotal		942,940
			Residential Share =>		**82%**
Nonresidential					
	Non-working Residents	35,044		4	140,176
	Jobs Located in City**	6,130			
	Residents Working in City**		1,377	10	13,770
	Non-Resident Workers (inflow commuters)		4,753	10	47,530
			Nonresidential Subtotal		201,476
			Nonresidential Share =>		**18%**
				TOTAL	1,144,416

** July 1, 2011 estimate from AZ Dept of Economic Security.*
*** Inflow/Outflow Analysis, OnTheMap web application, U.S. Census Bureau data for all jobs in 2011.*

Excluded Costs

Public safety development fees in Buckeye exclude costs to upgrade, update, improve, expand, correct or replace necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The City's comprehensive Capital Improvement Plan (CIP) addresses the cost of these excluded items. Also excluded from the Buckeye development fees are public safety vehicles and equipment used to provide administrative services.

Current Use and Available Capacity

In Buckeye, public safety facilities are fully utilized and there is no available capacity for future development. Even with the additional space in Sundance Crossing that will be operational in FY14-15, Buckeye has determined that police building space will require expansion to accommodate future development.

Police Facilities, Service Units, and Standards

Police development fees in Buckeye are based on the same level of service provided to existing development. Figure PS2 inventories police buildings in Buckeye. The Sundance Crossing building is

currently undergoing tenant improvements and will be operational during FY14-15 when the updated development fees become effective. Because some buildings used by the Police Department include other functions, floor areas were reduced to indicate the portion of each building used by Buckeye police.

For residential development, Buckeye will use peak population within the service areas to derive current police infrastructure standards. For nonresidential development, Buckeye will use inbound, average-weekday, vehicle trips as the service unit. Figure PS2 indicates the allocation of police building space to residential and nonresidential development, along with 2014 service units in Buckeye. Vehicle trips to nonresidential development are based on floor area estimates for industrial, commercial, institutional, office and other services, as documented in the Land Use Assumptions (see Appendix C). Also, trip generation rates are discussed further in the Streets Facilities section of this report. Trips to nonresidential development are shown above in Figure S1.

For police development fees, Buckeye will continue to use the 2009 cost factor of $345 per square foot. The recommended cost factor includes design, land, and site costs. Based on 2014 service units, the standard in Buckeye is 0.47 square feet of police building per person in the service area. For nonresidential development, Buckeye's standard is 0.14 square feet of police building per inbound vehicle trip to nonresidential development, on an average weekday. The capital cost factors are derived using the proportionate share factors, the cost of additional building space (i.e. $10 million as shown in Figure PS4) and the ten-year increase in service units. For example, the capital cost for residential development is 0.82 x $10,820,000 / 48,952 or $181 per person.

Figure PS2 – Buckeye Police Buildings and Standards

Police Buildings	*2014 Sq Ft*
Headquarters (police share of 100 N Apache)	9,700
Sundance Crossings (police share @ Yuma & Dean)	15,400
Criminal Investigations (police share of 1101 E Ash)	4,600
Annex and Training Facility (90 N Apache)	8,300
Total Floor Area	38,000

Allocation Factors for Police Buildings	
Total Sq Ft of Police Buildings	38,000
Cost per Square Foot of Building	$345
Residential Proportionate Share	82%
Nonresidential Proportionate Share	18%

	2014
Peak Population in Service Areas	66,702
Average Weekday Vehicle Trips to Nonresidential Development in Service Areas	48,075

Infrastructure Standards for Police Buildings	*2014 Sq Ft*	*Capital Cost per Service Unit*
Residential (per person)	0.47	$181
Nonresidential (per vehicle trip)	0.14	$26

Development fees will be used to expand the fleet of police vehicles and purchase additional equipment that has a useful life of at least three years. Figure PS3 lists police vehicles and equipment used by Buckeye's Police Department during FY13-14. Items are ranked ordered by total cost (from most to least). Buckeye's share of capital expenditures on the Regional Wireless Cooperative is the largest cost item. Various types of vehicles account for most of the line items. In FY13-14, Buckeye has 154 vehicles and equipment items, with a capital cost of approximately $9.85 million, which is a weighted average cost of approximately $63,900 per item. The number of police vehicles and equipment items were allocated to residential and nonresidential development in Buckeye. Every 1,000 persons will require Buckeye to purchase 2.0 additional police vehicles or equipment items and every 1,000 vehicles trips to nonresidential development will require an additional 0.6 police vehicle and equipment items. To maintain the current infrastructure standard for police vehicles and equipment, each additional person in the service areas requires a capital cost of $154, with each additional average daily vehicle trip to nonresidential development representing a capital cost of $22.

Figure PS3 – Buckeye Police Vehicles and Equipment

Police Vehicle and Equipment Inventory

Description	*Items*	*Unit Cost*	*Total Cost*
Regional Wireless Cooperative (Buckeye share of capital)	1	$4,375,800	$4,375,800
Patrol Vehicles (includes 10 additions in FY13-14)	37	$60,000	$2,220,000
Equipment per Sworn Officer (communications, weapons, etc.)	80	$15,000	$1,200,000
Lieutenants and Sergeant Vehicles	12	$60,000	$720,000
Unmarked Vehicles (Chiefs and Detectives)	13	$47,000	$611,000
2010 Ford Bearcat SWAT Vehicle	1	$250,000	$250,000
Geobase Mapping System	1	$180,300	$180,300
Dispatch Console	1	$74,600	$74,600
DIMS Digital Station Kiosk	1	$42,900	$42,900
Night vision equipment	1	$41,800	$41,800
Motorcycles	2	$20,900	$41,800
Automated Fingerprint System	1	$38,600	$38,600
License Plate Recognition System	1	$20,600	$20,600
Contraband Inspection Camera	1	$17,200	$17,200
CISCO Phone System	1	$11,900	$11,900
Total	154		$9,846,500

Allocation Factors for Police Vehicles and Equipment

Weighted Average Cost per Item	$63,900
Residential Proportionate Share	82%
Nonresidential Proportionate Share	18%
2013 Peak Population in Service Areas	63,573
2013 Average Weekday Vehicle Trips to Nonresidential Development in four Service Areas	44,085

Infrastructure Standards for Police Vehicles and Equipment

	Vehicles and Equipment	*Capital Cost per Service Unit*
Residential (per person)	0.0020	$154
Nonresidential (per vehicle trip)	0.0006	$22

Police Infrastructure Needs

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure PS4, projected population and nonresidential vehicle trips drive the need for police buildings and vehicles. Buckeye will need approximately 31,000 additional square feet of police buildings. The ten-year, growth-related capital cost of police buildings is approximately $10.82 million. The projected capital expenditure on additional police vehicles or equipment items is $9.2 million over the next ten years. In combination, Buckeye anticipates capital costs of approximately $20.02 million for growth-related police infrastructure over the next ten years. The City will provide police building space in new fire stations and construct a communications tower near I-10 and State Route 85.

Figure PS4 – Police Facilities Needed to Accommodate Growth

Infrastructure Standards and Capital Costs for Police Facilities

Police Buildings - Residential	0.47	per person
Police Buildings - Nonresidential	0.14	per vehicle trip
Police Building Cost	$345	per Sq Ft
Police Vehicles &Equipment - Residential	0.0020	per person
Police Vehicles & Equipment - Nonresidential	0.0006	per vehicle trip
Police Vehicles & Equipment Cost	$63,900	per item

Police Infrastructure Needs

	Year	*Peak Population in Service Areas*	*Veh Trips to Nonres Dev in Service Areas*	*Police Bldg Sq Ft*	*Police Veh & Equip Items*
Base	2013	63,573	44,085	38,000	154
Year 1	2014	66,702	48,075	38,000	163
Year 2	2015	69,998	52,672	40,194	172
Year 3	2016	73,467	57,940	42,564	182
Year 4	2017	77,116	64,266	45,169	194
Year 5	2018	80,956	71,537	47,997	206
Year 6	2019	85,014	80,659	51,190	220
Year 7	2020	89,289	92,658	54,895	236
Year 8	2021	97,034	100,937	59,691	256
Year 9	2022	104,779	109,443	64,519	277
Year 10	2023	112,525	117,971	69,351	298
Ten-Yr Increase		48,952	73,886	31,351	144
			Cost of Police Buildings =>	$10,820,000	
				Cost of Police Vehicles & Equipment =>	$9,200,000
				Total Projected Expenditures =>	$20,020,000

Police Development Fees

Infrastructure standards and cost factors for police are summarized in the upper portion of Figure PS5. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in an occupied dwelling (also known as a household in census terminology) provides the necessary conversion. Persons per household, by type of residential structure, are from the City's adopted design guidelines for water and sewer facilities. For nonresidential development, trip generation rates by type of development are from the Institute of Transportation Engineers (ITE 2012). To ensure the analysis is based on travel demand associated with nonresidential development within Buckeye, trip ends (entering and exiting) are converted to inbound trips using trip adjustment factors. For industrial and office/other services, a basic adjustment of 50% is applied. Because commercial development attracts "pass-by" trips, the adjustment factor for commercial is only 33%, based on the average pass-by factor for shopping centers (ITE 2012). The pass-by adjustment is also applicable to institutional uses, like schools. Updated development fees for police facilities are shown in the column with blue shading. Residential and commercial fees increase, but the proposed fees decrease for all other types of nonresidential development.

Figure PS5 – Service Units and Fees per Development Unit

Infrastructure Standards for Police

	Police Buildings	*Vehicle and Equipment Cost*	*Professional Services*	*Revenue Credit*	*Net Cost*
Residential (per person)	$181.00	$154.00	$1.27	0%	$336.27
Nonresidential (per inbound, average-weekday, vehicle trip)	$26.00	$22.00	$0.17	0%	$48.17

Residential (per dwelling unit)

Unit Type	*Persons per Household*	*Police Fee*	*Current Fee*	*Increase / (Decrease)*
Single Dwelling Unit	3.2	$1,076	$506	$570
Age-Restricted and 2+ Dwellings per Structure	2.5	$841	$380	$461

Nonresidential (per KSF of floor area)

ITE Code	*Type*	*Demand Unit*	*Weekday Vehicle Trip Ends*	*Trip Rate Adjustment Factors*	*Police Fee*	*Current Fee*	*Increase / (Decrease)*
150	Industrial	1000 SF	3.56	50%	$86	$415	($329)
820	Commercial	1000 SF	42.70	33%	$679	$592	$87
520	Institutional	1000 SF	15.43	33%	$245	$592	($347)
710	Office & Other Services	1000 SF	11.03	50%	$266	$592	($326)

Fire Facilities, Service Units, and Standards

Fire development fees in Buckeye are based on the same level of service that will be provided to existing development. As shown in the table below, Buckeye is planning to construct three fire stations over the next ten years. The cost attributable to existing development is approximately $4.65 million. The City has standard prototype designs for both three bay (13,000 square feet) and four bay (17,000 square feet) stations. All fire stations will have office space for police officers. To simplify the administration of development fees, TischlerBise recommends developer reimbursement for construction of system improvements, rather than site-specific credits that create unique fee schedules by geographic area. For example, if a developer in the North service area constructs Station 4, it would be reimbursed for actual costs, up to a maximum of $5,865,000. Upon completion, the City would reimburse the developer for the existing development share of the station (i.e. 31%) with the balance paid in annual installments from future development fees collected in the North service area.

Figure PS6 inventories fire buildings in Buckeye, except for the Verrado station that is outside the service area and adequate to accommodate future Verrado development. The Sundance Crossing building is currently undergoing tenant improvements and will be operational during FY14-15 when updated development fees become effective. Fire buildings are ranked from largest to smallest, with the expectation that the three small temporary stations will be replaced with new permanent stations within the next ten years. However, fire development fees will only be used to pay for growth cost of approximately $10.19 million.

For residential development, Buckeye will use 2023 peak population in the service areas to derive fire infrastructure standards. For nonresidential development, Buckeye will use 2023 jobs as the service units. Figure PS6 indicates the allocation of fire building space to residential and nonresidential development, along with 2023 service units. To be consistent with police development fees, Buckeye plans to spend $345 per square foot to construct future public safety buildings. This is a total project cost factor that includes land, site costs, design, and furniture.

Buckeye's plan-based standard is 0.49 square feet of fire building for each person in the service areas. The growth share of future stations will cost $170 for each additional person in the service areas. For nonresidential development, the growth share of fire stations will cost $93 for each additional job. To derive the growth cost per job, multiply the nonresidential proportionate share factor (0.18) by the growth cost of fire stations ($10,190,000) and divide by the increase in jobs (19,533 as shown below in Figure PS8).

Figure PS6 – Buckeye Fire Buildings and Standards

Fire Buildings	*2014 Sq Ft*	*2023 Sq Ft*	*Cost*
Sundance Station 2	12,200	12,200	
Downtown Station 1	8,000	8,000	
Sundance Crossings (fire share @ Yuma & Dean)	4,700	4,700	
Sun City Festival Station 4*	0	17,000	$5,865,000
Tartesso Station 5*	0	13,000	$4,485,000
West Park Station 6*	0	13,000	$4,485,000
TOTAL	24,900	67,900	14,835,000
Sq Ft Based on 2023 LOS =>	38,374		

** Temporary stations (1,800 Sq Ft each) are excluded from the existing Level Of Service (LOS).*

	Square Feet	*Cost*	
Existing Development Share	13,474	$4,648,530	31%
Future Development Share	29,526	$10,186,470	69%
Total Construction	43,000	$14,835,000	

Allocation and Cost Factors

Cost per Square Foot	$345
Residential Proportionate Share	82%
Nonresidential Proportionate Share	18%

	2014	*2023*
Peak Population in Service Areas	66,702	112,525
Jobs in Service Areas	14,444	32,877

Infrastructure Standards for Fire Buildings

	2014 Sq Ft	*2023 Sq Ft*	*Capital Cost*
Residential (per person)	0.31	0.49	$170
Nonresidential (per job)	0.31	0.37	$93

Development fees will be used to expand the fleet of fire vehicles and purchase additional equipment that has a useful life of at least three years. Figure PS7 lists fire vehicles and equipment currently used by the Buckeye Fire Department. Items are ranked ordered by total cost (from most to least). Expensive fire apparatus accounts for most of the total cost. In FY13-14, Buckeye has 25 vehicles and equipment items, with a capital cost of approximately $10.06 million, which is a weighted average cost of approximately $402,400 per item.

Following the same methodology used for fire buildings, the total count of fire vehicles and equipment was allocated to residential and nonresidential development in Buckeye service areas. As shown in Figure PS7, every 10,000 persons will require Buckeye to purchase 3.2 additional fire vehicles or equipment items, with each additional person in the service areas requiring a capital cost of $148. Every 10,000 jobs require 3.4 additional fire vehicles or equipment items. For nonresidential development, the fire vehicle and equipment capital cost is $81 per job.

Figure PS7 – Fire Vehicle and Equipment Inventory and Standards

Fire Vehicles and Equipent Inventory

Type	*Count*	*Unit Cost*	*Total Cost*
Pumpers	8	$725,000	$5,800,000
Ladder Trucks	2	$1,300,000	$2,600,000
Haz Mat Truck	1	$540,000	$540,000
Driver Training Simulator	1	$341,100	$341,100
Small Pickup Trucks	8	$36,200	$289,600
Brush Trucks	2	$140,000	$280,000
Air and Light Trailer	1	$82,000	$82,000
Radio Equipment for Fire Department	1	$68,000	$68,000
Heavy Duty Pickup Truck	1	$58,600	$58,600
TOTAL	25		$10,059,300

Allocation Factors for Fire Vehicles and Equipment

Weighted Average Cost per Vehicle	$402,400
Residential Proportionate Share	82%
Nonresidential Proportionate Share	18%
2013 Peak Population in Service Areas	63,573
2013 Jobs in Service Areas	13,345

Infrastructure Standards for Fire Vehicles and Equipment	*Vehicles*	*Capital Cost*
Residential (per person)	0.00032	$148
Nonresidential (per job)	0.00034	$81

Fire Infrastructure Needs

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure PS8, projected population and jobs drive the needs analysis for fire buildings and vehicles. The growth share is 29,526 additional square feet of fire buildings, plus 22 fire vehicles or equipment items. The ten-year, growth-related capital cost of fire buildings is approximately $10.19 million. The projected capital expenditure on additional fire vehicles or equipment items is $8.85 million over the next ten years.

Figure PS8 – Fire Facilities Needed to Accommodate Growth

Fire Infrastructure Standards and Capital Costs

Fire Stations - Residential	0.49	Sq Ft per person
Fire Stations - Nonresidential	0.37	Sq Ft per job
Fire Stations Cost	$345	per square foot
Fire Vehicles and Equipment - Residential	0.00032	per person
Fire Vehicles and Equipment - Nonresidential	0.00034	per job
Fire Vehicles and Equipment Cost	$402,400	average per item

Fire Infrastructure Needed

	Year	*Peak Population in Service Areas*	*Jobs in Service Areas*	*Sq Ft of Fire Buildings*	*Fire Vehicles and Equipment*
Base	2013	63,573	13,345		25
Year 1	2014	66,702	14,444	38,374	26
Year 2	2015	69,998	15,671	40,461	28
Year 3	2016	73,467	17,055	42,692	29
Year 4	2017	77,116	18,636	45,085	31
Year 5	2018	80,956	20,480	47,671	33
Year 6	2019	85,014	22,691	50,501	35
Year 7	2020	89,289	25,441	53,638	37
Year 8	2021	97,034	27,920	58,392	41
Year 9	2022	104,779	30,399	63,146	44
Year 10	2023	112,525	32,877	67,900	47
Increase =>		48,952	19,533	29,526	22
			Growth Cost of Fire Stations =>	$10,190,000	
				Cost of Fire Apparatus =>	$8,850,000
				Total Projected Expenditures (in millions) =>	$19,040,000

Fire Development Fees

Infrastructure standards and cost factors for fire are summarized in the upper portion of Figure PS9. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in an occupied dwelling (also known as a household) provides the necessary conversion. Persons per household, by type of residential structure, are from the City's adopted design guidelines for water and sewer facilities. For nonresidential development, average jobs (per thousand square feet of floor area) are derived from trip generation rates by type of development, published by the Institute of Transportation Engineers (ITE 2012). Additional details on nonresidential prototypes are provided in Appendix C (see Figure C10 and related text).

Updated development fees for fire facilities are shown in the column with light orange shading. Proposed fire development fees are less than current fees for all development types.

Figure PS9 – Fire Service Units and Fees per Development Unit

Infrastructure Standards for Fire	*Building Cost*	*Vehicle and Equipment Cost*	*Professional Services*	*Revenue Credit*	*Net Cost*
Residential (per person)	$170.00	$148.00	$1.27	0%	$319.27
Nonresidential (per job)	$93.00	$81.00	$0.68	0%	$174.68

Residential (per dwelling unit)	*Unit Type*	*Persons per Household*	*Proposed Fire Fee*	*Current Fee*	*Increase / (Decrease)*
	Single Dwelling Unit	3.20	$1,022	$1,178	($156)
	Age-Restricted and 2+ Dwellings per Structure	2.50	$798	$884	($86)

Nonresidential (per thousand sq ft of floor area)

ITE Code	*Type*	*Development Unit*	*Jobs per Dev Unit**	*Proposed Fire Fee*	*Current Fee*	*Increase / (Decrease)*
150	Industrial	1000 SF	0.91	$159	$965	($806)
820	Commercial	1000 SF	2.00	$349	$1,378	($1,029)
520	Institutional	1000 SF	1.00	$175	$1,378	($1,203)
710	Office & Other Services	1000 SF	3.33	$582	$1,378	($796)

** Jobs per development unit from Buckeye Land Use Assumptions, see Figure C10 and related text in Appendix C.*

Projected Revenue for Public Safety Facilities

Appendix A contains the forecast of revenues required by Arizona's enabling legislation. Public safety development fee revenue should match the growth cost of public safety infrastructure, which has a ten-year total cost of approximately $39.06 million (see the upper portion of Figure PS10). In addition to development fees collected after August 1, 2014, Buckeye will contribute $4.65 million from other revenues (including previously collected development fees) to cover existing development's share of future public safety buildings. At the end of FY12-13, Buckeye had a fire development fee fund balance of approximately $3.42 million, with $0.40 million in the police development fee fund.

The table below indicates Buckeye should receive approximately $39.04 million in public safety development fee revenue, if actual development matches the land use assumptions documented in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue.

Figure PS10 – Public Safety Development Fee Revenue

Ten-Year Cost of Public Safety Facilities (rounded)

	Future Development Share	*Existing Development Share*
Public Safety Buildings	$21,010,000	$4,650,000
Public Safety Vehicles and Equipment	$18,050,000	$0
Total	$39,060,000	$4,650,000

Public Safety Development Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$2,098 per housing unit	$1,639 per housing unit	$245 per 1000 Sq Ft	$1,028 per 1000 Sq Ft	$420 per 1000 Sq Ft	$848 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	18,912	1,207	2,310	1,350	1,970	1,980
Year 1	2014	19,842	1,267	2,620	1,500	2,100	2,100
Year 2	2015	20,822	1,329	2,960	1,690	2,250	2,200
Year 3	2016	21,853	1,395	3,370	1,900	2,430	2,320
Year 4	2017	22,939	1,464	3,860	2,160	2,630	2,460
Year 5	2018	24,083	1,537	4,430	2,470	2,860	2,590
Year 6	2019	25,289	1,614	5,120	2,870	3,130	2,750
Year 7	2020	26,561	1,695	5,960	3,430	3,470	2,910
Year 8	2021	28,865	1,842	6,600	3,750	3,640	3,230
Year 9	2022	31,169	1,989	7,260	4,080	3,820	3,550
Year 10	2023	33,472	2,137	7,910	4,420	3,980	3,870
Ten-Yr Increase		14,560	930	5,600	3,070	2,010	1,890
Projected Fees =>		$30,550,000	$1,520,000	$1,370,000	$3,160,000	$840,000	$1,600,000
						Total Fire Fee Revenue (rounded) =>	$39,040,000

WATER FACILITIES IIP

ARS § 9-463.05(T)(7)(a) defines the facilities and assets which can be included in the Water Facilities IIP.

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

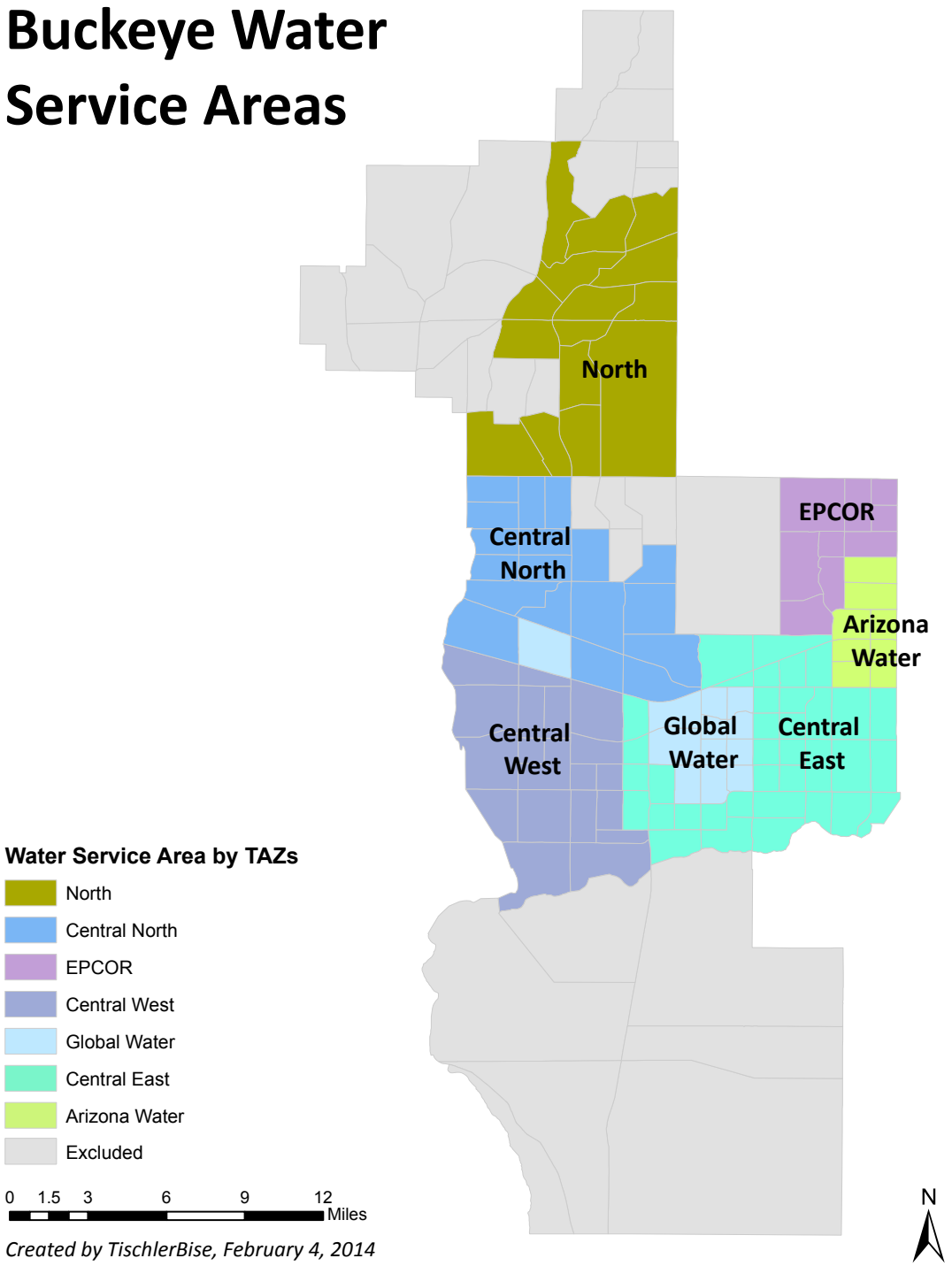
The Water Facilities IIP includes planned improvements for storage, booster pumps, wells, groundwater treatment, water resources, and major water lines. WCS prepared the water facilities IIP, with additional information provided in a separate document entitled "Appendix D – IIP Details for Water and Wastewater Facilities".

Water Service Area and Service Units

Average daily demand, in gallons of potable water, is the service unit for water development fees. All developed areas of Buckeye receive potable water either from the City or from private water companies. Areas served by private companies are outside the City's service area and are shown by the water company name in Figure W1. The remainder of the area shown as "excluded" is not expected to have any significant development over the next five years. Utility service area maps are based on Traffic Analysis Zone (TAZ) boundaries, which is the unit of analysis for socioeconomic data published by Maricopa Association of Governments. TAZ boundaries are not identical to the legal descriptions of utility service areas, which will be used to determine the service provider for a specific development.

Current utility development fees for water in Buckeye are imposed in three "Zones." Due to changes in Arizona's enabling legislation, TischlerBise recommends four "service areas" as mapped in Figure W1. The major change from the current fees is splitting Zone 3 into separate service areas. North of Northern Avenue is now referred to as the "North" service area. South of Northern Avenue to I-10, and generally west of the White Tank Mountains, is now referred to as "Central North." The master planned communities of Sundance and Blue Horizons are now combined with Central Buckeye and referred to as the "Central East" service area.

Figure W1 – Map of Water Service Areas



Projected Development and Water Demand

WCS evaluated the current use and available capacity of existing water systems. The need for additional improvements is based on the land use assumptions documented in Appendix C. Starting with socioeconomic data by TAZ, WCS identified the TAZs that best matched current water service areas. As shown in Figure W2, dwelling units and jobs were converted into Equivalent Dwelling Units (EDU) and average demand in Gallons Per Day (GPD) of water, for each of the four service areas. An EDU is the average daily water demand for a single residential unit, or 480 gallons per day in Buckeye, as specified in the City's Water Design Guidelines. Over the next ten years, average daily water demand from City of Buckeye customers is expected to increase by approximately 6.17 Million Gallons per Day (MGD).

Figure W2– Water Demand Increase by Service Area

Service Area	*Dwelling Units*	*Jobs*	*Equivalent Dwelling Units*	*Average Day Gallons*
North				
Festival Ranch	2,541	880	2,815	1,351,413
Sun Valley	428	1,480	891	427,497
Subtotal	2,969	2,360	3,706	1,778,910
Central North				
Tartesso	1,390	715	1,613	774,450
Tartesso East	93	773	334	160,402
Subtotal	1,483	1,488	1,948	934,852
Central West				
Cipriani	277	745	510	244,587
Gila 85	143	2,220	837	401,894
Gila Hassayampa	130	857	398	190,997
Palo Verde	210	588	394	189,027
Subtotal	761	4,410	2,139	1,026,505
Central East				
Central Buckeye	2,371	5,982	4,241	2,035,443
Sundance	486	1,093	828	397,347
Subtotal	2,857	7,075	5,068	2,432,790
Combined (all areas)	8,069	15,333	12,861	6,173,057

Growth-Related IIP for Water Facilities

Figure W3 summarizes growth-related infrastructure improvements by service area. Please see Appendix D for additional details regarding the water IIP by service area. Given the complicated engineering analysis required to determine the need for each component in the City's water system, all capital costs for the ten-year IIP are added together to derive a combined cost per gallon of average day water capacity. The cost of major water lines (i.e. distribution pipes with a 16-inch or larger diameter) is from the City's CIP or the Water Master Plan prepared by the engineering firm Brown and Caldwell. In Buckeye, 12-inch and smaller water lines are considered to be project-level improvements that are excluded from the development fee calculations. Planned expenditures for growth-related improvements to Buckeye water facilities have a total cost of approximately $73.78 million over the next ten years.

Those areas that currently require treatment of well water are anticipated to need additional treatment from future wells. If no treatment is currently required, it was assumed that no treatment would be required in the future. Areas that show no proposed major lines had no lines sizing information in the Capital Improvement Plan or the Water Master Plan.

Figure W3 – Summary of Water IIP by Service Area

vice Area	*Wells*	*Treatment*	*Storage*	*Booster Pumps*	*Production Subtotal*	*Distribution*	*Total*
th							
Festival Ranch	$2,400,000	$0	$895,529	$839,559	$4,135,088	$2,520,000	$6,655,088
Sun Valley	$2,400,000	$0	$1,368,560	$883,593	$4,652,153	$0	$4,652,153
Subtotal	$4,800,000	$0	$2,264,089	$1,723,151	$8,787,241	$2,520,000	$11,307,241
tral North							
Tartesso	$1,200,000	$0	$0	$0	$1,200,000	$0	$1,200,000
Tartesso East	$0	$0	$0	$0	$0	$0	$0
Subtotal	$1,200,000	$0	$0	$0	$1,200,000	$0	$1,200,000
tral West							
Cipriani	$2,400,000	$0	$1,245,096	$826,433	$4,471,530	$2,336,280	$6,807,809
Gila 85	$2,400,000	$0	$1,351,278	$875,592	$4,626,870	$1,082,811	$5,709,681
Gila Hassayampa	$2,400,000	$0	$1,208,923	$809,687	$4,418,610	$0	$4,418,610
Palo Verde	$2,400,000	$0	$1,207,593	$809,071	$4,416,664	$368,709	$4,785,374
Subtotal	$9,600,000	$0	$5,012,891	$3,320,783	$17,933,674	$3,787,800	$21,721,474
tral East							
Central Buckeye	$4,800,000	$3,271,899	$2,453,924	$1,663,291	$12,189,114	$26,763,211	$38,952,325
Sundance	$600,000	$0	$0	$0	$600,000	$0	$600,000
Subtotal	$5,400,000	$3,271,899	$2,453,924	$1,663,291	$12,789,114	$26,763,211	$39,552,325
nbined (all areas)	$21,000,000	$3,271,899	$9,730,904	$6,707,225	$40,710,028	$33,071,011	$73,781,040

Proposed Water Development Fees

Figure W4 summarizes growth-related costs and the projected increase in water demand (average GPD) that are used to derive the proposed water system development fee by service area and cost component. The amounts shown are for the smallest meter size. Fees for larger meters will be derived using meter capacities published in Table 6 of Buckeye's Water Design Guidelines. The major reason for the significant fee increases in the Central West service area is the allocation of significant lump sum costs, necessary to expand service, with a relatively small base of customers over the next ten years to help pay for the capital costs.

In contrast to other service areas, the North and Central North service areas have surplus capacity in water facilities, for which reimbursement is owed to developers. In the Central North service area, reimbursement of approximately $6.38 million will accommodate an additional 2,401 EDUs, which is equal to 1,152,480 average day gallons of capacity. In the Central North, the cost of future improvements must be added to the cost per gallon for developer reimbursements, to yield the total cost of $6.81 per gallon of capacity.

In the North service area, approximately $11.08 million in water improvements have been oversized to accommodate future development, with sufficient capacity to accommodate 6,759 additional EDUs, which is approximately 3.24 MGD (i.e. 6759 EDU x 480 gallons per day per EDU). The cost per gallon of capacity for developer reimbursements in the North service area ($3.41 per average-day gallon of capacity) must be added to the cost per gallon for future improvements, to yield the total cost of $9.75 per gallon of capacity.

Figure W4 – Water Development Fees by Cost Component

Service Area	*Cost of Water Improvements*	*Average Day Gallons Increase*	*Cost per Gallon of Capacity*	*Percent by Cost Component*	*Proposed Fee for Smallest Meter**	*Current Fee for Smallest Meter*	*$ Change*	*% Change*
North Reimbursements	$11,082,798	3,244,320	$3.41	35%				
North IIP Production	$8,787,241	1,778,910	$4.93	51%				
North IIP Distribution	$2,520,000	1,778,910	$1.41	14%				
North Total			$9.75		$4,680	$4,766	($86)	-2%
Central North Reimbursements	$6,382,193	1,152,480	$5.53	81%				
Central North IIP Production	$1,200,000	934,852	$1.28	19%				
Central North IIP Distribution	$0	934,852	$0.00	0%				
Central North Total			$6.81		$3,268	$4,766	($1,498)	-31%
Central North IIP Production	$17,933,674	1,026,505	$17.47	83%				
Central North IIP Distribution	$3,787,800	1,026,505	$3.68	17%				
Central West Total			$21.15		$10,152	$2,574	$7,578	294%
Central East IIP Production	$12,789,114	2,432,790	$5.25	32%				
Central East IIP Distribution	$26,763,211	2,432,790	$11.00	68%				
Central East Total			$16.25		$7,800	$3,689	$4,111	111%

** 480 average day gallons per EDU (Water System Design Guidelines, 2012). Age-restricted dwellings pay 78% of this amount.*

Figure W5 indicates Buckeye's water fee schedule for all meter types and sizes. Based on fewer persons in the average household, age-restricted dwellings will pay 78% of the fee amount for the smallest meter. The column with gallons per minute data provides the meter-size multipliers, or capacity ratios, used to derive the fees for larger water meters.

Figure W5 – Water Development Impact Fee Schedule

Meter Type and Size (inches)	*Town Allowable Maximum Capacity* (gallons per minute)*	*North*	*Central North*	*Central West*	*Central East*
Age-Restricted (per unit)		$3,656	$2,553	$7,931	$6,093
Disc 1.0	25	$4,680	$3,268	$10,152	$7,800
Disc 1.5	50	$9,360	$6,536	$20,304	$15,600
Disc 2.0	80	$14,976	$10,457	$32,486	$24,960
Compound 3.0	160	$29,952	$20,915	$64,972	$49,920
Turbine 3.0	180	$33,696	$23,529	$73,094	$56,160
Compound 4.0	250	$46,800	$32,680	$101,520	$78,000
Turbine 4.0	500	$93,600	$65,360	$203,040	$156,000
Compound 6.0	500	$93,600	$65,360	$203,040	$156,000
Turbine 6.0	1000	$187,200	$130,720	$406,080	$312,000

** Table 6, Buckeye Water System Design Guidelines, December 2012.*

WASTEWATER FACILITIES IIP

ARS § 9-463.05(T)(7)(b) defines the facilities and assets which can be included in the Wastewater Facilities IIP.

> *"Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities."*

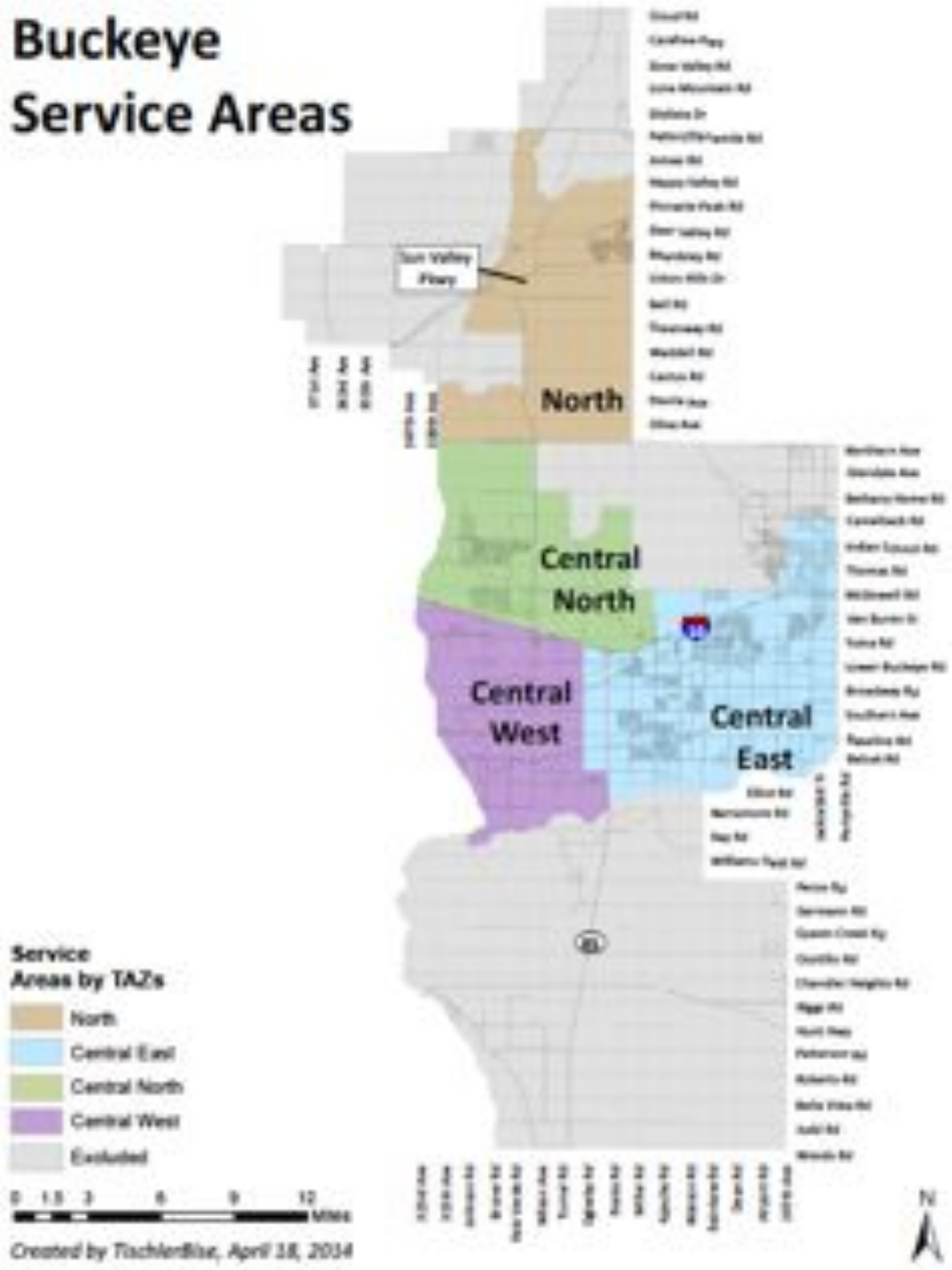
The Wastewater Facilities development fee includes the growth-related cost of planned improvements, such as wastewater treatment and major sewer lines for both collection and recharge/reuse. WCS prepared the wastewater facilities IIP, with additional information provided in a separate document titled "Appendix D – IIP Details for Water and Wastewater Facilities".

Wastewater Service Area and Service Units

Average day gallons of wastewater flow are the service units for wastewater development fees. Areas served by private companies are outside the City's service area and are shown as "excluded" on the map below. The remainder of the area shown as "excluded" is not expected to have any significant development over the next five years. Utility service area maps are based on TAZ boundaries, which is the unit of analysis for socioeconomic data. TAZ boundaries are not identical to the legal descriptions of utility service areas, which will be used to determine the service provider for a specific development.

Current utility development fees for wastewater facilities in Buckeye are imposed in three "Zones." Due to changes in Arizona's enabling legislation, TischlerBise recommends four "service areas" as mapped in Figure WW1. The major change from the current fees is splitting Zone 3 into separate service areas. North of Northern Avenue is now referred to as the "North" service area. South of Northern Avenue to I-10, and generally west of the White Tank Mountains, is now referred to as "Central North." The master planned communities of Sundance and Blue Horizons are now combined with Central Buckeye and referred to as the "Central East" service area.

Figure WW1 – Map of Wastewater Service Areas



Demand Indicators and Wastewater Flow

WCS evaluated the current use and available capacity of existing wastewater facilities. The need for additional improvements is based on the land use assumptions documented in Appendix C. Starting with socioeconomic data by TAZ, WCS identified the TAZs that best matched current wastewater service areas. As shown in Figure WW2, dwelling units and jobs were converted into EDU and average day gallons of wastewater flow, for each of the four service areas. An EDU is the average daily wastewater flow from a single residential unit, or 320 gallons per day in Buckeye, as specified in the City's Wastewater Design Guidelines.

Over the next ten years, average day wastewater from City of Buckeye customers is expected to increase by approximately 6.03 MGD. In Buckeye, the ten-year increase in dwelling units within sewer service areas is 58% more than the increase within water service areas. The projected increase in jobs is 27% higher (i.e. an increase of 19,428 jobs in sewer service areas and 15,333 jobs in water service areas). Sewer demand units are greater than the City's water demand units due to private water companies.

Figure WW2 – Sewer Demand Increase by Service Area

Service Area	*Dwelling Units*	*Jobs*	*Eqivalent Dwelling Units*	*Average Day Gallons*
North				
Festival Ranch	2,541	880	2,816	900,965
Sun Valley	428	1,480	891	285,138
Subtotal	2,969	2,360	3,707	1,186,102
Central North				
Tartesso	1,418	820	1,675	536,002
Tartesso East	93	773	335	107,043
Subtotal	1,511	1,593	2,010	643,045
Central West				
Cipriani	277	745	510	163,139
Gila 85	143	2,220	837	267,971
Gila Hassayampa	130	857	398	127,396
Palo Verde	210	588	394	126,137
Subtotal	761	4,410	2,140	684,643
Central East				
Central Buckeye	5,941	8,824	8,699	2,783,572
Sundance	1,580	2,241	2,281	729,929
Subtotal	7,521	11,065	10,980	3,513,501
Combined (all areas)	12,760	19,428	18,835	6,027,292

Wastewater IIP

Figure WW3 summarizes growth-related wastewater improvements by service area. Please see Appendix D for additional details regarding the wastewater IIP by service area. Given the complicated engineering analysis required to determine the need for each component in the City's wastewater system, all capital costs for the ten-year IIP are added together to derive a combined cost per gallon of average day wastewater capacity. As shown in Figure WW3, Buckeye anticipates major expenditures of $73.24 million for growth-related wastewater facilities, over the next ten years. Approximately 39% of planned expenditures are for expansion of wastewater treatment plants, at an average cost of $7.00 per gallon of capacity. Major lines needed to expand the wastewater collection system are from the City CIP and the Wastewater Master Plan by Brown and Caldwell. WCS derived the estimated cost of improvements for all areas except Festival Ranch, Tartesso, and Tartesso East, which were provided by the developers of these areas, then reviewed by WCS. Reclamation includes the cost to reuse or recharge treated wastewater.

Figure WW3 – Summary of Wastewater IIP by Service Areas

Service Area	*Collection*	*Treatment*	*Reclamation*	*Total*
North				
Festival Ranch	$1,680,335	$2,396,036	$608,855	$4,685,226
Sun Valley	$2,149,662	$1,995,964	$1,409,769	$5,555,395
Subtotal	$3,829,997	$4,392,000	$2,018,624	$10,240,621
Central North				
Tartesso	$0	$0	$0	$0
Tartesso East	$0	$0	$0	$0
Subtotal	$0	$0	$0	$0
Central West				
Cipriani	$3,441,619	$1,141,971	$1,682,232	$6,265,822
Gila 85	$5,068,815	$1,875,797	$1,401,185	$8,345,797
Gila Hassayampa	$0	$891,773	$1,330,898	$2,222,671
Palo Verde	$1,485,376	$882,961	$1,330,269	$3,698,606
Subtotal	$9,995,810	$4,792,502	$5,744,584	$20,532,896
Central East				
Central Buckeye	$18,206,285	$19,485,003	$3,147,386	$40,838,673
Sundance	$0	$0	$1,632,165	$1,632,165
Subtotal	$18,206,285	$19,485,003	$4,779,551	$42,470,838
Combined (all areas)	$32,032,092	$28,669,505	$12,542,759	$73,244,355

Proposed Wastewater Development Fees

Figure WW4 summarizes growth-related costs and the projected increase in wastewater flow (average day gallons) that are used to derive the wastewater development fee by service area and cost component. The amounts shown are for the smallest meter size. Proposed fees decrease 7% in the Central East service area, and increase 17-60% in the other service areas.

In contrast to other service areas, the North and Central North service areas have surplus capacity in wastewater facilities, for which reimbursements are owed to developers. In the North, reimbursement of approximately $16.43 million will accommodate an additional 6,759 EDUs, which is an increase of 2,162,880 average day gallons. In the North service area, the cost per gallon of capacity for developer reimbursements ($7.59 per gallon of capacity) is added to the cost of future wastewater improvements, to yield the total cost of $16.21 per gallon of capacity.

In the Central North service area, approximately $16.27 million will accommodate an additional 2,774 EDUs, which is equal to 887,680 average-day gallons of capacity. In the Central North, no future wastewater improvements are needed to accommodate projected development over the next ten years. Based on a cost factor of $18.32 per gallon of capacity for developer reimbursements, the proposed wastewater development fee in the Central North service area is $5,862 for the smallest meter (i.e. $18.32 per gallon of capacity x 320 average day gallons per EDU).

Figure WW4 – Proposed Wastewater Fees by Cost Component

Service Area	*Cost of Wastewater Improvements*	*Average Day Gallons Increase*	*Cost per Gallon of Capacity*	*Percent by Cost Component*	*Proposed Fee for Smallest Meter**	*Current Fee for Smallest Meter*	*$ Change*	*% Change*
North Reimbursement	$16,429,675	2,162,880	$7.59	47%				
North IIP Collection	$3,829,997	1,186,102	$3.22	20%				
North IIP Treatment	$4,392,000	1,186,102	$3.70	23%				
North IIP Reclamation	$2,018,624	1,186,102	$1.70	10%				
North Total			$16.21		$5,187	$4,440	$747	17%
Central North Reimbursement	$16,268,383	887,680	$18.32	100%				
Central North IIP Collection	$0	643,045	$0.00	0%				
Central North IIP Treatment	$0	643,045	$0.00	0%				
Central North IIP Reclamation	$0	643,045	$0.00	0%				
Central North Total			$18.32		$5,862	$4,440	$1,422	32%
Central West IIP Collection	$9,995,810	684,643	$14.60	49%				
Central West IIP Treatment	$4,792,502	684,643	$7.00	23%				
Central West IIP Reclamation	$5,744,584	684,643	$8.39	28%				
Central West Total			$29.99		$9,596	$5,988	$3,608	60%
Central East IIP Collection	$18,206,285	3,513,501	$5.18	43%				
Central East IIP Treatment	$19,485,003	3,513,501	$5.54	46%				
Central East IIP Reclamation	$4,779,551	3,513,501	$1.36	11%				
Central East Total			$12.08		$3,865	$4,169	($304)	-7%

** 320 average day gallons per EDU (Buckeye Wastewater System Design Guidelines, 2012). Age-restricted dwellings pay 78% of this amount.*

Figure WW5 indicates Buckeye's wastewater fee schedule for all meter types and sizes. Based on fewer persons in the average household, age-restricted dwellings will pay 78% of the fee amount for the smallest meter. Wastewater fees are also based on water meter capacity, but an independent fee calculation may be requested or required by the City Engineer, if anticipated wastewater flow from a particular development is atypical. For example, a bottling plant may have significantly less wastewater flow than indicated by the type and size of the water meter.

Figure WW5 – Wastewater Development Impact Fee Schedule

Meter Type and Size (inches)	*Town Allowable Maximum Capacity* (gallons per minute)*	*North*	*Central North*	*Central West*	*Central East*
Age-Restricted (per unit)		$4,052	$4,579	$7,496	$3,019
Disc 1.0	25	$5,187	$5,862	$9,596	$3,865
Disc 1.5	50	$10,374	$11,724	$19,192	$7,730
Disc 2.0	80	$16,598	$18,758	$30,707	$12,368
Compound 3.0	160	$33,196	$37,516	$61,414	$24,736
Turbine 3.0	180	$37,346	$42,206	$69,091	$27,828
Compound 4.0	250	$51,870	$58,620	$95,960	$38,650
Turbine 4.0	500	$103,740	$117,240	$191,920	$77,300
Compound 6.0	500	$103,740	$117,240	$191,920	$77,300
Turbine 6.0	1000	$207,480	$234,480	$383,840	$154,600

** Table 6, Buckeye Water System Design Guidelines, December 2012*

APPENDIX A – FORECAST OF REVENUES

ARS § 9-463.05(E)(7) requires:

> *"A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."*

ARS § 9-463.05(B)(12) states:

> *"The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection."*

Buckeye does not have a higher than normal construction excise tax rate, so the required offset described above is not applicable. The required forecast of non-development fee revenue that might be used for growth-related capital costs is shown in Figure A1 (operating revenue) and Figure A2 (capital revenues). Buckeye staff provided the revenue projections. In the operating revenue table, TischlerBise hid rows contain revenue details. By only showing subtotals, operating revenue can be presented on a single page. In the table of capital revenues, TischlerBise hid rows that did not have any data in FY13-14 through FY17-18. Also, TischlerBise deleted staff revenue projections of development fees because these are shown in the IIP for each type of infrastructure. Finally, TischlerBise deleted numerous interest income line items that indicated relatively minor amounts of revenue. Interest income tends to be offset by inflation and the intent is to spend development fee revenue as it is collected. Because fund balances will remain small, there should be minimal interest income.

Figure A1 – Operating Revenue Projections

Town Of Buckeye
Schedule Of Operating Revenues for FY13-14

Acct No	Operating Revenues	FY 10-11	FY 11-12	Revised FY 12-13	Estimated FY 12-13	Budget FY 13-14	Projections FY 14-15	FY 15-16	FY 16-17	FY 17-18
010-040-4001	LOCAL SALES TAX - less Construction	9,294,324	11,608,947	11,655,000	13,000,000	13,702,000	14,537,822	15,555,470	16,644,352	17,809,457
010-040-4002	TPT RECOVERIES	82,649	21,930	10,000	22,276	23,500	24,934	26,679	28,546	30,545
010-040-4011	MAGISTRATE COURT FINES	446,595	435,179	465,000	415,609	438,000	464,718	497,248	532,056	569,300
010-040-4030	OCCUPATIONAL LICENSES	138,860	137,700	145,000	137,787	145,000	153,845	164,614	176,137	188,467
010-040-4031	LIQUOR LICENSE	10,425	9,500	1,000	2,000	2,100	2,228	2,384	2,551	2,730
010-040-4032	LICENSE APPLIC/REINSTATE FEE	12,995	10,200	6,000	9,000	9,500	10,080	10,785	11,540	12,348
	Local Government	**9,985,848**	**12,223,455**	**12,282,000**	**13,586,673**	**14,320,100**	**15,193,626**	**16,257,180**	**17,395,183**	**18,612,845**
010-041-4051	AUTO LIEU TAX	865,935	1,632,808	1,686,000	1,700,000	1,695,852	1,901,100	2,034,177	2,176,569	2,328,929
010-041-4052	STATE SHARED SALES TAX	2,112,351	3,975,466	4,254,000	4,254,000	4,396,072	4,757,223	5,090,228	5,446,544	5,827,802
010-041-4053	URBAN REVENUE SHARING	2,472,836	4,293,972	5,196,000	5,197,000	5,675,977	5,897,450	6,257,194	6,632,626	7,030,584
070-041-4056	STATE MOTOR VEHICLE FUEL TAX	1,588,860	2,547,520	2,565,000	2,700,000	2,869,885	3,019,394	3,230,751	3,456,904	3,698,887
	State Shared Revenues	**7,076,210**	**12,494,431**	**13,701,000**	**13,874,518**	**14,637,786**	**15,575,166**	**16,612,351**	**17,712,643**	**18,886,202**
010-042-4101	PRIMARY PROPERTY TAX	4,522,965	4,867,847	5,332,766	5,332,766	5,644,332	6,247,480	6,684,803	7,152,739	7,653,431
010-042-4102	PROPERTY TAX LEVY - BACK 1 YR	28,116	27,092	98,000	92,000		100,000	100,000	100,000	100,000
010-042-4103	PROPERTY LEASE & EXCISE TAX	1,628	1,628	-	1,628	1,628	1,628	1,628	1,628	1,628
010-042-4109	IN LIEU TAX - SRP	22,791	20,779	10,000	20,000	20,000	20,000	20,000	20,000	20,000
	Property Taxes	**4,575,499**	**4,917,346**	**5,440,766**	**5,446,394**	**5,665,960**	**6,369,108**	**6,806,431**	**7,274,367**	**7,775,059**
	Building & Planning Fees	**1,302,156**	**1,318,382**	**843,600**	**1,321,000**	**1,396,825**	**1,477,003**	**1,561,783**	**1,651,430**	**1,746,222**
	Charges For Services	**1,077,072**	**1,138,931**	**1,062,250**	**1,218,186**	**1,347,575**	**1,245,272**	**1,269,904**	**1,295,151**	**1,321,030**
	Enterprise Charges For Services	**15,035,400**	**17,160,926**	**14,907,700**	**17,908,485**	**19,015,320**	**19,040,723**	**19,513,554**	**19,998,205**	**20,494,973**
	Franchise Fees & Leases	**2,412,675**	**2,262,280**	**2,299,400**	**2,194,140**	**2,207,940**	**2,243,901**	**2,306,890**	**2,383,541**	**2,473,887**
	Operating Interest Revenues	**42,632**	**368,986**	**254,200**	**361,400**	**361,400**	**361,400**	**361,400**	**361,400**	**361,400**
	Grants/ Donations/ Sponorships	**917,469**	**716,982**	**818,462**	**544,632**	**574,653**	**544,632**	**544,632**	**544,632**	**544,632**
	All Other Operating Revenues	**2,748,565**	**3,135,226**	**2,368,540**	**2,479,731**	**2,479,731**	**2,479,731**	**2,479,731**	**2,479,731**	**2,479,731**
	Operating Revenues	**45,173,526**	**55,736,945**	**53,977,918**	**58,935,159**	**62,007,290**	**64,530,562**	**67,713,856**	**71,096,284**	**74,695,981**

Figure A2 – Capital Revenue Projections

Town Of Buckeye
Schedule Of Capital Revenues for FY13-14

Acct No	Capital Revenues	FY 10-11	FY 11-12	Revised FY 12-13	Estimated FY 12-13	Budget FY 13-14	Projections FY 14-15	FY 15-16	FY 16-17	FY 17-18
010-040-4001	LOCAL SALES TAX - Construction	2,977,754	2,931,187	2,600,000	3,000,000	3,000,000	3,500,000	4,000,000	4,500,000	5,000,000
010-043-4113	BUILDING PERMIT FEES	1,324,889	2,107,671	1,000,000	3,000,000	3,000,000	3,500,000	4,000,000	4,500,000	5,000,000
010-048-4597	PUBLIC SAFETY SUPPORT FESTIVAL	1,000,000	800,000	600,000	600,000	400,000	200,000	-	-	-
	GF Non-recurring Revenues	**5,302,643**	**5,838,858**	**4,200,000**	**6,600,000**	**6,400,000**	**7,200,000**	**8,000,000**	**9,000,000**	**10,000,000**
035-041-4055	PROJECT FUNDING AWARDS	372,828	899,497	1,925,447	200,368	1,100,500	-	-	-	-
043-047-4366	CDBG GRANT CONTRIBUTION STATE	-	-	556,764	73,513	1,115,583	-	-	-	-
046-048-4071	SPECIAL DISTRICT REVENUE	-	-	20,000,000	-	20,000,000	-	-	-	-
051-047-4366	STATE GRANTS	29,151	12,660	123,750	-	6,765	-	-	-	-
051-047-4367	FEDERAL GRANTS	476,083	487,931	4,711,731	-	194,265	-	-	-	-
061-047-4414	WIFA LOAN/GRANT PROCEEDS	-	-	-	-	15,600,000	-	-	-	-
073-047-4382	COPS-BVP-(VESTS)	8,503	5,719	20,000	1,858	11,600	-	-	-	-
073-047-4399	UNSP COMP GRANTS	-	-	719,000	-	300,000	-	-	-	-
073-047-4409	PD CLICK OR TICKET GRANT	11,209	5,000	6,000	-	6,000	-	-	-	-
073-047-4415	HOMELAND SECURITY INITIATIVES	50,723	60,635	10,000	288	70,000	-	-	-	-
075-047-4396	UASI	33,000	-	-	31,448	35,000	-	-	-	-
075-047-4399	UNSPECIFIED GRANTS	-	9,196	-	-	416,821	-	-	-	-
076-047-4399	UNIDENTIFIED GRANTS	-	-	818,000	-	400,000	-	-	-	-
121-048-4467	FLEET PROCEEDS & FEES	32,413	15,647	15,000	3,906	4,000	4,000	4,000	4,000	4,000
630-047-4366	LSTA GRANT	-	-	-	-	20,000	-	-	-	-
630-048-4456	MISCELLANEOUS	3,196	4,538	45,000	188,501	65,000	-	-	-	-
672-047-4378	DEVELOPER CONTRIBUTION	947,370	-	-	-	5,500,000	-	-	-	-
	Capital Revenues	**5,237,162**	**9,905,923**	**35,711,244**	**2,476,278**	**44,845,534**	**4,000**	**4,000**	**4,000**	**4,000**

APPENDIX B – COST OF PROFESSIONAL SERVICES

As stated in Arizona's development fee enabling legislation, "a municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing and professional services required for the preparation or revision of a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan" (see ARS § 9-463.05(A)). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units over five years. Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience". Costs shown in Figure B1 include professional services by TischlerBise and WCS.

Figure B1 – Cost of Professional Services

Necessary Public Service	*Cost*	*Development Type*	*Share*	*Demand Indicator*				*Cost per Service Unit Increase*
				Units	*Base Year*	*2018*	*Increase*	
Parks and Recreation	$27,096	Residential	95%	Central East Peak Population	50,677	61,449	10,772	$2.38
		Nonresidential	5%	Central East Jobs	11,299	16,388	5,089	$0.26
Libraries	$27,096	Residential	95%	Central East & North Peak Population	59,778	71,694	11,916	$2.16
		Nonresidential	5%	Central East & North Jobs	13,001	17,909	4,908	$0.27
Water	$54,192	All Development	100%	Equivalent Dwelling Units			12,861	$4.21
Wastewater	$54,192	All Development	100%	Equivalent Dwelling Units			18,835	$2.87
Streets	$54,192	All Development	100%	Central Areas Avg Wkdy VMT	626,934	815,475	188,541	$0.28
Police	$27,096	Residential	82%	Peak Population in Service Areas	63,573	80,956	17,383	$1.27
		Nonresidential	18%	Avg Wkdy Veh Trips to Nonres	44,085	71,537	27,452	$0.17
Fire	$27,096	Residential	82%	Peak Population in Service Areas	63,573	80,956	17,383	$1.27
		Nonresidential	18%	Jobs in Service Areas	13,345	20,480	7,135	$0.68
	$270,960	*Total (TB & WCS)*						

APPENDIX C – LAND USE ASSUMPTIONS

For municipalities in Arizona, the state enabling legislation now requires supporting documentation on land use assumptions, a plan for infrastructure improvements, and development fee calculations. This document contains the land use assumptions for the City of Buckeye 2014 development fee update. Development fees must be updated every five years, making short-range projections the critical time frame. The Infrastructure Improvements Plan (IIP) is limited to ten years, thus a very long-range "build-out" analysis may not be used to derive development fees.

ARS § 9-463.05(T)(7) defines the preparation of a required *Land Use Assumptions* document as follows:

> *"Projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the General Plan of the municipality."*

TischlerBise prepared current demographic ***estimates*** and future development ***projections*** for both residential and nonresidential development that are used in the IIP and calculation of the development fees. Demographic data for FY13-14 (beginning July 1, 2013) are used in calculating levels-of-service provided to existing development in the City of Buckeye. Although long-range projections are necessary for planning infrastructure systems, a shorter five to ten year time frame is critical for the development fees analysis. Due to the slow recovery from the Great Recession, TischlerBise used compound growth rates to produce conservative initial projections that increase over time. In Buckeye, the basic methodology converts housing unit projections to peak population and job projections to nonresidential floor area. The housing unit and job projections are Maricopa Association of Governments (MAG June 2013).

Summary of Growth Indicators

Development projections and growth rates are summarized in Figure C1. These projections will be used to estimate development fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development fee methodologies are designed to reduce sensitivity to accurate development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, impact fees revenues will also decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in impact fee revenue, but will also need to accelerate capital improvements to keep pace with development.

Development projections are based on MAG socioeconomic data by traffic analysis zone (June 2013). TischlerBise used MAG's 2010, 2020, and 2030 data for the Municipal Planning Area (MPA). The City of Buckeye will continue to annex land as development occurs, with the incorporated area expanding over time to eventually approximate the planning area. For 2010 to 2020 interim years, TischlerBise used compound growth rates, thus yielding conservative initial growth with annual increments that increase over time. For interim year data from 2020 to 2030, TischlerBise derived average annual increases (i.e. linear growth).

During the next five years, the development fee study assumes Buckeye's IIP service areas increase by an average of 1,100 housing units per year (compound annual growth rate of 5.0%). IIP service areas are mapped and described in the next section. In comparison, Buckeye's average annual increase was 716 housing units over the past five years. From 2013 to 2018 the development fee study expects Buckeye to add nonresidential floor area averaging 948,000 square feet per year (compound annual increase of 10.2%).

Note: MPA = Municipal Planning Area; KSF = Square Feet of nonresidential floor area in thousands

Figure C1 – Summary of Service Area Projections and Growth Rates

Based on socioeconomic data by traffic analysis zone, Maricopa Association of Governments (June 2013).

Buckeye, AZ	Annual Increase	
Timeframe	*Single Family Permits*	*Nonres Sq Ft x 1000*
2008 CY permits	1,503	
2009 CY permits	488	
2010 CY permits	381	
2011 CY permits	507	
2012 CY permits	699	
7/13-7/14	990	710
7/14-7/15	1,042	780
7/15-7/16	1,097	920
7/16-7/17	1,155	1,090
7/17-7/18	1,217	1,240

	Total as of July 1st	
Year	*Dwelling Units*	*Nonres Sq Ft in thousands*
2013	20,119	7,610
2014	21,109	8,320
2015	22,151	9,100
2016	23,248	10,020
2017	24,403	11,110
2018	25,620	12,350
2023	35,609	20,180

	2013 to 2018 Average Annual	
	Increase	*Compound Growth Rate*
Residential Units	1,100	5.0%
Nonresidential Sq Ft x 1000	948	10.2%

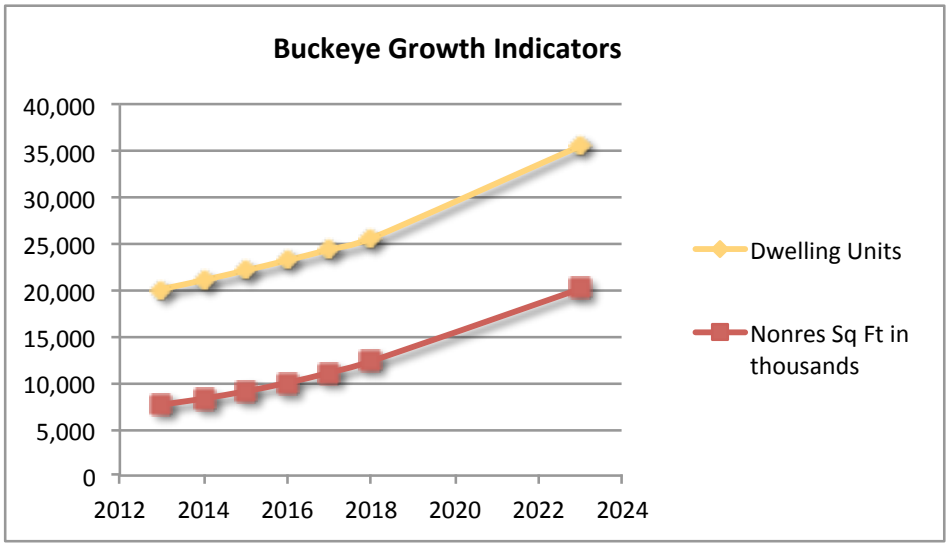


Figure C2 provides additional detail on the annual increases in demand indicators within the four Buckeye Service Areas (change from July 1st to July 1st of the next year). Single-unit housing tends to be the most consistent type of development from year to year. In contrast, apartments and all nonresidential development vary significantly over time. The City of Buckeye will closely monitor actual development each year. If needed, development fees can be updated prior to the required five-year cycle. Please see Figure C10 and related text for additional information on types of nonresidential development.

Figure C2 – Projected Annual Increases for the Buckeye Service Area

Annual Increase	7/13-7/14	7/14-7/15	7/15-7/16	7/16-7/17	7/17-7/18	7/18-7/19	***2013-2023 Avg Anl***
Peak Population	3,129	3,296	3,469	3,649	3,840	4,058	4,895
Dwelling Units	990	1,042	1,097	1,155	1,217	1,283	1,549
Jobs	1,099	1,227	1,383	1,581	1,844	2,211	1,953
Industrial KSF	310	340	410	490	570	690	560
Commercial KSF	150	190	210	260	310	400	307
Institutional KSF	130	150	180	200	230	270	201
Office & Other Services KSF	120	100	120	140	130	160	189
Total Nonres KSF/Yr =>	710	780	920	1,090	1,240	1,520	1,257

Service Areas

ARS § 9-463.05(T)(9) defines "service area" as:

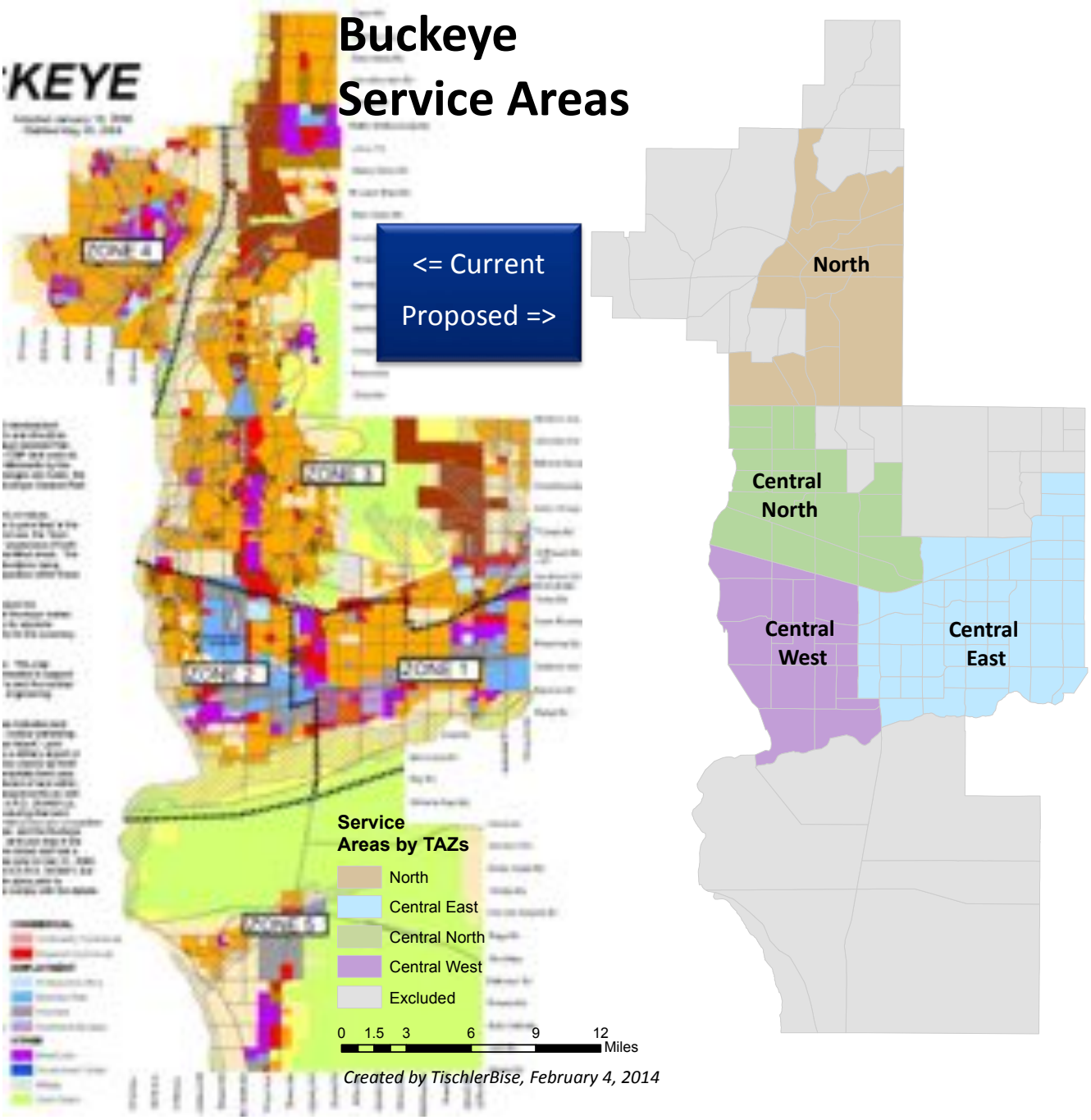
> *"…Any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed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

Arizona's development fee legislation includes detailed definitions of the types of infrastructure that are considered to be "necessary public services." In the City of Buckeye, development fees for police, fire, parks, libraries, and streets are currently imposed citywide. Water and sewer fees are currently imposed by three sub-areas (see left map in Figure C3), with the actual service area limited by the geographic extent of utility lines.

To provide demographic data for the demand analysis required for development fees, TischlerBise tabulated peak population, housing units, jobs, and nonresidential floor area by four service areas. The four proposed service areas are shown in the right side of Figure C3, and defined by traffic analysis zones listed in the following table. For each type of infrastructure, the specific service area is composed of one or more of the four areas, as described further in the IIP. Areas shown with gray shading in the proposed service areas map are currently excluded from the IIP and development fee service areas, but may be added in the future. Given the expectation that no significant development will occur over the next five years northwest of the Hassayampa River and south of the Gila River, these areas are excluded from the service areas.

Service Area	***Traffic Analysis Zones***
North	112, 113, 116, 1690, 1711, 1717, 1724, 1737, 1740, 1752, 1754, 1768, 1780, 1781, 1785
Central North	115, 119, 122, 125, 1786, 1791, 1792, 1793, 1794, 1804, 1805, 1813, 1819, 1820, 1831, 1832, 1837, 1845, 1855
Central West	120, 121, 123, 124, 1850, 1874, 1887, 1888, 1894, 1895, 1902, 1906, 1907, 2313, 2729, 2737, 2778, 2820, 2886
Central East	126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 1808, 1839, 1840, 1842, 1843, 1846, 1848, 1857, 1858, 1868, 1876, 1877, 1878, 1879, 1881, 1889, 1890, 1891, 1892, 1896, 1897, 1898, 1900, 2389, 2392, 2393, 2734, 2740, 2816, 2817, 2818, 2819, 2821, 2837, 2887, 2888, 2889, 2909

Figure C3: Map of Existing and Proposed Service Areas



According to the latest socioeconomic data by traffic analysis zone (MAG, June 2013), the Central East service area is projected to have the largest dwelling unit increase over the next ten years (see Figure C4). The next largest increase is in the North Service area.

Figure C4: Dwelling Units by Service Area

Dwelling Units	*2013*	*2023*	*Increase*	*Annual Growth (linear rate)*
North	2,044	6,010	3,966	19.4%
Central North	1,554	3,143	1,589	10.2%
Central West	483	1,454	971	20.1%
Central East	16,037	25,002	8,965	5.6%
Total	20,118	35,609	15,491	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

As shown in Figure C5, almost all of the industrial floor area in Buckeye is located currently located in the Central East service area. Major increases in industrial jobs and floor area are also expected in the Central West service area over the next ten years.

Figure C5: Industrial Floor Space by Service Area

Industrial	*Square Feet of Floor Area (in thousands)*			*Annual Growth*
	2013	*2023*	*Increase*	*(linear rate)*
North	10	10	0	0.0%
Central North	0	200	200	
Central West	70	1,640	1,570	224.3%
Central East	2,230	6,060	3,830	17.2%
Total	2,310	7,910	5,600	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

All other types of nonresidential floor space (i.e. commercial, institutional, office and other services), by service area, are shown in Figure C6. These types of nonresidential buildings tend to follow residential development, with the Central East having the largest increase, followed by the North service area. The percentage increase is slightly larger in the North because the base amount is smaller.

Figure C6: All Other Nonresidential by Service Area

All Other Nonresidential	*Square Feet of Floor Area (in thousands)*			*Annual Growth*
	2013	*2023*	*Increase*	*(linear rate)*
North	230	1,430	1,200	52.2%
Central North	200	1,080	880	44.0%
Central West	310	1,220	910	29.4%
Central East	4,560	8,540	3,980	8.7%
Total	5,300	12,270	6,970	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

Residential Development

Current estimates and future projections of residential development are detailed in this section, including population and housing units by type. Since 2000, Buckeye increased by an average of 1,586 housing units per year. Figure C7 indicates the estimated number of housing units added by decade in Buckeye. Consistent with the nationwide decline in development activity, residential construction in the City has slowed significantly since 2008. Even with the recent drop in housing starts, Buckeye added more units during the past decade than any previous decade. For comparison, the projected increase in dwelling units within the service areas, over the next decade, is also shown on the graph.

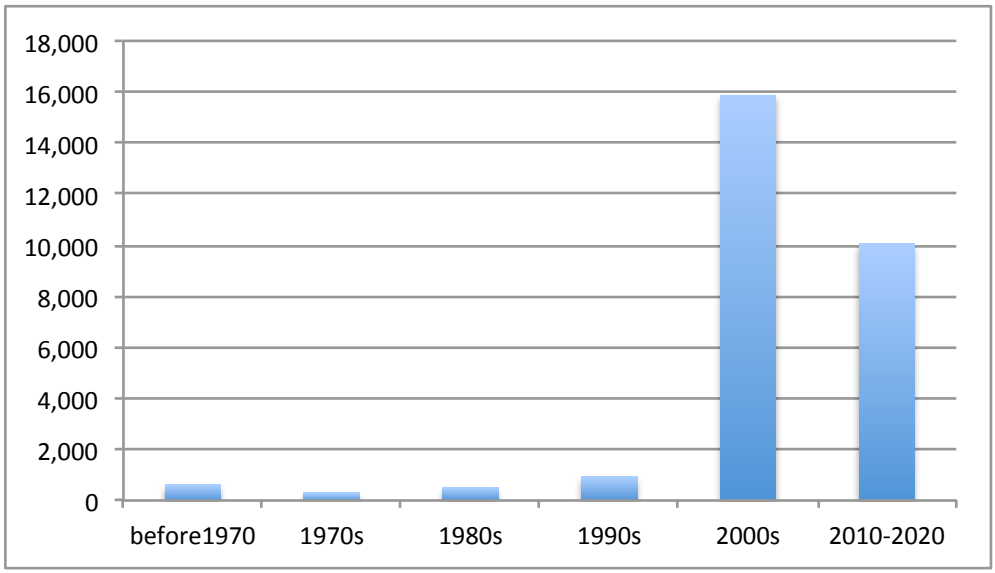
Figure C7 – Housing Units by Decade

Buckeye, Arizona

Census 2010 Population*	50,876
Census 2010 Housing Units*	18,207
Total Housing Units in 2000	2,344
New Housing Units	15,863

From 2000 to 2010, Buckeye added an average of 1,586 housing units per year.

** U.S. Census Bureau, Summary File 1.*



Source for 1990s and earlier is Table B25034, American Community Survey (2007-2011) scaled to equal total housing units in 2000. Projected housing unit increase from 2010 to 2020 is based on MAG socioeconomic data (June 2013).

The 2010 census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For development fees in Buckeye, "single-unit" residential includes detached units (both site-built and manufactured) and townhouses that share a common sidewall, but which are constructed on an individual parcel of land. The second residential category includes all structures with two or more units on an individual parcel of land.

According to the Census Bureau, a household is a housing unit that is occupied by year-round residents. Development fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. When persons per housing unit are used in the fee calculations, infrastructure standards are derived using year-round population. When persons per household are used in the fee calculations, the development fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. For the development fee calculations, TischlerBise used average persons per household from the City of Buckeye water and sewer design guidelines, as shown at the bottom of Figure C8. The ACS housing mix was used to produce the weighted average of 3.16 persons per household.

Figure C8 – Persons per Household by Type of Housing

2009 Summary by Type of Housing from American Community Survey

Units in Structure	*Renter & Owner*			*Housing Units*	*Housing Mix*
	Persons	*House-holds*	*Persons per Household*		
Single Unit*	41,802	12,780	3.27	15,663	94%
2+ Units	1,842	796	2.31	937	6%
TOTAL	43,644	13,576	3.21	16,600	

Source: Tables B25024, B25032, and B25033.

2007-2011 American Community Survey, U.S. Census Bureau.

2010 Census

Single Unit*	43,850	13,578	3.23	17,179	*Vacant or*
2+ Units	1,932	846	2.28	1,028	*Seasonal*
Subtotal	45,782	14,424	3.17	18,207	21%
Group Quarters	5,094				
TOTAL	50,876				

** Single unit includes detached, attached, and mobile homes.*

Source: Totals from Summary File 1, U.S. Census Bureau.

Town of Buckeye Water and Sewer Design Guidelines

Units in Structure	*Persons per Household*
Single Unit	3.20
2+ Units	2.50
Weighted Average	3.16

Demographic data shown in Figure C9 provide key inputs for updating development fees in the City of Buckeye. TischlerBise obtained 2010, 2020, and 2030 data for the entire MPA by traffic analysis zone (MAG, June 2013), which were summarized by service area. The municipal planning area is geographically larger than the service areas, but the difference will decrease over time as the City continues to annex additional land area. In 2013, the difference between the Buckeye service areas and the MPA was 5,745 housing units. The service areas capture 78% of the MPA housing units in 2013, increasing to 81% capture by 2023.

TischlerBise derived interim year data using exponential growth formulas, with growth rates based on the beginning (2010) and ending (2020) data points. This approach provides more conservative short-range projections, with annual increases growing larger over time. As shown below, the average number of persons per household remains constant over time. TischlerBise converted dwelling units to peak population assuming an average of 3.16 persons per household.

Figure C9 – Buckeye Residential Development

Buckeye, Arizona	*FY13-14*	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*	*FY23-24*
	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*
	Base Yr	*1*	*2*	*3*	*4*	*5*	*10*
Peak Population by Service Area							
North	6,459	7,088	7,774	8,526	9,347	10,245	18,992
Central North	4,911	5,265	5,644	6,048	6,481	6,939	9,932
Central West	1,526	1,659	1,808	1,966	2,136	2,323	4,595
Central East	50,677	52,690	54,772	56,927	59,152	61,449	79,006
Total Peak Population	63,573	66,702	69,998	73,467	77,116	80,956	112,525
Persons per Household	3.16	3.16	3.16	3.16	3.16	3.16	3.16
Dwelling Units by Service Area							
North	2,044	2,243	2,460	2,698	2,958	3,242	6,010
Central North	1,554	1,666	1,786	1,914	2,051	2,196	3,143
Central West	483	525	572	622	676	735	1,454
Central East	16,037	16,674	17,333	18,015	18,719	19,446	25,002
Total Dwelling Units	20,119	21,109	22,151	23,248	24,403	25,620	35,609

Nonresidential Development

In addition to data on residential development, the IIP and development fees require data on nonresidential development in Buckeye. Current estimates and future projections of nonresidential development are detailed in this section, including jobs and floor area by type. TischlerBise uses the term "jobs" to refer to employment by place of work.

Figure C10 indicates 2013 job and floor area estimates for the City of Buckeye, according to four general types of nonresidential development. TischlerBise estimated floor area using average square feet per job multipliers, derived from trip generation data published by the Institute of Transportation Engineers (ITE 2012). The prototype for industrial development is warehousing. The prototype for commercial development is an average-size shopping center. For institutional development, an elementary school is the prototype. An average-size general office building is the prototype for office and other services, such as hospitals and hotels.

For the purpose of development fee calculations, TischlerBise excluded construction, non-site based employment, and work-at-home employment. These types of jobs do not result in any substantial increase in nonresidential floor area.

Figure C10 – 2013 Jobs and Floor Area Estimates

	2013 Jobs (1)		*Sq Ft per Job*	*2013 Floor Area (2)*	*Jobs per 1000 Sq Ft*
Industrial (3)	2,102	16%	1,100	2,312,000	0.91
Commercial (4)	2,691	20%	500	1,346,000	2.00
Institutional (5)	1,955	15%	1,000	1,955,000	1.00
Office/Other (6)	6,597	49%	300	1,979,000	3.33
TOTAL	13,345	100%	569	7,592,000	1.76

(1) Jobs in 2013 based on MAG socioeconomic projections (June 2013) for 2010 and 2020.
(2) Estimated from the number of jobs using square feet per employee multipliers derived from Trip Generation (Institute of Transportation Engineers, 2012).
(3) MAG industrial (excludes construction and non-site based employment).
(4) MAG retail.
(5) MAG public.
(6) MAG office and other (excludes work-at-home employment).

Figure C11 provides base year data and a ten-year forecast of both jobs and nonresidential floor for Buckeye service areas. Based on the latest MAG employment forecast (June 2013), the 2013 inventory of nonresidential building space will more than double over the next ten years and Buckeye is expected to become more of an employment center with jobs increasing faster than housing units. In 2013, there were 0.58 jobs for every housing unit in the Buckeye service areas. By 2023, the ratio increases to 0.86 jobs per housing unit. Construction, non-site based employment, and work-at-home jobs were excluded to more accurately indicate the increase in nonresidential floor area. Average square feet per job increases over time due to an increase in the share of industrial jobs. For jobs, the service areas capture 81% of the MPA jobs in 2013, increasing to 89% capture by 2023.

Figure C11 – Buckeye Nonresidential Development

Buckeye, Arizona	*FY13-14*	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*	*FY23-24*
	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*
	Base Yr	*1*	*2*	*3*	*4*	*5*	*10*
Jobs (by place of work within Service Areas)							
Industrial Jobs	2,102	2,378	2,696	3,068	3,504	4,024	7,188
Commercial Jobs	2,691	3,009	3,374	3,800	4,308	4,936	8,827
Institutional Jobs	1,955	2,098	2,255	2,429	2,626	2,854	3,984
Office & Other Services Jobs	6,597	6,959	7,346	7,758	8,197	8,666	12,877
Total Jobs	13,345	14,444	15,671	17,055	18,636	20,480	32,877
Jobs to Housing Ratio	0.58	0.60	0.63	0.66	0.69	0.72	0.86
Nonresidential Floor Area (square feet in thousands within Service Areas)							
Industrial KSF	2,310	2,620	2,960	3,370	3,860	4,430	7,910
Commercial KSF	1,350	1,500	1,690	1,900	2,160	2,470	4,420
Institutional KSF	1,970	2,100	2,250	2,430	2,630	2,860	3,980
Office & Other KSF	1,980	2,100	2,200	2,320	2,460	2,590	3,870
Total MPA KSF	7,610	8,320	9,100	10,020	11,110	12,350	20,180
Avg Sq Ft Per Job	570	576	581	588	596	603	614

APPENDIX D – IIP DETAILS FOR WATER AND WASTEWATER FACILITIES

Figures D1 through D4 indicate the water and wastewater fees by cost component, meter type and size. Percentage allocations by water cost component are from Figure W4, including reimbursement for existing oversized facilities, water production, and water distribution. Percentage allocations by wastewater cost component are from Figure WW4, including reimbursement for existing oversized facilities, wastewater collection, wastewater treatment, and wastewater reclamation.

Figure D1 – North Utility Fees by Cost Component, Meter Type and Size

North - Utility Impact Fees							
Meter Type & Size (inches)	Water Reimbursement 35%	Water Production 51%	Water Distribution 14%	Wastewater Reimbursement 47%	Wastewater Collection 20%	Wastewater Treatment 23%	Wastewater Reclamation 10%
Age-Restricted (per unit)	$1,279.60	$1,864.56	$511.84	$1,904.44	$810.40	$931.96	$405.20
Disc 1.0	$1,638.00	$2,386.80	$655.20	$2,437.89	$1,037.40	$1,193.01	$518.70
Disc 1.5	$3,276.00	$4,773.60	$1,310.40	$4,875.78	$2,074.80	$2,386.02	$1,037.40
Disc 2.0	$5,241.60	$7,637.76	$2,096.64	$7,801.06	$3,319.60	$3,817.54	$1,659.80
Comp 3.0	$10,483.20	$15,275.52	$4,193.28	$15,602.12	$6,639.20	$7,635.08	$3,319.60
Turb 3.0	$11,793.60	$17,184.96	$4,717.44	$17,552.62	$7,469.20	$8,589.58	$3,734.60
Comp 4.0	$16,380.00	$23,868.00	$6,552.00	$24,378.90	$10,374.00	$11,930.10	$5,187.00
Turb 4.0	$32,760.00	$47,736.00	$13,104.00	$48,757.80	$20,748.00	$23,860.20	$10,374.00
Comp 6.0	$32,760.00	$47,736.00	$13,104.00	$48,757.80	$20,748.00	$23,860.20	$10,374.00
Turb 6.0	$65,520.00	$95,472.00	$26,208.00	$97,515.60	$41,496.00	$47,720.40	$20,748.00

Figure D2 – Central North Utility Fees by Cost Component, Meter Type and Size

Central North - Utility Impact Fees							
Meter Type & Size (inches)	Water Reimbursement 81%	Water Production 19%	Water Distribution 0%	Wastewater Reimbursement 100%	Wastewater Collection 0%	Wastewater Treatment 0%	Wastewater Reclamation 0%
Age-Restricted (per unit)	$2,067.93	$485.07	$0.00	$4,579.00	$0.00	$0.00	$0.00
Disc 1.0	$2,647.08	$620.92	$0.00	$5,862.00	$0.00	$0.00	$0.00
Disc 1.5	$5,294.16	$1,241.84	$0.00	$11,724.00	$0.00	$0.00	$0.00
Disc 2.0	$8,470.17	$1,986.83	$0.00	$18,758.00	$0.00	$0.00	$0.00
Comp 3.0	$16,941.15	$3,973.85	$0.00	$37,516.00	$0.00	$0.00	$0.00
Turb 3.0	$19,058.49	$4,470.51	$0.00	$42,206.00	$0.00	$0.00	$0.00
Comp 4.0	$26,470.80	$6,209.20	$0.00	$58,620.00	$0.00	$0.00	$0.00
Turb 4.0	$52,941.60	$12,418.40	$0.00	$117,240.00	$0.00	$0.00	$0.00
Comp 6.0	$52,941.60	$12,418.40	$0.00	$117,240.00	$0.00	$0.00	$0.00
Turb 6.0	$105,883.20	$24,836.80	$0.00	$234,480.00	$0.00	$0.00	$0.00

Figure D3 – Central West Utility Fees by Cost Component, Meter Type and Size

Central West - Utility Impact Fees							
Meter Type & Size (inches)	Water Reimbursement 0%	Water Production 83%	Water Distribution 17%	Wastewater Reimbursement 0%	Wastewater Collection 49%	Wastewater Treatment 23%	Wastewater Reclamation 28%
Age-Restricted (per unit)	$0.00	$6,582.73	$1,348.27	$0.00	$3,673.04	$1,724.08	$2,098.88
Disc 1.0	$0.00	$8,426.16	$1,725.84	$0.00	$4,702.04	$2,207.08	$2,686.88
Disc 1.5	$0.00	$16,852.32	$3,451.68	$0.00	$9,404.08	$4,414.16	$5,373.76
Disc 2.0	$0.00	$26,963.38	$5,522.62	$0.00	$15,046.43	$7,062.61	$8,597.96
Comp 3.0	$0.00	$53,926.76	$11,045.24	$0.00	$30,092.86	$14,125.22	$17,195.92
Turb 3.0	$0.00	$60,668.02	$12,425.98	$0.00	$33,854.59	$15,890.93	$19,345.48
Comp 4.0	$0.00	$84,261.60	$17,258.40	$0.00	$47,020.40	$22,070.80	$26,868.80
Turb 4.0	$0.00	$168,523.20	$34,516.80	$0.00	$94,040.80	$44,141.60	$53,737.60
Comp 6.0	$0.00	$168,523.20	$34,516.80	$0.00	$94,040.80	$44,141.60	$53,737.60
Turb 6.0	$0.00	$337,046.40	$69,033.60	$0.00	$188,081.60	$88,283.20	$107,475.20

Figure D4 – Central East Utility Fees by Cost Component, Meter Type and Size

Central East - Utility Impact Fees							
Meter Type & Size (inches)	Water Reimbursement 0%	Water Production 32%	Water Distribution 68%	Wastewater Reimbursement 0%	Wastewater Collection 43%	Wastewater Treatment 46%	Wastewater Reclamation 11%
Age-Restricted (per unit)	$0.00	$1,949.76	$4,143.24	$0.00	$1,298.17	$1,388.74	$332.09
Disc 1.0	$0.00	$2,496.00	$5,304.00	$0.00	$1,661.95	$1,777.90	$425.15
Disc 1.5	$0.00	$4,992.00	$10,608.00	$0.00	$3,323.90	$3,555.80	$850.30
Disc 2.0	$0.00	$7,987.20	$16,972.80	$0.00	$5,318.24	$5,689.28	$1,360.48
Comp 3.0	$0.00	$15,974.40	$33,945.60	$0.00	$10,636.48	$11,378.56	$2,720.96
Turb 3.0	$0.00	$17,971.20	$38,188.80	$0.00	$11,966.04	$12,800.88	$3,061.08
Comp 4.0	$0.00	$24,960.00	$53,040.00	$0.00	$16,619.50	$17,779.00	$4,251.50
Turb 4.0	$0.00	$49,920.00	$106,080.00	$0.00	$33,239.00	$35,558.00	$8,503.00
Comp 6.0	$0.00	$49,920.00	$106,080.00	$0.00	$33,239.00	$35,558.00	$8,503.00
Turb 6.0	$0.00	$99,840.00	$212,160.00	$0.00	$66,478.00	$71,116.00	$17,006.00

WCS prepared the following maps and tables in Appendix D. In the IIP tables presented below, the "Capacity" column represents the quantity needed to accommodate projected development over the next ten years. The amounts shown have different measurement units, depending on the type of improvement, as summarized in the table below.

Water Storage	Gallons
Water Booster Pump	Gallons per Minute
Water Wells	Count
Water Treatment	Gallons per Day
Water Lines	Linear Feet
Wastewater Treatment	Gallons per Day
Wastewater Recharge/Reuse	Gallons per Day
Wastewater Lines	Linear Feet

Water North

Figure D5 – Existing Water Facilities North

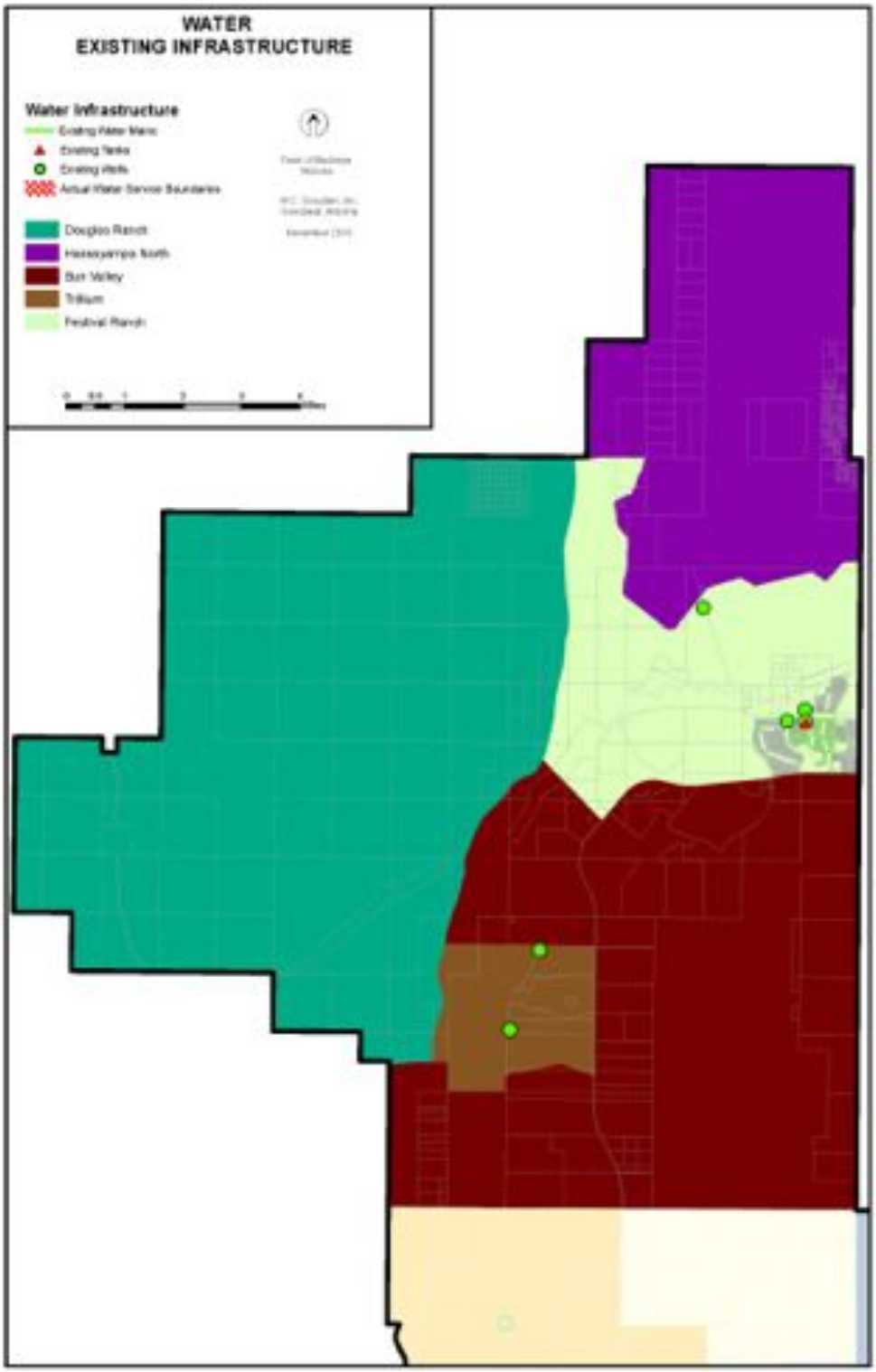


Figure D6 - North Water IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Festival Ranch ***Water***			
Storage	597,019	$1.50	$895,529
Booster Pump Capacity	3,358	$250	$839,559
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
16" Water Line	21,000	$120	$2,520,000
Total			$6,655,088

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Sun Valley ***Water***			
Storage	912,373	$1.50	$1,368,560
Booster Pump Capacity	3,534	$250	$883,593
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
Pipe	0		$0
Total			$4,652,153

Water Central

Figure D7 – Existing Water Facilities Central

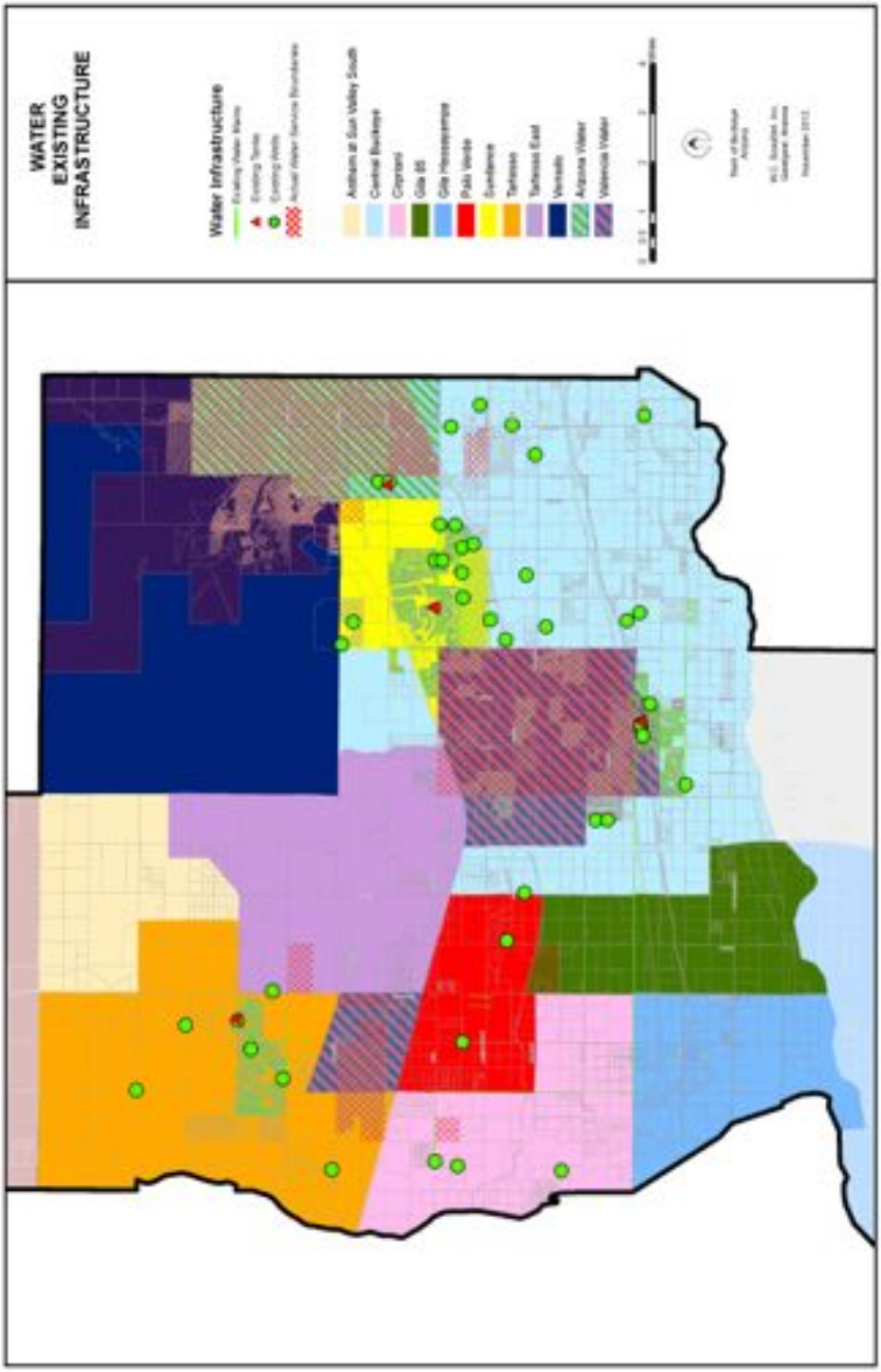


Figure D8 – Central North Water IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Tartesso ***Water***			
Storage			$0
Booster Pump Capacity			$0
Well	1	$1,200,000	$1,200,000
Total			$1,200,000
Component	*Growth Quantity*	*Unit Cost*	*Cost*
Tartesso East ***Water***			
Storage		$1.50	$0
Booster Pump Capacity		$250	$0
Wells		$1,200,000	$0
Treatment	0	$1.50	$0
Water Resource		$9,000,000.00	$0
Pipe	0		$0
Total			$0

Figure D9 – Central West Water IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Cipriani ***Water***			
Storage	830,064	$1.50	$1,245,096
Booster Pump Capacity	3,306	$250	$826,433
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
30" Water Line	2,665	$220	$586,329
16" Water Line	14,583	$120	$1,749,951
Total			$6,807,809

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Gila 85 ***Water***			
Storage	900,852	$1.50	$1,351,278
Booster Pump Capacity	3,502	$250	$875,592
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
30" Water Line	552	$220	$121,454
16" Water Line	8,011	$120	$961,357
Total			$5,709,681

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Gila Hassayampa ***Water***			
Storage	805,949	$1.50	$1,208,923
Booster Pump Capacity	3,239	$250	$809,687
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
Pipe	0		$0
Total			$4,418,610

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Palo Verde ***Water***			
Storage	805,062	$1.50	$1,207,593
Booster Pump Capacity	3,236	$250	$809,071
Wells	2	$1,200,000	$2,400,000
Treatment	0	$1.50	$0
Water Resource			0
30" Water Line	308	$220	$67,681
16" Water Line	2,509	$120	$301,028
Total			$4,785,374

Figure D10 – Central East Water IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Central Buckeye			
Water			
Storage	1,635,949	$1.50	$2,453,924
Booster Pump Capacity	5,544	$300	$1,663,291
Wells	4	$1,200,000	$4,800,000
Treatment	1,635,949	$2.00	$3,271,899
Water Resource			0
16" (MC85 Extension)	15,840	$120	$1,900,800
16" (Sundanc-Downtown)	32,320	$120	$3,878,400
16" (Monroe Extension	5,280	$120	$633,600
16" (SR 85 Supply and Transmission)	21,120	$120	$2,534,400
16" (Palo Verde)	21,120	$120	$2,534,400
36" Water Line	3,816	$230	$877,727
30" Water Line	3,442	$220	$757,316
24" Water Line	1,913	$165	$315,610
20" Water Line	7,836	$150	$1,175,348
16" Water Line	101,297	$120	$12,155,610
Total			$38,952,325

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Sundance			
Water			
Storage		$1.50	$0
Booster Pump Capacity		$250	$0
Equipping Well	1	$600,000	$600,000
Treatment	0	$1.50	$0
Water Resource			0
16" Water Line		$120	$0
Total			$600,000

Wastewater North

Figure D11 – Existing Wastewater Facilities North

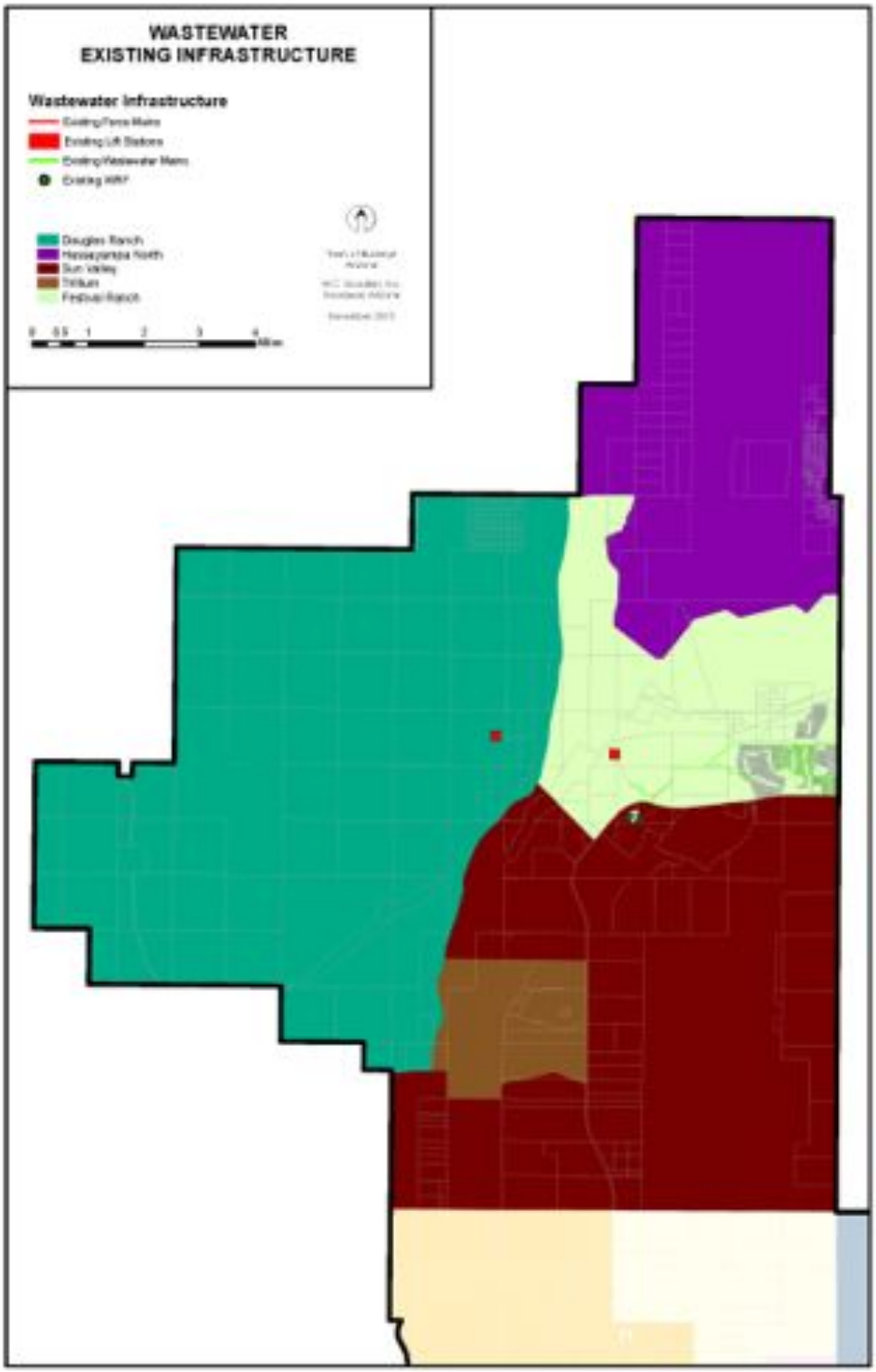


Figure D12 – North Wastewater IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Festival Ranch			
Wastewater			
Treatment	342,291	$7.00	$2,396,036
Recharge			0
Recharge Line			$608,855
Sewer Trunks			$1,680,335
Pumping			$0
Total			$4,685,226

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Sun Valley			
Wastewater			
Treatment	285,138	$7.00	$1,995,964
Recharge	142,569	$1.00	$142,569
16" Recharge Line	10,560	$120.00	$1,267,200
15" Sewer	15,355	$140	$2,149,662
Pumping			$0
Total			$5,555,395

Wastewater Central

Figure D13 – Existing Wastewater Facilities Central

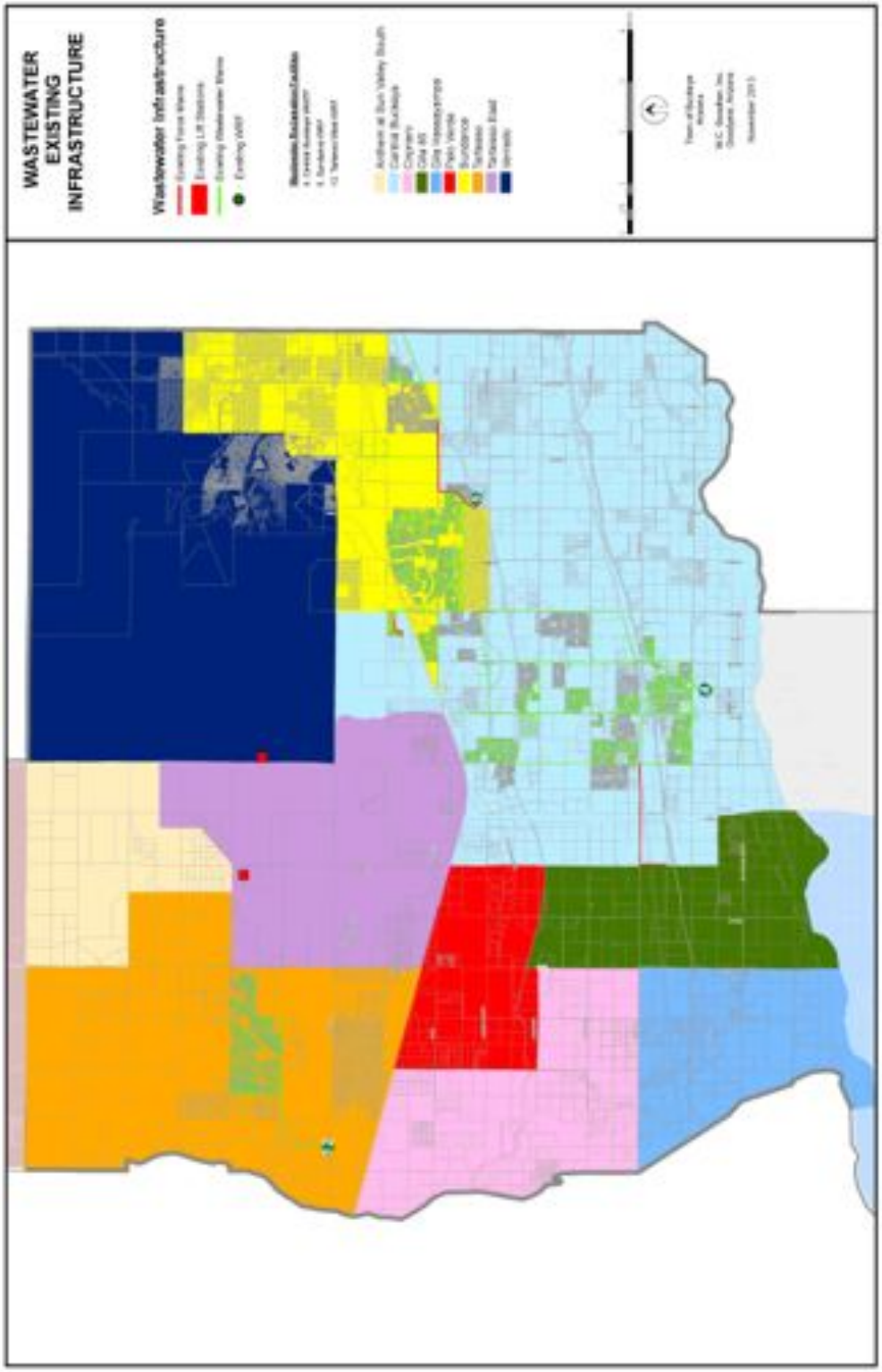


Figure D14 – Central North Wastewater IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Tartesso			
Wastewater			
Treatment			$0
Recharge		$1.00	$0
16" Recharge Line		$120.00	$0
60" Sewer		$300	$0
48" Sewer		$270	$0
36" Sewer		$250	$0
30" Sewer		$200	$0
24" Sewer		$180	$0
21" Sewer		$150	$0
18"Sewer		$160	$0
15" Sewer		$140	$0
Pumping			$0
Total			$0

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Tartesso East			
Wastewater			
Treatment			$0
Recharge	0	$1.00	$0
16" Recharge Line		$120.00	$0
Collection	0		$0
Pumping			$0
Total			$0

Figure D15 – Central West Wastewater IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Cipriani			
Wastewater			
Treatment	163,139	$7.00	$1,141,971
15" Sewer	24,583	140	$3,441,619
Recharge	415,032	$1	$415,032
16" Recharge Line	10,560	$120	$1,267,200
Pumping			$0
Total			$6,265,822

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Gila 85			
Wastewater			
Treatment	267,971	$7.00	$1,875,797
Recharge	133,985	$1.00	$133,985
16" Recharge Line	10,560	$120.00	$1,267,200
15" Sewer	36,206	140	$5,068,815
Pumping			$0
Total			$8,345,797

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Gila Hassayampa			
Wastewater			
Treatment	127,396	7	$891,773
Recharge	63,698	$1.00	$63,698
16" Recharge Line	10,560	$120.00	$1,267,200
Collection	0		$0
Pumping	0		$0
Total			$2,222,671

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Palo Verde			
Wastewater			
Treatment	126,137	$7.00	$882,961
Recharge	63,069	$1.00	$63,069
16" Recharge Line	10,560	$120.00	$1,267,200
15" Sewer	10,610	$140	$1,485,376
Pumping			$0
Total			$3,698,606

Figure D16 – Central East Wastewater IIP

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Central Buckeye			
Wastewater			
Treatment	2,783,572	$7.00	$19,485,003
Perryville Trunk Line	10,560	$120	$1,267,200
Effluent Line from Beloat to BWCDD Canal	10,032	$175	$1,755,600
54" Sewer	184	$300	$55,167
42" Sewer	2,659	$270	$717,892
36" Sewer	18,511	$250	$4,627,803
33" Sewer	1,159	$240	$278,220
30" Sewer	4,542	$200	$908,392
24" Sewer	3,416	$180	$614,812
18" Sewer	24,903	$160	$3,984,534
15" Sewer	41,088	$140	$5,752,266
16" Recharge Line	10,560	$120	
Recharge	1,391,786	$1	$1,391,786
Pumping			$0
Total			$40,838,673

Component	*Growth Quantity*	*Unit Cost*	*Cost*
Sundance			
Wastewater			
Treatment	729,929		$0
Recharge	364,965	$1.00	$364,965
16" Recharge Line	10,560	$120.00	$1,267,200
27" Sewer		$180	$0
18" Sewer		$160	$0
15" Sewer		$140	$0
Pumping			$0
Total			$1,632,165