

City of Surprise



STORMWATER UTILITY FORMATION

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FCS GROUP

Washington Office

7525 166th Avenue NE, Suite D-215
Redmond, WA 98052
T: 425.867.1802 | F: 425.867.1937

Oregon Office

4000 Kruse Way Place, Bldg 1, Ste 220
Lake Oswego, OR 97035
T: 503.841.6543 | F: 503.841.6573

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SECTION I: INTRODUCTION

This section describes the context and project scope upon which the body of this report is based.

A. BACKGROUND

In July, 2014, the City of Surprise (City) contracted with Financial Consulting Solutions Group, Inc. (FCS GROUP) to perform a stormwater utility formation and rate study that would include structuring a stormwater rate to equitably recover the costs of stormwater management within the parameters of the Arizona Constitution and Arizona Revised Statutes. The City's stormwater functions are currently funded by the Streets Division (sweeping) and the Wastewater Division (maintenance, etc.).

B. SCOPE OF SERVICES

With this study, the City wished to implement a stormwater utility and supporting rate to provide the funding necessary to allow stormwater functions to be independent and fully funded. The study was performed using the following general approach:

- ◆ **Policy Framework for Charges.** In this step, we worked with City staff to identify, analyze, and agree on key policy issues.
- ◆ **Customer Base Calculation.** In this step, we worked with City staff to create customer base estimates for the utility. Additional information on the calculation is included as **Appendix A** to this report.
- ◆ **Technical Analysis.** In this step, we worked with City staff to perform a detailed financial analysis with projected costs, utility revenue requirements, and resulting rates. The technical analysis is included as **Appendices B and C** to this report.
- ◆ **Documentation and Presentation.** In these tasks, we wrote this report describing the recommended charge structure and charges, and presented results to the City Council and the general public.

SECTION II: POLICY FRAMEWORK

In this section, we examine four key issues related to funding ongoing City stormwater management: (1) stormwater program funding options, (2) stormwater utility rate structure options, (3) stormwater rate credits and exemptions, and (4) stormwater utility fiscal policies.

A. FUNDING OPTIONS

In examining the question of appropriate funding options, it is important to consider the purpose of the program. The City of Surprise stormwater program exists in large part to meet a number of federal, state, and local regulations, most prominent among them being National Pollutant Discharge Elimination System (NPDES) requirements as managed through Arizona Pollutant Discharge Elimination System (AZPDES) permits, 401 Certification, superfund site rules, the U.S. Environmental Protection Agency (EPA) Ground Water Rule run through the Arizona Department of Environmental Quality (ADEQ), and additional risk costs – to say nothing of potential future regulatory requirements. Local regulations include the City’s Storm Water Service Code (Chapter 58, Article VI, Surprise Municipal Code) and Stormwater Management Code (Chapter 117, Surprise Municipal Code). Compliance with these and other regulations requires dedicated, reliable funding – a key criterion in the selection of a recommended funding approach.

Many communities (although few in Arizona¹) employ utility service charges to fund their storm and surface water management programs. Service charges provide a dependable, predictable, legally defensible and equitable funding source that is dedicated to its purpose and rationally based on the service provided to individual property owners. The American Public Works Association concludes the following:

The user charge and utility concepts are the most dependable and equitable approaches available to local governments for financing stormwater management. Great care should be taken in advance of establishing such a system to assure a legal, beneficial, equitable, acceptable, and effective management agency.²

However, there are other potential sources of funding for surface water management programs and program components, including the following, evaluated below:

- ◆ General Fund
- ◆ Special Assessments
- ◆ Special Fees
- ◆ Impact Fees
- ◆ Conventional Debt
- ◆ Special Grants and Loans

Use of **General Fund** money is usually unrestricted, and thus could be used to fund stormwater management. However, the general fund is subject to many competing demands, and cannot usually be considered a reliable source for ongoing funding.

¹ We know of stormwater utilities in the cities of Flagstaff, Oro Valley, Peoria, Scottsdale, and Tucson.

² *Urban Stormwater Management (American Public Works Association, 1981), 263.*

Special Assessments are most commonly structured as local improvement districts, these funding mechanisms assess individual properties benefited or served by a specific capital improvement for a share of the cost of that facility. Typically, benefit must be demonstrated by an increase in assessed valuation due to the improvement. Although special assessment charges are not recommended at this time, the idea of special benefits will be discussed in more detail in the rate structure section.

Special Fees or direct charges may be used to recover the direct costs for services performed for a customer or class of customers not generally related to the overall service charge. Again, although these fees are not recommended at this time, the idea of direct benefits will be discussed in more detail in the rate structure section.

Impact Fees, like utility connection charges, are one-time charges imposed as conditions of development, and are designed to recover an equitable share of the cost of capital investment incurred by the Utility. The cost basis for an impact fee, authorized in Title 9, Chapter 4 of the Arizona Code, and available for “Storm water, drainage and flood control facilities, including any appurtenances for those facilities”, may include a share of planned future facilities required to support growth. It is crucial that impact fees be the product of a clear calculation basis derived from official asset accounting and capital improvement plans and that they adhere to statutory limitations and legal precedents. Revenues from such charges are available for capital purposes only and may be worth revisiting in the future, but will not fund ongoing program operations, which is the primary goal of this study.

Similarly, **Debt** and **Special Grants and Loans** such as ADEQ’s Water Quality Improvement Grant (WQIG) Program, which allocates money from the U.S. EPA pursuant to Section 319(h) of the Clean Water Act, are similarly available only for capital project funding – not ongoing operations. In addition, loans require a reliable funding source to meet debt repayment needs.

FCS GROUP recommends that the City establish a stormwater utility and supporting rate in order to recover most of the costs of its maturing stormwater program. An appropriately structured rate will allow the City to charge each customer equitably and ensure that each customer pays only for service received from the Stormwater Utility. Calculated rates provide a dedicated, equitable, reliable mechanism for cost recovery for services provided.

Most cities need to utilize other sources of funding as well. It is wise to aggressively pursue federal, state, and private sector grants and loans for needed capital construction to minimize the financial burden on local ratepayers. While these sources are difficult to access, the potential cost savings to the ratepayers on qualifying projects makes pursuing them worthwhile.

If this special funding cannot be obtained, then many cities use revenue bond debt, supported by utility rates, to finance implementation of the stormwater capital plan. In most cases, the life of surface water and stormwater facilities far outreaches the term of conventional long-term debt instruments, making this type of financing cost-effective and appropriate.

Recommendation: To equitably and rationally address the cost of stormwater services provided by the City to individual properties in Surprise, FCS GROUP recommends that the City implement a stormwater utility, relying primarily on a calculated stormwater utility fee for service as the mechanism for program cost recovery.

B. RATE STRUCTURE

More and more communities are employing utility service charges to fund their storm and surface water programs. Service charges provide a dependable, predictable, legally defensible, and equitable

revenue stream that is dedicated to its purpose. Additionally, this revenue stream can be realized through any of several alternative rate structures.

Rate structure options consist of impervious surface area, density of development, runoff coefficients, flat fees, land use, trip generation, and geographic location. Although they could all be used to aid in the calculation of stormwater rates, they are not as well accepted nor tied as closely to stormwater as impervious surface area. The following selection from *Stormwater Strategies: Community Responses to Runoff Pollution* describes the impervious surface area nexus clearly:

The problem of polluted stormwater runoff has two main components: the increased volume and rate of runoff from impervious surfaces and the concentration of pollutants in the runoff. Both components are highly related to development in urban and urbanizing areas. When impervious cover (roads, highways, parking lots, and rooftops) reaches 10 and 20 percent of the area of a watershed, ecological stress becomes clearly apparent. Everyday activities, including driving and maintaining vehicles, maintaining lawns and parks, disposing of waste, and even walking pets, often cover these impervious surfaces with a coating of various harmful materials. Construction sites, power plants, failed septic systems, illegal discharges, and improper sewer connections also contribute substantial amounts of pollutants to runoff. Sediments, toxic metal particles, pesticides and fertilizers, oil and grease, pathogens, excess nutrients, and trash are common stormwater pollutants. Many of these constituents end up on roads and parking lots during dry weather only to be washed into waterbodies when it rains or when snow melts.

Together, these pollutants and the increased velocity and volume of runoff cause dramatic changes in hydrology and water quality that result in a variety of problems. These include increased flooding, stream channel degradation, habitat loss, changes in water temperature, contamination of water resources, and increased erosion and sedimentation. These changes affect ecosystem functions, biological diversity, public health, recreation, economic activity, and general community well-being. Urban stormwater is not alone in causing these impacts. Industrial and agricultural runoff are equal or greater contributors. But the environmental, aesthetic, and public health impacts of diffuse pollution will not be eliminated until urban stormwater pollution is controlled.³

Impervious surface area is the most common basis for charging stormwater fees. The term refers to hard surface area that prevents or slows water permeation into the ground. Impervious surface area is most widely accepted as an appropriate measure of a property's contribution of runoff, providing a clear relationship, or "rational nexus," to service received from a stormwater program.

To administer a rate structure based on impervious surface area, data quantifying the applicable area by parcel is required. To minimize administrative and data collection costs, stormwater utilities typically develop a uniform rate for single family residential customers based on an estimated average amount of impervious surface area per developed residential parcel. The charge basis for all other customer types is generally actual measured impervious surface area by parcel. The charge itself is most commonly calculated as a dollar amount per unit of impervious surface area, or an equivalent unit of service, especially when the fee structure is implemented as a uniform charge for residential customers. (For example, one unit may equate to 2,500 square feet of average residential impervious surface area per parcel, and the fee may be \$5.00 per unit charged to each residential account.)

³ Peter H. Lehner, George P. Aponte Clarke, Diane M. Cameron, and Andrew G. Frank, *Stormwater Strategies: Community Responses to Runoff Pollution* (Natural Resources Defense Council, May 1999), xi.

An impervious-based rate structure defines a direct linkage between a parcel's contribution to runoff impacting the system infrastructure and the fee that parcel pays. The fee basis creates a standard of charging that quantifies how different amounts of impervious surface area cause proportionately different impacts on the environment in terms of flooding, water quality, and habitat degradation. By recognizing that relationship, the fee structure basis proportionately charges different customers their share of the system's cost burden and provides an equitable, defensible means of cost recovery for a stormwater utility.

Density of development is an alternative measure of runoff contribution. The term refers to impervious or development coverage as a percentage of parcel size. It may also be used in combination with actual impervious surface area measurements to adjust charges depending on the percentage of the parcel covered by hard surface. As an adjusting factor, it is used to acknowledge that, for example, 5,000 square feet of impervious surface on a 6,000 square foot lot more directly impacts the public system than 5,000 square feet of hard surface on a 15,000 square foot lot. As with impervious surface area, density of development is an appropriate charge basis because it adequately quantifies the relationship between the rate paid and the amount of service received. However, because of its relationship to gross parcel size, it may conflict with recent Arizona House Bill 2378, which prohibits a municipality from charging a citywide tax or fee "based on the size or value of the owner's real property or improvements to real property."

Runoff coefficients are yet another measurement of a property's contribution to surface water impacts. This factor is similar to density of development, but it is more closely associated with the physical characteristics of properties. When applied to lot size, runoff coefficients are generally accepted as a measure of surface water contribution and hence, service received. Information required to charge under this basis includes basic physical characteristics of land (such as slope and soil type), land use, and lot size. Under this approach, undeveloped parcels may also be charged depending upon slope variables and soil characteristics. Runoff coefficients are typically charged either as a fee per unit of area or as an adjustment factor to impervious surface area to modify the final charge based on a parcel's runoff characteristics. In measuring contribution to surface water runoff by evaluating property-specific characteristics that cause impacts, this approach proportionately recovers the costs of various activities within a stormwater program from each user based on their level of contribution. However, physical characteristics of land such as soil type and slope are not thought to be controllable by the property owner and are hence more difficult to accurately measure and quantify as a rate basis than measurements of quantity or intensity of development.

A **flat fee** per account would recover stormwater program costs uniformly from all customers. While relatively simple to calculate and administer, a flat fee structure reflects a philosophy that all customers large and small are served equally by the stormwater program. This approach conflicts with accepted research showing the negative impact of development, and more specifically impervious surface area, on surface water runoff and resulting damage to the environment. From a practical standpoint, flat fees have proven effective as long as the rates can be kept at modest levels.

Land use is another basis that can be used to adjust rates based on distinct characteristics of properties. Using this fee basis, adjusting factors are created to establish rates based on assumed runoff generation by land use type. For example, empirical analysis may find that industrial land use has a more significant contribution to water quality problems from stormwater runoff than undeveloped land and therefore, should be charged a proportionately higher rate.

While the fee structures discussed above focus on runoff contribution, **trip generation** as a fee basis relates automobile traffic to non-point source pollution contributed by properties. [Motor vehicles are responsible for most of the pollutants that must be addressed by the City stormwater program.] Data used to measure traffic is available from the Institute of Transportation Engineers' Trip Generation manual, which assigns a number of daily trips generated by specific land use categories. In addition to this information, customer land use types and lot size would be required to accurately calculate rates. This fee approach would be best used to recover the costs of stormwater *quality* management within a stormwater program. The City of Surprise program is generally focused on stormwater quantity management.

The final rate structure option to consider is **geographic location**. Also referred to as area-specific rates, geographic location can be defined either as the basin or sub-basin that a parcel is in, or its proximity to receiving waters or flood plains. Both bases describe areas that may differ in required levels of service in terms of capital construction and ongoing maintenance costs. By separating these costs based on location served, charges can correspondingly be set in relation to level of service. Almost all activities performed by a stormwater program are applicable for location-specific user fees given the fact that service provided can be directly linked to location and therefore the amount paid. As examples, properties in flood plains could pay a proportionately higher share of flood control costs, developments on hillsides could pay for causing additional runoff impacting those downstream, and waterfront properties could bear more of the costs of water quality improvements. It is important to note that if specific locations are less-developed than others or simply require costly activities, the resulting user fee could be economically impractical to charge property-owners.

It is recommended that the City pursue a stormwater utility fee structure that is based on impervious surface area, with single family residential customers defined as one equivalent dwelling unit (EDU). An impervious-based rate structure defines a direct linkage between a parcel's contribution to runoff impacting the system infrastructure and the fee that parcel pays – a key distinction between rates and taxes. The fee basis creates a standard of charging that quantifies how different amounts of impervious surface area cause proportionately different impacts on the environment in terms of flooding, water quality, and habitat degradation. By recognizing that relationship, the fee structure basis proportionately charges different customers their share of the system's cost burden and provides an equitable, defensible means of cost recovery for a stormwater utility. It should be noted that both Oro Valley and Flagstaff utilize impervious surface area in their respective stormwater rate structures.

Recommendation: FCS GROUP recommends using impervious surface area to determine chargeable area and rates to be charged for services rendered.

C. RATE CREDITS AND EXEMPTIONS

When considering how to charge, or credit, different types of customers, it is important to remember that a stormwater rate is a fee for service, not a tax. As such, the level of a customer's charge must substantially relate to that customer's proportionate share of the utility's costs. In terms of equity and legal defensibility, it is important to recognize the significance of that type of relationship when defining exemption or credit policies because such policies could potentially move a utility away from the rational linkage between service delivered and the amount of the fee. The following types of rate credits are often considered and sometimes offered by stormwater utilities.

Senior and/or low-income discounts or exemptions are a common general policy, but equity considerations under an impervious surface area approach do not give cause for such adjustments. Developed properties owned by senior citizen and/or low income customers still contribute runoff that places a cost burden on the utility system. If the City wishes to pursue a social policy to grant credits or exemptions, a utility and its ratepayers should not bear the costs of that policy. To preserve the cost of service approach to rate design and avoid causing stormwater utility customers to subsidize a general City policy, the General Fund could possibly be used to fund the costs of senior and low income credits or exemptions.

Publicly-owned properties, similar to senior/low income credits, do not warrant rate relief. When a cost of service approach is used as the basis for fee evaluation, exemptions and credits should only be granted when the characteristics of a parcel or improvements to that property cause runoff to differ when compared to similar parcels. Some jurisdictions do not charge publicly-owned land because there is a general sense that charging simply transfers money from one City fund to another. Administratively, this may be a valid perception; however, by not charging public lands, the City may not accurately and equitably allocate what can be viewed as an overhead cost borne to support the departments that use stormwater services because of their land holdings. Effectively, utility ratepayers would bear the costs of stormwater management utilized by other user-supported services or the general public. The one common exception to this general approach has to do with charging city streets. City streets, while impervious and generating runoff, also serve as part of the stormwater conveyance system. Cities often choose to exempt their streets in recognition of this fact. This approach has been widely adopted and is supported by the regulatory definition of a Municipal Separate Storm Sewer System, which states:

a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.⁴

Further, it would be unfair for the General Fund, which is supported by all taxpayers, to also take on the cost of stormwater from individually owned pieces of property. This would result in a “double taxation” of many taxpayers.

Like public properties, **tax-exempt properties** are also subject to the general criterion for credit or exemption eligibility; that is, the specific parcel must have characteristics or improvements that cause runoff to differ from similar properties in order to be eligible for cost relief. There may be general City or social policies that aim to provide cost relief to these properties; as such, any credit granted should be funded from a source outside the utility. As an alternative, cost relief may be granted without General Fund subsidization in cases where the tax-exempt property, most often a school, provides an in-kind service such as topic-specific curriculum in lieu of paying a utility service charge.

⁴ 40 CFR 122.26(b)(8)

Undeveloped property areas by definition have no added impervious area. Therefore it would make sense to exclude them from stormwater rates, as they do not contribute to increased runoff. Charging undeveloped property would be inconsistent with an impervious surface area approach.

Comparatively, properties with **on-site mitigation** have a reduced effect on the public system than similar property lacking this mitigation. However, meeting (as opposed to exceeding) City development standards does not reduce costs for the utility; it simply keeps the utility whole. Granting a credit for such activities would actually reduce the amount of resources available for basic services to the remainder of the customer base. Exceeding standards – that is, providing capacity in addition to that needed by the developing (or developed) property to the benefit of the City system – in theory does reduce cost to the utility by, in effect, reducing the net utility service area. How much of a credit to grant can then be sized according to the extent to which on-site controls exceed City standards. Therefore, the two criteria to check for may be (1) effectiveness in reducing stormwater runoff and (2) whether these on-site systems are designed to handle a greater amount of stormwater than would be required as a condition of development approval. The additional capacity provided by the new development then may become the basis for the service charge credit amount.

Even though development in Surprise is required to retain all stormwater on-site, this policy would in practice grant credits only to customers who exceed that standard to the benefit of the public system. Because most utility costs are fixed, and do not necessarily vary with the volume of runoff, we propose that credits be subject to a maximum percentage of the rate – determined by an analysis of fixed or “base” costs versus variable or “use” costs as a fraction of total program cost.

In addition to rate structure exemptions and credits, FCS GROUP recommends providing an appeal process to provide for adjustments to the amount of chargeable area or fees charged.

Recommendation: FCS GROUP recommends providing exemptions for undeveloped properties and City streets, as well as providing a process for appeals that would allow for adjustments to fees charged, based on the amount of chargeable surface area and on-site mitigation.

D. FISCAL POLICIES

Fiscal policies for stormwater utilities are often similar to water and wastewater utilities, but with less need to be heedful of revenue shortfalls, since rates are not based on usage and therefore revenue is less volatile. Key financial policies and recommendations for minimum fund balance, system reinvestment, and debt service are described in this section.

Minimum Fund Balances – Operating reserves are designed to provide a liquidity cushion to ensure that adequate cash working capital will be maintained to deal with significant cash balance fluctuations such as unanticipated cash expenses, or lower than expected revenue collections. The City’s current policy (Comprehensive Financial Management Policy 43a) is to maintain a minimum balance in the Operations Fund equal to 2 months of operating expenses for the water, wastewater, and solid waste utilities. This target is somewhat conservative for a stormwater utility, given the lower variability in revenue collections for a rate structure based on impervious surface area, however we recommend extending it to stormwater in order to be consistent with the City’s existing utilities and to mitigate any risk inherent with a new fee.

A capital contingency reserve is an amount of cash set aside in case of an emergency should a piece of equipment or a portion of the utility’s infrastructure fail unexpectedly. The reserve also could be used for other unanticipated capital needs including capital project cost overruns. Industry practices range from maintaining a balance equal to 1 to 2% of fixed assets, an amount equal to a 5-year rolling average of CIP costs, or an amount determined sufficient to fund equipment failure (other than catastrophic failure). The final target level should balance industry standards with the risk level

of the City. The City currently has a policy for water, wastewater, and solid waste utilities to maintain a minimum balance in the Operations Fund - Capital Portion equal to 2% of all tangible capital assets (Comprehensive Financial Management Policy 43b).

System Reinvestment – The purpose of system reinvestment funding is to provide for the replacement of aging system facilities to ensure sustainability of the system for ongoing operation. Each year, the City’s assets lose value, and as they lose value they are moving toward eventual replacement. That accumulating loss in value and future liability is measured for reporting purposes through annual depreciation expense, which is based on the original cost of the asset. While this reported expense reflects the consumption of the existing asset and its original investment, the replacement of that asset will likely cost much more, factoring in inflation and construction conditions. Therefore, the added annual replacement liability is even greater than the annual depreciation expenses.

The City is forecast to begin funding system reinvestment for water at \$700,000 per year, wastewater at \$4.6 million per year, and sanitation at \$400,000 per year and continue to increase this towards, or even above, depreciation expenses. This same tactic would be recommended for stormwater as well.

Debt Management – It is prudent to consider policies related to debt management as part of broader utility financial policy structure. Debt management policies should be evaluated and formalized including the level of acceptable outstanding debt, debt repayment, bond coverage, and total debt coverage targets. The City’s existing bond covenants require a minimum 1.00 debt coverage test for the wastewater MPC 2007 bond; however the minimum required for revenue bonds is 1.25.

Recommendation: FCS GROUP recommends a minimum operating reserve of 60 days, a minimum capital reserve of 2% of fixed assets, system reinvestment equal to or above annual depreciation expenses, and remaining above a minimum 1.25 debt coverage test.

E. SUMMARY OF RECOMMENDATIONS

FCS GROUP recommends that the City implement a stormwater utility, relying primarily on a calculated stormwater utility fee for service as the mechanism for program cost recovery. FCS GROUP recommends that this stormwater utility use impervious surface area as the primary basis to determine chargeable area and rates to be charged for services rendered. A process for appeals should also be available that would allow for adjustments to the fees charged, including exemptions as warranted, based on the amount of chargeable surface area. Fiscal policies similar to other utilities are also recommended.

SECTION III: CUSTOMER COMPILATION

The recommended rate approach is based on the amount of actual or assumed impervious surface area on each parcel. The rate is then expressed as a dollar amount per EDU with one EDU equal to the average amount of impervious square feet on developed single family residential parcels. Under this approach, the rate calculation is thus: total annual program costs, or the revenue requirement, divided by the total number of EDUs in the customer base. The result may be divided again by twelve to convert it to a monthly charge.

$$\text{Yearly Rate} = \frac{\text{Annual Revenue Requirement}}{\text{Total Number of EDUs}}$$

The revenue requirement analysis is summarized in **Section IV**. In this section, we summarize the customer data compilation used in the rate calculation.

A. RESIDENTIAL EDU CALCULATION

The City's Geographic Information System (GIS) staff analyzed LiDAR data to measure impervious surface area on all single family residential parcels within the City. Based on these measurements, the average amount of impervious surface area on single family residences in Surprise equals 3,420 square feet, which is the resulting value of one equivalent dwelling unit, or EDU (please see Appendix A for the initial customer work plan methodology followed by the City).

With data from the City's utility customer accounts and GIS data, we calculated the number of SFR EDUs in the City. There were a total of 43,700 SFR utility accounts which equates to 43,700 EDUs. The City also decided to include RV parks in the residential EDU calculation. The City decided that RV parks should be charged on a per dwelling unit basis. After surveying all RV parks, it was determined that there are 3,267 RV park EDUs, totaling 46,967 residential EDUs. The City also determined that improved residential lots would be treated as single family residential units.

B. NON-RESIDENTIAL EDU CALCULATION

Non-residential EDUs are calculated based on actual impervious surface area of properties, with one EDU equal to 3,420 square feet of impervious surface area. There are two categories of non-residential customers: commercial and agricultural. Based on City-provided data, 1,869 commercial accounts had 135,587,096 square feet of impervious surface area, resulting in 39,645 EDUs.

The other customer class, agricultural, is calculated based on a combination of impervious and pervious surface area. Agricultural EDUs are calculated based on total impervious surface area plus 10 percent of the pervious surface area on the property. This reflects the fact that agricultural properties contribute more to stormwater infrastructure than just their impervious surface area. Agricultural accounts have approximately 139,500 square feet of total surface area. Assuming five percent impervious surface area for all agricultural land and then including 10 percent of the remaining pervious surface area in the EDU calculation, there are 5,914 agricultural EDUs.

C. TOTAL EDU CALCULATION

Based on the calculations for residential (SFR and RV parks) and non-residential (commercial and agricultural) accounts, **Exhibit 3.1** shows the total number of accounts and EDUs in the City.

Exhibit 3.1: EDU Summary by Customer Type					
Customer Type	Accounts	Gross Parcel Area	Impervious Surface Area	Chargeable Pervious Area	EDUs
Residential					
Single Family	43,700				43,700
RV Park	3,267				3,267
Total Residential	46,967				46,967
Non-Residential					
Commercial	1,869	135,587,096	135,587,096	0	39,645
Agricultural	10	139,479,120	6,973,956	132,505,164	5,914
Total Non-Residential	1,879	275,066,216	142,561,052	132,505,164	45,559
Total	48,846				92,526

Source: City staff, compiled by FCS Group.

Notes: Square feet of impervious surface area for 1 EDU is determined by average Single Family Residence.

*1 EDU = 3,420 sq. ft. of impervious area

*Each Single Family Residence is 1 EDU

*Commercial customers are charged based on sq. ft. of impervious surface area

*Agricultural customers are charged based on impervious surface area plus 10 percent of chargeable pervious area

*1 RV dwelling unit is considered 1 EDU

The City has initiated the measurement of impervious surface area for its nonresidential customers, and expects to complete that effort prior to initial billing. It is recommend that the City provide for rate adjustments when customers can demonstrate that their actual impervious area is different than that which is utilized for billing purposes.



SECTION IV: REVENUE REQUIREMENT

The recommended rate approach is based on the amount of actual or assumed impervious surface area on the parcel. The rate is then expressed as a dollar amount per EDU with one EDU equal to 3,420 impervious square feet on a property. Under this approach, the rate calculation is thus: total annual program costs, or the revenue requirement, divided by the total number of EDUs in the customer base. The result may be divided again by twelve to convert it to a monthly charge.

$$\text{Yearly Rate} = \frac{\text{Annual Revenue Requirement}}{\text{Total Number of EDUs}}$$

A. CUSTOMER DATA

As calculated in **Section III**, the City's current customer base for stormwater is 92,526 EDUs. In general, this is the denominator in the equation above for the first year of analysis. We project the customer base to grow by 0.29 percent per year thereafter based on projected increases in wastewater customer growth.

B. ASSUMPTIONS

The assumptions regarding cost escalation, fiscal policies, and capital financing are summarized below. These factors influence the revenue requirement in future years. Note that many of these assumptions are applied by the City to water, wastewater, and sanitation utilities based on historical growth averages.

◆ **Annual Cost Escalation.**

- General Cost Escalation: 3.00 percent. This escalator applies to materials and services expenditures.
- Capital Cost Escalation: 3.16 percent. This escalator applies to capital improvement expenditures.
- Labor Cost Escalation: 3.00 percent. This escalator applies to salary and wage expenditures.
- Benefit Cost Escalation: 3.00 percent. This escalator applies to employee benefit expenditures.

◆ **Fiscal Policies.**

- Maintain a minimum operating fund balance of 60 days of operating expenditures per the City's current financial policy (Comprehensive Financial Management Policy 43a).
- Maintain a capital contingency reserve of 2.00 percent of fixed assets per the City's current financial policy (Comprehensive Financial Management Policy 43b).
- The fund interest rate is expected to be 0.50 percent in the first year and escalate to 1.00 percent in fiscal year (FY) 2017-18 of the analysis period.

◆ **Capital Financing Policies.**

- The City has chosen to fund all capital construction with rates.

C. PROGRAM COSTS AND REVENUE REQUIREMENTS

The costs of the stormwater utility consist of five categories of operations and maintenance (O&M): streets right-of-way (ROW), street sweeping, wastewater collections, general stormwater operations, and future operational needs. Future operational needs are expected to begin in FY 2016-17. A summary of these expenditures for FY 2016-17 through 2021-22, including capital expenditures, is below in **Exhibit 4.1**. The street, wastewater, and general operations expenditures will increase per escalation rates in **Section IV.B**. These expenditures were in other funds but will be at least partially under the purview of the stormwater utility in the future. Future operational needs were projected by City staff. FY 2018-19 expenditures include the addition of two FTEs.

Exhibit 4.1: Program Requirement Summary

Fiscal Year Ending 6/30:	2017	2018	2019	2020	2021	2022
Streets ROW	\$120,268	\$123,876	\$127,592	\$131,420	\$135,363	\$139,424
Streets Street Sweeping	362,874	373,760	384,973	396,522	408,418	420,671
Wastewater Collections	112,682	116,062	119,544	123,131	126,825	130,629
General Operations	22,660	23,340	24,040	24,761	25,504	26,269
Future Operational Needs	335,227	337,100	513,908	532,802	546,617	560,848
Rate Funded Capital	0	650,000	775,000	1,000,000	1,250,000	1,500,000
Total Requirement	\$953,711	\$1,624,138	\$1,945,058	\$2,208,636	\$2,492,727	\$2,777,840

Source: Compiled by FCS GROUP. See Appendices B and C for complete information.

D. RATES

Because the utility will be an enterprise fund, it must be self-sustaining. Also, the utility also has no identified non-rate revenues, meaning the utility must finance all of its operating expenditures through rates.

In fiscal year 2016-17, the program will have \$953,711 in total expenses. Per conversations with City staff, the initial stormwater rate is calculated so as not to require a rate increase in the first few fiscal years. The resulting initial rate is \$2.00 per month per EDU. In the following year, the City begins constructing capital projects, increasing the revenue requirement by \$650,000 in the first year.

Starting from this initial financial position, there are two options for the stormwater utility rates in the future: raise rates when necessary in order to satisfy all financial requirements, or smooth rate increases across several years. We examine each scenario below.

D.1 Scenario I – Required Rate Increases

The first scenario assumes that the utility will increase the rates in accordance with its financial requirements. Specifically, the utility will increase rates to cover costs projected in the coming year.

For the first two years after rate implementation, the rate per EDU will not increase. Then, the rate will increase annually to ensure adequate funding of the utility. After five years of rates, in fiscal year 2021-22, the rate will be \$2.68 per EDU. An executive level summary of capital expenditures, funding, revenues, operations and maintenance expenses, rate levels, and fund balances is displayed in **Exhibit 4.2**. See **Appendix B** for a complete analysis.

Exhibit 4.2: Scenario I Summary – Required Increases

Revenue Requirement	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Revenues						
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632
Non-Rate Revenues	0	1,568	1,601	1,923	1,987	2,043
Total Revenues	\$ 2,053,731	\$ 2,061,279	\$ 2,067,293	\$ 2,073,595	\$ 2,079,639	\$ 2,085,675
Expenses						
Cash Operating Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840
Existing Debt Service	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000
Additions Required to Meet Operating Fund Balance	156,774	3,358	32,206	6,342	5,604	5,772
Total Expenses	\$ 1,110,485	\$ 1,627,496	\$ 1,977,264	\$ 2,214,978	\$ 2,498,331	\$ 2,783,612
Net Surplus (Deficiency)	\$ 943,246	\$ 433,783	\$ 90,028	\$ (141,383)	\$ (418,692)	\$ (697,937)
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ 943,246	\$ 433,783	\$ 90,028	\$ (141,383)	\$ (418,692)	\$ (697,937)
% of Rate Revenue	0.00%	0.00%	0.00%	6.82%	20.15%	33.50%
Annual Rate Adjustment	0.00%	0.00%	0.00%	6.82%	12.48%	11.11%
Cumulative Annual Rate Adjustment	0.00%	0.00%	0.00%	6.82%	20.15%	33.50%
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,213,054	\$ 2,496,344	\$ 2,781,569
Additional Taxes from Rate Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Cash Flow After Rate Increase	1,100,020	437,141	122,234	6,342	5,604	5,772
Coverage After Rate Increases	n/a	n/a	n/a	n/a	n/a	n/a
Sample Residential Monthly Bill	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.14	\$ 2.41	\$ 2.68
Monthly Average Increase (\$)	\$ 2.00	\$ -	\$ -	\$ 0.14	\$ 0.27	\$ 0.27

Fund Balance	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
SEWER OPERATIONS FUND						
Beginning Balance	\$ 0	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284
plus: Net Cash Flow after Rate Increase	1,100,020	437,141	122,234	6,342	5,604	5,772
less: Transfer of Surplus to Capital Fund	(943,246)	(433,783)	(90,028)	-	(0)	(0)
Ending Balance	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284	\$ 210,056
Target Balance	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284	\$ 210,056
Days	60	60	60	60	60	60
OPERATIONS FUND - CAPITAL PORTION						
Beginning Balance	\$ -	\$ 943,246	\$ 1,397,899	\$ 1,508,349	\$ 1,549,334	\$ 1,792,386
plus: Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000
plus: Transfers from Operating Fund	943,246	433,783	90,028	-	0	0
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-
plus: Transfers from SPA Funds for Deficit Repayment	-	-	-	-	-	-
plus: Net Debt Proceeds Available for Projects	-	-	-	-	-	-
plus: Interest Earnings	-	9,432	13,979	15,083	15,493	17,924
Total Funding Sources	\$ 943,246	\$ 2,036,461	\$ 2,276,906	\$ 2,523,432	\$ 2,814,828	\$ 3,310,310
less: Capital Expenditures	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)
less: Transfers to SPA Funds	-	-	-	-	-	-
Ending Working Capital Balance	\$ 943,246	\$ 1,397,899	\$ 1,508,349	\$ 1,549,334	\$ 1,792,386	\$ 1,713,062
Minimum Target Balance	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018
COMBINED BEGINNING BALANCE	\$ 0	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,748,014	\$ 1,996,670
COMBINED ENDING BALANCE	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,748,014	\$ 1,996,670	\$ 1,923,118

D.2 Scenario II – Smoothed Rate Increases

This scenario smooths rate increases, requiring fewer rate increases and lower rate reactivity. This also means that rates will increase sooner under this scenario. Under this scenario, the rate will not increase for four years after implementation, after which it will increase by \$0.75. After five years of

rates, in fiscal year 2021-22, the rate will be \$2.75 per EDU. An executive level summary of capital expenditures, funding, revenues, operations and maintenance expenses, rate levels, and fund balances is displayed in **Exhibit 4.3**. See **Appendix C** for a complete analysis.

Exhibit 4.3: Scenario II Summary – Smoothed Increases

Revenue Requirement	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Revenues						
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632
Non-Rate Revenues	0	1,568	1,601	1,923	573	2,043
Total Revenues	\$ 2,053,731	\$ 2,061,279	\$ 2,067,293	\$ 2,073,595	\$ 2,078,225	\$ 2,085,675
Expenses						
Cash Operating Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840
Existing Debt Service	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000
Additions Required to Meet Operating Fund Balance	-	-	-	-	-	5,772
Total Expenses	\$ 953,711	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,783,612
Net Surplus (Deficiency)	\$ 1,100,020	\$ 437,141	\$ 122,234	\$ (135,041)	\$ (414,502)	\$ (697,937)
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ 1,100,020	\$ 437,141	\$ 122,234	\$ (135,041)	\$ (414,502)	\$ (697,937)
% of Rate Revenue	0.00%	0.00%	0.00%	6.52%	19.95%	33.50%
Annual Rate Adjustment	0.00%	0.00%	0.00%	0.00%	37.50%	0.00%
Cumulative Annual Rate Adjustment	0.00%	0.00%	0.00%	0.00%	37.50%	37.50%
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,856,771	\$ 2,864,994
Additional Taxes from Rate Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Cash Flow After Rate Increase	1,100,020	437,141	122,234	(135,041)	364,617	89,197
Coverage After Rate Increases	n/a	n/a	n/a	n/a	n/a	n/a
Sample Residential Monthly Bill	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.75	\$ 2.75
Monthly Average Increase (\$)	\$ 2.00	\$ -	\$ -	\$ -	\$ 0.75	\$ -

Fund Balance	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
SEWER OPERATIONS FUNI						
Beginning Balance	\$ 0	\$ 156,774	\$ 160,132	\$ 192,338	\$ 57,297	\$ 204,284
plus: Net Cash Flow after Rate Increase	1,100,020	437,141	122,234	(135,041)	364,617	89,197
less: Transfer of Surplus to Capital Fund	(943,246)	(433,783)	(90,028)	-	(217,631)	(83,425)
Ending Balance	\$ 156,774	\$ 160,132	\$ 192,338	\$ 57,297	\$ 204,284	\$ 210,056
Target Balance	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284	\$ 210,056
Days	60	60	60	17	60	60
OPERATIONS FUND - CAPITAL PORTION						
Beginning Balance	\$ -	\$ 943,246	\$ 1,397,899	\$ 1,508,349	\$ 1,549,334	\$ 2,010,017
plus: Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000
plus: Transfers from Operating Fund	943,246	433,783	90,028	-	217,631	83,425
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-
plus: Transfers from SPA Funds for Deficit Repayment	-	-	-	-	-	-
plus: Net Debt Proceeds Available for Projects	-	-	-	-	-	-
plus: Interest Earnings	-	9,432	13,979	15,083	15,493	20,100
Total Funding Source	\$ 943,246	\$ 2,036,461	\$ 2,276,906	\$ 2,523,432	\$ 3,032,458	\$ 3,613,542
less: Capital Expenditures	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)
less: Transfers to SPA Funds	-	-	-	-	-	-
Ending Working Capital Balance	\$ 943,246	\$ 1,397,899	\$ 1,508,349	\$ 1,549,334	\$ 2,010,017	\$ 2,016,294
Minimum Target Balance	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018
COMBINED BEGINNING BALANCE	\$ 0	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,606,632	\$ 2,214,301
COMBINED ENDING BALANCE	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,606,632	\$ 2,214,301	\$ 2,226,350

E. RATE CREDITS

As a general consideration, it is important to recognize that onsite mitigation might or might not reduce the utility's cost of providing service. Since onsite mitigation only partially neutralizes the impact of developing the property, the cost of meeting City standards and constructing onsite mitigation for property owners could arguably be considered a cost of doing business. However,

using credits as a means of incentivizing the construction of onsite facilities with extra capacity can reduce the utility’s costs. The amount of credit for such oversizing, if consistent with the City’s goals, could be determined by the extent to which the onsite facility exceeds minimum requirements.

As stated previously, we recommend the City implement a rate credit structure to reflect the actual benefit from cost reductions received from onsite storm drainage systems. The City should not offer credits for those program costs that are unaffected by customers’ onsite mitigation measures, or “base” costs. These are costs the utility would incur regardless of the mitigation factors implemented on properties. However, the City can justify offering credits to the extent that customers’ onsite mitigation measures result in cost savings or other quantifiable benefits for the utility, or “use” costs.

After calculating the total revenue requirement for the utility (see **Appendices B and C**), we determined the maximum rate credit using the following approach. With the input of City staff, each category of stormwater program costs (FY 2018-19) was allocated between base and use. Results are shown below:

- ◆ Streets Right-of-Way – \$127,592 – 100% base
- ◆ Street Sweeping – \$384,973 – 100% base
- ◆ Sewer Collections / Stormwater – \$119,544 – 100% base
- ◆ General Operations – \$24,040 – 100% base
- ◆ Future Operational Needs – \$513,908 – 50% base, 50% use
- ◆ Rate Funded Capital – \$775,000 – 50% base, 50% use

These allocations of the FY 2019 budget, totaling \$1,945,058, resulted in \$1,300,604 of expenses being classified as base costs and \$644,454 classified as use costs, or 67% and 33% respectively.

The maximum rate credit was determined by dividing each component cost by the expected number of EDUs to be charged. It was assumed that up to 40% of nonresidential EDUs would be lost to credits, or refinements to their chargeable area based on updated measurements, shown in **Exhibit 4.4**.

Exhibit 4.4: Chargeable EDU Calculation			
	Residential	Non-Residential	Total
Accounts (FY 2019)	47,241	1,889	49,130
EDUs (FY 2019)	47,241	45,824	93,065
EDUs Lost to Credits / Adjustments	0	-18,489	-18,489
Chargeable EDUs	47,241	27,335	74,735

Source: Compiled by FCS GROUP.

Note: Assumed 40% of Non-Residential EDUs lost to credits

The calculation of the maximum credit amount, 38% of the rate, is summarized in **Exhibit 4.5** below.

Exhibit 4.5: Calculation of Maximum Credit chargeable EDU Calculation			
	Base	Use	Total
Revenue Requirement	\$1,300,604	\$644,454	\$1,945,058
÷ Chargeable EDUs	93,065	74,735	
Annual Rate Component	\$13.98	\$8.62	\$22.60
Percentage Maximum Credit		38%	

Note: % Maximum Credit = Use Rate Component ÷ Total Rate

It is proposed that the following refined credit policy be offered, applicable only to non-residential customers.

- ◆ 25 percent credit for qualifying on-site mitigation above City standards.
- ◆ 13 percent credit for approved participation in City-sponsored education.

F. RATE SUMMARY

A summary of the rates for both scenarios, required and smoothed, is shown in **Exhibit 4.6**. Scenario II rates are higher in most years, but require fewer increases. Scenario I generally has lower rates, but requires annual rate increases to react to financial requirements. Either will achieve the City’s desired targets for program cost recovery.

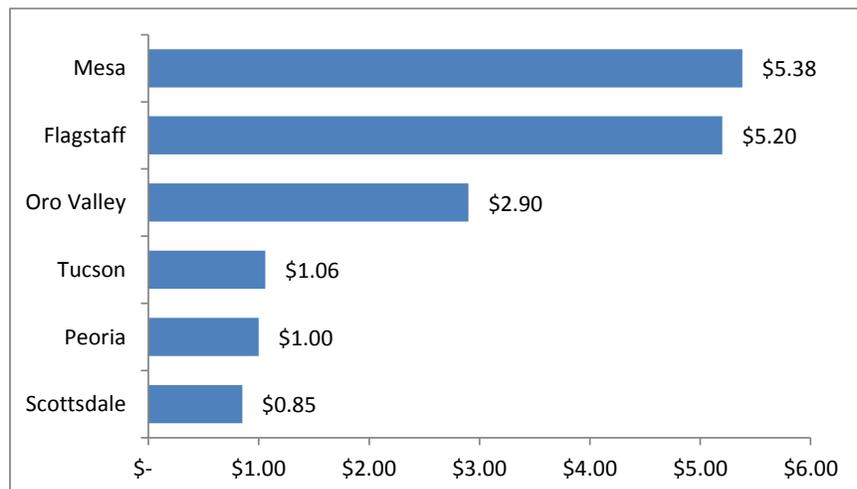
Exhibit 4.6: Rate Comparison											
Fiscal Year Ending 6/30:	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
I - Required Increases	\$2.00	\$2.00	\$2.00	\$2.14	\$2.41	\$2.68	\$2.71	\$2.74	\$2.77	\$2.81	\$2.88
II - Smoothed Increases	\$2.00	\$2.00	\$2.00	\$2.00	\$2.75	\$2.75	\$2.75	\$2.75	\$2.85	\$2.85	\$2.85

Source: FCS GROUP.

G. RATE COMPARISONS

There are currently six Arizona cities that we know of that charge rates for stormwater. Three of these charge stormwater rates per account (Mesa, Scottsdale, and Peoria), two charge per impervious surface area (Oro Valley and Flagstaff), and one charges based on water meter size (Tucson). Rate comparisons for single-family customers in each of these cities are summarized in **Exhibit 4.7**. Although not technically a stormwater rate, Phoenix has an excise tax of \$0.70 per month for all single-family residential accounts that is earmarked for stormwater.

Exhibit 4.7: Rate Comparisons



APPENDIX A: CUSTOMER DATA WORK PLAN

CITY OF SURPRISE, AZ

STORMWATER UTILITY FORMATION

CUSTOMER DATA COMPILATION

The following preliminary work plan may be used to compile the customer data needed to support the stormwater rate calculation and, ultimately, its billing.

Proposed Approach

1. Decide upon a primary key providing the best linkage between existing utility billing records and the GIS database. What single identifier, unique to each customer, is in both datasets (i.e., property address, tax identification number)? These data points should be unique to each customer.
2. Segregate single-family residential (SFR) and non-SFR (all other) accounts in the selected billing list.

Equivalent Service Unit Calculation

A sampling analysis is necessary to determine the average amount of impervious surface area on the City's single-family residential parcels, unless the City determines to use a standard estimate. This analysis will yield the value of an equivalent service unit (ESU), which will become the base unit for the City's stormwater utility fee.

1. Number single-family residential accounts sequentially in an unused field, starting with the number 1. For example, assuming there are 6,000 single family parcels, number these parcels 1 through 6,000 in their existing order, regardless of any other recorded numbering system, e.g., assessor parcels number or location identification number. These numbered parcels will make up the population from which the sample will be taken.
2. Using random numbers provided by FCS GROUP to identify parcels to be sampled, extract the following information from each sampled parcel and record it on the worksheet provided:
 - Sample number
 - Property address
 - Other common identifier (if applicable)
 - Number of dwelling units (if applicable – should be one per parcel)
 - Utility billing account number
3. Continue sampling and recording data until a sample of no fewer than 152 parcels has been compiled. Note: Appendix A details the methodology used to determine the recommended sample size.
4. Using the common parcel identifier and corresponding maps, example shown in Section 3, page 11, identify each sampled parcel on the system.
5. Measure impervious surface area on each of the sampled parcels. Record measured impervious surface area on worksheet. Note any anomalies or irregularities on the worksheet, identifying the parcel(s) concerned by the sample number or common identifier.
6. Deliver completed worksheets to FCS GROUP for statistical analysis.

Non-Residential ESUs

1. Using the common parcel identifier and corresponding maps, example shown in Section 3, page 11, identify each non-single family residential parcel on the system.
2. Measure impervious surface area on each non-single family residential parcel. Record measured impervious area on worksheet. Note any anomalies or irregularities on the worksheet, identifying the parcel(s) concerned by the common identifier.
3. Deliver completed worksheets to FCS GROUP for analysis.

Billing stormwater charges in the City of Surprise will present some unique billing issues. Most customers will likely receive an additional line item on their monthly utility statement to account for a new stormwater bill. There are two unique billing issues created in billing a monthly stormwater bill – single “master” accounts and “stormwater only” accounts.

It may be necessary to create a single “master” account to which multiple meters have been consolidated. This may become necessary when there is no easily known way for the utility to allocate impervious surface area among the various tenants. For example, without detailed lease agreements, it is impossible for the City to allocate parking spaces to individual tenants in a strip mall. It will therefore be necessary to charge a single master account for the entire parcel.

“Stormwater Only” accounts will be limited to new accounts created specifically for the stormwater utility. This will be necessary for properties where no utility service is currently being provided. For example, in most cases a parking lot will not receive other utility services. It will therefore be necessary to create a stormwater only account.

APPENDIX A

SAMPLE SIZE DETERMINATION

Recommended sample sizes were determined in the following manner.

For residential parcels, the sampling program is intended to verify the average amount of impervious area per dwelling unit in order to determine the value of an equivalent dwelling unit. In order to state with confidence that the sample is representative of the entire customer class, the sample size is determined by using a standard estimating technique. This technique is based on: (1) the maximum probable error B we are willing to tolerate, (2) the expected range of responses to the sample, and (3) a desired level of confidence.

A sampling error B of 100 square feet was chosen for all residential customer classes because this value yields a manageable sample size, while still providing a reasonably accurate point estimate for the mean.

Assuming we wish to be 90% confident that the sample mean represents the population mean + 100 square feet, the following formula may be used to determine sample size.

$$n = \frac{2.71(s)^2}{B^2}; \text{ where } B = 100, \text{ and } s = \frac{(\text{expected high} - \text{expected low})}{4}$$

If we assume that responses for single-family residences will range between 5,000 and 2,000 square feet of impervious area per unit, this formula yields a sample size of 152 developed single-family parcels.

APPENDIX B: REVENUE REQUIREMENT – SCENARIO I



City of Surprise

Stormwater Utility Rate Study

Summary

Revenue Requirement	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Revenues											
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues	0	2,744	2,802	3,366	3,366	3,366	3,366	3,366	3,366	3,366	3,366
Total Revenues	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,081,018	\$ 2,086,998	\$ 2,092,978	\$ 2,098,958	\$ 2,104,938	\$ 2,110,918	\$ 2,116,899
Expenses											
Cash Operating Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating Fund Balance	156,774	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 1,110,485	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
Net Surplus (Deficiency)	\$ 943,246	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (411,709)	\$ (690,842)	\$ (727,709)	\$ (758,981)	\$ (791,370)	\$ (832,230)	\$ (866,956)
Additions to Meet Coverage	-	-	-	-	-	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ 943,246	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (411,709)	\$ (690,842)	\$ (727,709)	\$ (758,981)	\$ (791,370)	\$ (832,230)	\$ (866,956)
% of Rate Revenue	0.00%	0.00%	0.00%	6.45%	19.82%	33.16%	34.83%	36.22%	37.66%	39.49%	41.02%
Annual Rate Adjustment	0.00%	0.00%	0.00%	6.45%	12.56%	11.13%	1.25%	1.03%	1.06%	1.33%	2.44%
Cumulative Annual Rate Adjustment	0.00%	0.00%	0.00%	6.45%	19.82%	33.16%	34.83%	36.22%	37.66%	39.49%	42.90%
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,205,270	\$ 2,489,361	\$ 2,774,474	\$ 2,817,321	\$ 2,854,573	\$ 2,892,942	\$ 2,939,783	\$ 2,980,489
Additional Taxes from Rate Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Cash Flow After Rate Increase	1,100,020	438,317	123,435	-	0	0	-	0	-	-	-
Coverage After Rate Increases	n/a										
Sample Residential Monthly Bill	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.13	\$ 2.40	\$ 2.67	\$ 2.70	\$ 2.73	\$ 2.76	\$ 2.80	\$ 2.87
Monthly Average Increase (\$)	\$ 2.00	\$ -	\$ -	\$ 0.13	\$ 0.27	\$ 0.27	\$ 0.03	\$ 0.03	\$ 0.03	\$ 0.04	\$ 0.07



City of Surprise

Stormwater Utility Rate Study

Summary

Fund Balance	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
SEWER OPERATIONS FUND											
Beginning Balance	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592
plus: Net Cash Flow after Rate Increase	1,100,020	438,317	123,435	-	0	0	-	0	-	-	-
less: Transfer of Surplus to Capital Fund	(825,665)	(432,440)	(67,075)	-	-	-	-	-	-	-	-
Ending Balance	\$ 274,355	\$ 280,232	\$ 336,592								
Target Balance	\$ 274,355	\$ 280,232	\$ 336,592	\$ 347,690	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Days	105	105	105	102	99	96	93	91	88	85	83
OPERATIONS FUND - CAPITAL PORTION											
Beginning Balance	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,645,233	\$ 1,564,437	\$ 1,681,026	\$ 1,658,300	\$ 1,487,379	\$ 1,807,525
plus: Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
plus: Transfers from Operating Fund	825,665	432,440	67,075	-	-	-	-	-	-	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-	-	-	-	-
plus: Transfers from SPA Funds for Deficit Repayment	-	-	-	-	-	-	-	-	-	-	-
plus: Net Debt Proceeds Available for Projects	-	-	-	-	-	-	-	-	-	-	-
plus: Interest Earnings	-	8,257	12,778	13,641	14,036	16,452	15,644	16,810	16,583	14,874	18,075
Total Funding Sources	\$ 825,665	\$ 1,916,362	\$ 2,132,653	\$ 2,377,736	\$ 2,667,674	\$ 3,161,685	\$ 3,080,082	\$ 3,197,836	\$ 3,174,883	\$ 3,002,253	\$ 3,325,601
less: Capital Expenditures	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)	(1,399,056)	(1,539,536)	(1,687,504)	(1,194,727)	(1,232,523)
less: Transfers to SPA Funds	-	-	-	-	-	-	-	-	-	-	-
Ending Working Capital Balance	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,645,233	\$ 1,564,437	\$ 1,681,026	\$ 1,658,300	\$ 1,487,379	\$ 1,807,525	\$ 2,093,078
Minimum Target Balance	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018	\$ 327,999	\$ 358,790	\$ 392,540	\$ 416,435	\$ 441,085
COMBINED BEGINNING BALANCE	\$ 0	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,740,230	\$ 1,981,825	\$ 1,901,029	\$ 2,017,618	\$ 1,994,892	\$ 1,823,971	\$ 2,144,118
COMBINED ENDING BALANCE	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,740,230	\$ 1,981,825	\$ 1,901,029	\$ 2,017,618	\$ 1,994,892	\$ 1,823,971	\$ 2,144,118	\$ 2,429,670



City of Surprise

Stormwater Utility Rate Study

Assumptions

July 2015 - June 2016

Economic & Financial Factors	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
1 General Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2 Construction Cost Inflation	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%
3 Labor Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
4 Benefit Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
5 Customer Growth	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.28%	0.28%
6 General Inflation plus Growth	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.29%	3.29%	3.29%	3.29%
7 No Escalation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8 PILOT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9 Franchise Fee	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10 Fuel Cost Escalation	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
11 [Extra]	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Fund Earnings	0.50%	0.75%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

Accounting Assumptions	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
FISCAL POLICY RESTRICTIONS												
Min. Op. Fund Balance (days of O&M expense)	60	60	60	60	60	60	60	60	60	60	60	60
Max. Op. Fund Balance (days of O&M expense)	105	105	105	105	105	105	105	105	105	105	105	105
Minimum Capital Fund Balance Target												
Select Minimum Capital Fund Balance Target	1		Defined as % of Plant									
1 - Defined as % of Plant												
Plant-in-Service in 2015	\$ 10,000,000											
Minimum Capital Fund Balance - % of plant assets	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2 - Amount at Right ==>												
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RATE FUNDED SYSTEM REINVESTMENT												
Select Reinvestment Funding Strategy	3		User Input									
Amount of Annual Cash Funding from Rates												
1 - Equal to Annual Depreciation Expense	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
2 - Equal to Depreciation less Annual Debt Principal Payments	-	-	12,771	28,142	47,624	68,073	100,018	127,999	158,790	192,540	216,435	216,435
3 - Equal to Amount at Right ==>	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
4 - Do Not Fund Depreciation												

Capital Financing Assumptions	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
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City of Surprise

Stormwater Utility Rate Study

Assumptions

July 2015 - June 2016

FUNDING SOURCES																						
Grants	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Additional Proceeds (Costs)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Additional Proceeds	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
REVENUE BONDS																						
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Issuance Cost	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Revenue Bond Coverage Requirement	1.25																					
OTHER LOANS																						
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
OTHER LOW COST LOANS																						
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Issuance Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Other Assumptions	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	
Customer Growth																
Projected New Equivalent Dwelling Units (EDUs)	100.00% of Original Growth Projections							Based on previous 5 year average growth projections								
SPA 1	-	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
SPA 2	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
SPA 3	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total New EDUs	-	271	271	271	271	271	271	271	271							
Cumulative EDUs	92,526	92,526	92,797	93,068	93,339	93,610	93,881	94,152	94,423	94,694	94,965	95,236	95,507	95,778		
EDU Growth Rate		0.00%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.28%	0.28%	
PILOT Tax Components																
Capital Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ARS Assessed Valuation Annual Year Percentage	19.50%	19.00%	18.50%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	
ARS Assessed Valuation Fiscal Year Percentage	19.75%	19.25%	18.75%	18.25%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	
Primary Property Tax Rate	0.7383%	0.7783%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	
Payment in Lieu of Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

		FORECAST BASIS	Actual	Budget	Projection										
			FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Revenues															
Rate Revenues															
			\$ -	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
	5	Customer Growth													
	7	No Escalation													
		Total Rate Revenue	\$ -	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues															
31813	7	Interest Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31543	7	Federal Grant Revenue - SPA 1	-	-	-	-	-	-	-	-	-	-	-	-	-
31432	7	Line Extension Fees	-	-	-	-	-	-	-	-	-	-	-	-	-
31461	7	Revenue Recovery-Utility Bill	-	-	-	-	-	-	-	-	-	-	-	-	-
31816	7	Unrealized Gain/Loss	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	[Extra]	-	600,470	-	-	-	-	-	-	-	-	-	-	-
		Total Non-Rate Revenues	\$ -	\$ 600,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL REVENUES			\$ -	\$ 600,470	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533

		FORECAST BASIS	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Expenses															
544 Stormwater Streets Fund															
516 ROW															
Personnel/Salaries															
36111	3	Full Time Salaries	24,479	28,640	29,499	30,384	31,296	32,235	33,202	34,198	35,224	36,280	37,369	38,490	39,644
36113	3	Overtime Compensation	368	700	721	743	765	788	811	836	861	887	913	941	969
36115	4	Holidays	1,338	-	-	-	-	-	-	-	-	-	-	-	-
36116	4	Paid Time Off	2,730	-	-	-	-	-	-	-	-	-	-	-	-
36151	4	Stipend	46	50	52	53	55	56	58	60	61	63	65	67	69
36211	4	FICA	2,081	2,250	2,318	2,387	2,459	2,532	2,608	2,687	2,767	2,850	2,936	3,024	3,115
36231	4	Medical	6,743	7,030	7,241	7,458	7,682	7,912	8,150	8,394	8,646	8,905	9,173	9,448	9,731
36232	4	Dental	330	330	340	350	361	371	383	394	406	418	431	443	457
36233	4	Vision	54	50	52	53	55	56	58	60	61	63	65	67	69
36234	4	Life	122	130	134	138	142	146	151	155	160	165	170	175	180
36252	4	AZ State Retirement	3,342	3,410	3,512	3,618	3,726	3,838	3,953	4,072	4,194	4,320	4,449	4,583	4,720
36278	4	Workers Compensation	1,790	1,730	1,782	1,835	1,890	1,947	2,006	2,066	2,128	2,192	2,257	2,325	2,395
Commodities/Supplies															
37111	1	Office Supplies	6	20	21	21	22	23	23	24	25	25	26	27	28
37131	1	Clothing & Uniforms	74	80	82	85	87	90	93	96	98	101	104	108	111
37142	1	Phone Supplies	89	-	-	-	-	-	-	-	-	-	-	-	-
37161	1	Operational Supplies	714	350	361	371	382	394	406	418	430	443	457	470	484
37165	1	Mach. & Equipment <\$10,000	1,155	1,550	1,597	1,644	1,694	1,745	1,797	1,851	1,906	1,963	2,022	2,083	2,146
37193	1	Safety & First Aid Supplies	371	500	515	530	546	563	580	597	615	633	652	672	692
37211	1	Gas & Fuel	5,193	5,200	5,356	5,517	5,682	5,853	6,028	6,209	6,395	6,587	6,785	6,988	7,198
37212	1	Auto Parts & Lubricants	1,673	5,160	5,315	5,474	5,638	5,808	5,982	6,161	6,346	6,537	6,733	6,935	7,143
37223	1	Agricultural/Grounds Supplies	1,434	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384
37233	1	Street Repair Supplies	199	-	-	-	-	-	-	-	-	-	-	-	-
Contractual Services															
38162	1	Landscape Services	29,078	36,695	37,796	38,930	40,098	41,301	42,540	43,816	45,130	46,484	47,879	49,315	50,794
38199	1	Other Prof/Tech Services	127	500	515	530	546	563	580	597	615	633	652	672	692
38211	1	Water	9,699	9,920	10,218	10,524	10,840	11,165	11,500	11,845	12,200	12,566	12,943	13,332	13,732
38212	1	Electricity	700	720	742	764	787	810	835	860	886	912	939	968	997
38216	1	Sanitary/Landfill	676	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016	2,076
38221	1	Cell Phone/Pagers	252	-	-	-	-	-	-	-	-	-	-	-	-
38324	1	Machinery & Equip. Maint.	337	-	-	-	-	-	-	-	-	-	-	-	-
38331	1	Vehicle Maintenance	3,334	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461
38372	1	Pest Control Services	124	120	124	127	131	135	139	143	148	152	157	161	166
38381	1	Grounds Maintenance	6,984	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063	8,305
38591	1	Other Rental/Leases	290	300	309	318	328	338	348	358	369	380	391	403	415
38922	1	Travel & Training	41	130	134	138	142	146	151	155	160	165	170	175	180
38924	1	Dues & Memberships	90	-	-	-	-	-	-	-	-	-	-	-	-
38927	1	EE Certification & Licensing	138	-	-	-	-	-	-	-	-	-	-	-	-
38991	1	Uniform/Laundry Services	113	200	206	212	219	225	232	239	246	253	261	269	277
517 Street Sweeping															
Personnel/Salaries															
36111	3	Full Time Salaries	113,701	167,130	172,144	177,308	182,627	188,106	193,749	199,562	205,549	211,715	218,067	224,609	231,347
36113	3	Overtime Compensation	6,164	4,545	4,681	4,822	4,966	5,115	5,269	5,427	5,590	5,757	5,930	6,108	6,291
36115	4	Holidays	5,883	-	-	-	-	-	-	-	-	-	-	-	-
36116	4	Paid Time Off	11,464	-	-	-	-	-	-	-	-	-	-	-	-
36151	4	Stipend	-	315	324	334	344	355	365	376	387	399	411	423	436
36211	4	FICA	9,872	13,140	13,534	13,940	14,358	14,789	15,233	15,690	16,161	16,645	17,145	17,659	18,189
36231	4	Medical	27,146	35,730	36,802	37,906	39,043	40,214	41,421	42,663	43,943	45,262	46,620	48,018	49,459
36232	4	Dental	2,151	2,610	2,688	2,769	2,852	2,938	3,026	3,116	3,210	3,306	3,405	3,508	3,613
36233	4	Vision	326	360	371	382	393	405	417	430	443	456	470	484	498



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

			Actual	Budget	Projection											
36234	Life	4	Benefit Cost Inflation	562	720	742	764	787	810	835	860	886	912	939	968	997
36252	AZ State Retirement	4	Benefit Cost Inflation	15,903	19,935	20,533	21,149	21,784	22,437	23,110	23,803	24,518	25,253	26,011	26,791	27,595
36278	Workers Compensation	4	Benefit Cost Inflation	9,450	9,270	9,548	9,835	10,130	10,433	10,746	11,069	11,401	11,743	12,095	12,458	12,832
Commodities/Supplies																
37131	Clothing & Uniforms	1	General Cost Inflation	322	315	324	334	344	355	365	376	387	399	411	423	436
37142	Phone Supplies	1	General Cost Inflation	351	-	-	-	-	-	-	-	-	-	-	-	-
37161	Operational Supplies	1	General Cost Inflation	498	-	-	-	-	-	-	-	-	-	-	-	-
37165	Mach. & Equipment <\$10,000	1	General Cost Inflation	13,270	12,600	12,978	13,367	13,768	14,181	14,607	15,045	15,496	15,961	16,440	16,933	17,441
37193	Safety & First Aid Supplies	1	General Cost Inflation	557	855	881	907	934	962	991	1,021	1,052	1,083	1,116	1,149	1,184
37211	Gas & Fuel	1	General Cost Inflation	30,734	29,385	30,267	31,175	32,110	33,073	34,065	35,087	36,140	37,224	38,341	39,491	40,676
37212	Auto Parts & Lubricants	1	General Cost Inflation	21,394	24,165	24,890	25,637	26,406	27,198	28,014	28,854	29,720	30,611	31,530	32,476	33,450
37232	Chemical Supplies	1	General Cost Inflation	917	-	-	-	-	-	-	-	-	-	-	-	-
Contractual Services																
38211	Water	1	General Cost Inflation	4,059	4,815	4,959	5,108	5,261	5,419	5,582	5,749	5,922	6,099	6,282	6,471	6,665
38216	Sanitary/Landfill	1	General Cost Inflation	29,138	20,250	20,858	21,483	22,128	22,792	23,475	24,180	24,905	25,652	26,422	27,214	28,031
38217	Postage & Mailings	1	General Cost Inflation	323	-	-	-	-	-	-	-	-	-	-	-	-
38324	Machinery & Equip. Maint.	1	General Cost Inflation	113	-	-	-	-	-	-	-	-	-	-	-	-
38331	Vehicle Maintenance	1	General Cost Inflation	9,927	5,040	5,191	5,347	5,507	5,673	5,843	6,018	6,199	6,385	6,576	6,773	6,977
38922	Travel & Training	1	General Cost Inflation	27	135	139	143	148	152	157	161	166	171	176	181	187
38924	Dues & Memberships	1	General Cost Inflation	405	-	-	-	-	-	-	-	-	-	-	-	-
38951	Printing	1	General Cost Inflation	26	-	-	-	-	-	-	-	-	-	-	-	-
38991	Uniform/Laundry Services	1	General Cost Inflation	457	990	1,020	1,050	1,082	1,114	1,148	1,182	1,218	1,254	1,292	1,330	1,370
643 Stormwater Sewer Fund																
601 Collections WW																
Personnel/Salaries																
36111	Full Time Salaries	3	Labor Cost Inflation	-	75,100	77,353	79,674	82,064	84,526	87,061	89,673	92,364	95,134	97,988	100,928	103,956
36151	Stipend	4	Benefit Cost Inflation	-	500	515	530	546	563	580	597	615	633	652	672	692
36211	FICA	4	Benefit Cost Inflation	-	4,700	4,841	4,986	5,136	5,290	5,449	5,612	5,780	5,954	6,132	6,316	6,506
36211	FICA	4	Benefit Cost Inflation	-	1,100	1,133	1,167	1,202	1,238	1,275	1,313	1,353	1,393	1,435	1,478	1,523
36231	Medical	4	Benefit Cost Inflation	-	11,000	11,330	11,670	12,020	12,381	12,752	13,135	13,529	13,934	14,353	14,783	15,227
36232	Dental	4	Benefit Cost Inflation	-	600	618	637	656	675	696	716	738	760	783	806	831
36233	Vision	4	Benefit Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
36234	Life	4	Benefit Cost Inflation	-	300	309	318	328	338	348	358	369	380	391	403	415
36252	AZ State Retirement	4	Benefit Cost Inflation	-	8,800	9,064	9,336	9,616	9,904	10,202	10,508	10,823	11,148	11,482	11,826	12,181
36278	Workers Compensation	4	Benefit Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
Commodities/Supplies																
37111	Office Supplies	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
37114	Books & Subscriptions	1	General Cost Inflation	-	500	515	530	546	563	580	597	615	633	652	672	692
37131	Clothing & Uniforms	1	General Cost Inflation	-	200	206	212	219	225	232	239	246	253	261	269	277
37193	Safety & First Aid Supplies	1	General Cost Inflation	-	300	309	318	328	338	348	358	369	380	391	403	415
Contractual Services																
38922	Travel & Training	1	General Cost Inflation	-	3,100	3,193	3,289	3,387	3,489	3,594	3,702	3,813	3,927	4,045	4,166	4,291
38924	Dues & Memberships	1	General Cost Inflation	-	2,800	2,884	2,971	3,060	3,151	3,246	3,343	3,444	3,547	3,653	3,763	3,876
38925	Federal Mileage Allowance	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
645 Stormwater General Fund																
112 General Operation																
Commodities/Supplies																
37111	Office Supplies	1	General Cost Inflation	80	100	103	106	109	113	116	119	123	127	130	134	138
37112	Computer Supplies	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
37114	Books & Subscriptions	1	General Cost Inflation	111	500	515	530	546	563	580	597	615	633	652	672	692
37131	Clothing & Uniforms	1	General Cost Inflation	217	-	-	-	-	-	-	-	-	-	-	-	-
37165	Mach. & Equipment <\$10,000	1	General Cost Inflation	19	-	-	-	-	-	-	-	-	-	-	-	-
37194	Community Relations Supplies	1	General Cost Inflation	660	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661
37211	Gas & Fuel	1	General Cost Inflation	549	600	618	637	656	675	696	716	738	760	783	806	831
37212	Auto Parts & Lubricants	1	General Cost Inflation	30	200	206	212	219	225	232	239	246	253	261	269	277
37997	Education & Training Supplies	1	General Cost Inflation	151	200	206	212	219	225	232	239	246	253	261	269	277
Contractual Services																
38124	Audit Services	1	General Cost Inflation	-	-	-	-	-	-	-	-	-	-	-	-	-
38128	Recording, License & Permit Fees	1	General Cost Inflation	11,900	14,000	14,420	14,853	15,298	15,757	16,230	16,717	17,218	17,735	18,267	18,815	19,379
38199	Other Prof/Tech Services	1	General Cost Inflation	10,720	-	-	-	-	-	-	-	-	-	-	-	-
38217	Postage & Mailings	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
38912	Risk Insurance Premium	1	General Cost Inflation	917	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384
38922	Travel & Training	1	General Cost Inflation	95	1,400	1,442	1,485	1,530	1,576	1,623	1,672	1,722	1,773	1,827	1,881	1,938
38924	Dues & Memberships	1	General Cost Inflation	2,750	2,600	2,678	2,758	2,841	2,926	3,014	3,105	3,198	3,294	3,392	3,494	3,599
38951	Printing	1	General Cost Inflation	831	-	-	-	-	-	-	-	-	-	-	-	-
Future Operational Needs																
22531-64	Wastewater Manager	1	General Cost Inflation	-	-	33,424	34,426	35,459	36,523	37,618	38,747	39,909	41,107	42,340	43,610	44,918
21111-54	Public Works Director	1	General Cost Inflation	-	-	19,271	19,849	20,445	21,058	21,690	22,341	23,011	23,701	24,412	25,145	25,899
22531-64	Assistant Director Utilities	1	General Cost Inflation	-	-	32,692	33,673	34,683	35,724	36,795	37,899	39,036	40,207	41,414	42,656	43,936
21111-54	Business Manager	1	General Cost Inflation	-	-	7,220	7,437	7,660	7,890	8,127	8,370	8,621	8,880	9,146	9,421	9,703



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

			Actual	Budget	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection
21111-54	Administrative Technician - Business Support	1	-	-	3,394	3,496	3,601	3,709	3,820	3,934	4,052	4,174	4,299	4,428	4,561
21111-54	Sr. Financial Analyst	1	-	-	4,362	4,493	4,628	4,767	4,910	5,057	5,209	5,365	5,526	5,691	5,862
21111-54	Business Analyst	1	-	-	5,614	5,782	5,955	6,134	6,318	6,508	6,703	6,904	7,111	7,324	7,544
	Indirect Cost allocation Citywide Staff	7	-	-	66,800	66,800	66,800	72,280	72,280	72,280	78,960	78,960	78,960	86,280	86,280
	Franchise Fee		-	-	-	-	-	-	-	-	-	-	-	-	-
	Payments in lieu of property tax (PILOT)		-	-	-	-	-	-	-	-	-	-	-	-	-
22531-64	Collections & Stormwater Supervisor	1	-	-	49,700	51,191	52,727	54,309	55,938	57,616	59,344	61,125	62,958	64,847	66,793
22531-64	Stormwater Operator	1	-	-	-	-	84,700	87,241	89,858	92,554	95,331	98,191	101,136	104,170	107,295
22531-64	Stormwater Inspector/Code Compliance	1	-	-	-	-	84,000	86,520	89,116	91,789	94,543	97,379	100,300	103,309	106,409
22531-64	Maint of City owned drywells (3-5/yr)	1	-	-	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	33,598	34,606
37131	Uniform Purchase	1	-	-	400	412	424	437	450	464	478	492	507	522	538
37161	Operational Supplies	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
37162	Furniture, Fixtures, and Equipment (computers one-)	1	-	-	6,000	-	-	-	-	-	-	-	-	-	-
37165	Operational Equipment, Tools, and Parts	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
37193	Safety & First Aid Supplies	1	-	-	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688
37211	Gas & Fuel	1	-	-	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063
37212	Auto Parts & Lubricants	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
37998	Photography Supplies	1	-	-	100	103	106	109	113	116	119	123	127	130	134
38199	Professional & Outside Services	1	-	-	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
38216	Sanitary/Landfill	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
38221	Cell Phone/Pagers	1	-	-	500	515	530	546	563	580	597	615	633	652	672
38324	Machinery & Equipment Maintenance	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
38331	Vehicle Maintenance	1	-	-	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704
38351	Wells/Sewer/Lines/Etc.	1	-	-	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317
38521	Equipment Rental	1	-	-	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
38922	Travel & Training	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
38991	Uniform/Laundry Services	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
	Other														
	Add'l O&M from CIP				From CIP	-	-	-	-	-	-	-	-	-	-
	Total Cash O&M Expenditures		\$ 450,487	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
	Depreciation Expense in FY2013		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Depreciation Expense														
	Last year's plus annual add'l from CIP		\$ -	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
	debt principal payments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	System Reinvestment Funding		\$ -	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
	TOTAL EXPENSES		\$ 450,487	\$ 600,470	\$ 953,711	\$ 986,909	\$ 1,198,201	\$ 1,256,260	\$ 1,310,800	\$ 1,377,858	\$ 1,448,686	\$ 1,516,729	\$ 1,588,848	\$ 1,659,583	\$ 1,700,289
	Capital Outlays		\$ 19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Costs and O&M Impacts in Year: **FY 2016**

No	Description	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
1	Fund 21112												
2	Martin Acres Flood Control	\$ -											
3	107th & Union Hills Drainage	-											
4	Elm Street & Nash OTS Drainage Improvements												
5	Greasewood Street & Lizard Acres Wash OTS			250,000									
6	Paradise Lane & El Mirage Rd OTS Drainage			250,000	650,000								
7	Santa Fe Drive OTS Drainage Improvements					350,000							
8	Greenway Rd OTS Drainage Improvements					300,000							
9	Sections 10 & 11 Drainage & Roadway Improvements					150,000	350,000	250,000	250,000	250,000	250,000		
10	Additional Projects												
11	Cactus & Reems					50,000	250,000	250,000					
12	Bell Rd (EB)-Sarival to Reems												
13	Peoria & Litchfield					10,000	50,000	50,000					
14	Peoria & Sarival						25,000	125,000	125,000				
15	Greenway-Litchfield To Bullard						25,000	125,000	125,000				
16	WB Waddell-BT Cotton & 175TH						25,000	125,000	125,000				
17	Cactus & 155th Ave												
18	Cotton Ln-BT Peoria & Greenway						150,000	400,000	500,000	750,000	500,000	500,000	500,000
19	Laural Lane & Litchfield Rd									200,000	400,000		
20	Jerry St & Ironwood										25,000	125,000	125,000
21	211th & Deer Valley										25,000	125,000	125,000
22	Pinnacle Peak-W of Citrus										25,000	125,000	125,000
23	219th & Pinnacle Peak										25,000	125,000	125,000
24	183rd & Happy Valley												
25	Enoch-West OF Citrus												
26	NW Cor Peoria/Greer Ranch Pkwy												
27	Cactus Rd between Litchfield and Bullard												
28	Deer Valley Road SPA3 Interceptor Sewer												
29	Acoma & Cotton Lane												
30	Norwich - Citrus to Grand												
31	152nd @ Acoma												
32	Happy Valley 1/4 mile west of Citrus												
33	Retention Basin south of Ocotillo, East of Litchfield												
34	SEC Litchfield/Greenway			50,000	50,000								
35	Autoshow and Cactus												
36	Heritage Park in Marley Park										50,000		
37	Auto Show Dr-BT Waddell & Cactus												
38	CACTUS & L303												
39	Cactus and Citrus			15,000									
40	151st Avenue and Tierra Buena			35,000									
41													
Total Capital Projects		\$ -	\$ -	\$ 600,000	\$ 700,000	\$ 860,000	\$ 875,000	\$ 1,325,000	\$ 1,125,000	\$ 1,200,000	\$ 1,275,000	\$ 875,000	\$ 875,000
Projects by Grants / Developer Donations		-	-	-	-	-	-	-	-	-	-	-	-
Projects by Enterprise Fund		-	-	600,000	700,000	860,000	875,000	1,325,000	1,125,000	1,200,000	1,275,000	875,000	875,000



City of Surprise
Stormwater Utility Rate Study
Revenue Requirements Analysis

Cash Flow Sufficiency Test	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
EXPENSES												
Cash Operating Expenses	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating Fund Balance	-	156,774	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 600,470	\$ 1,110,485	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
REVENUES												
Rate Revenue	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non Rate Revenue	600,470	-	-	-	-	-	-	-	-	-	-	-
Operating Fund & Debt Reserve Fund Interest Earnings	-	0	2,744	2,802	3,366	3,366	3,366	3,366	3,366	3,366	3,366	3,366
Total Revenue	\$ 600,470	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,081,018	\$ 2,086,998	\$ 2,092,978	\$ 2,098,958	\$ 2,104,938	\$ 2,110,918	\$ 2,116,899
NET CASH FLOW (DEFICIENCY)	\$ 0	\$ 943,246	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (411,709)	\$ (690,842)	\$ (727,709)	\$ (758,981)	\$ (791,370)	\$ (832,230)	\$ (866,956)
% of Rate Revenue	-100.00%	-45.93%	-21.28%	-5.98%	6.45%	19.82%	33.16%	34.83%	36.22%	37.66%	39.49%	41.02%

Coverage Sufficiency Test - Revenue Bonds	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
EXPENSES												
Total Cash Operating Expenses (less Capital Outlays)	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Revenue Bond Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Bond Coverage Requirement at 1.25	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
ALLOWABLE REVENUES												
Rate Revenue	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Other Revenue	600,470	-	-	-	-	-	-	-	-	-	-	-
Interest Earnings - All Funds	-	0	11,000	15,580	17,007	17,402	19,818	19,010	20,176	19,949	18,240	21,441
Total Revenue	\$ 600,470	\$ 2,053,731	\$ 2,070,711	\$ 2,081,272	\$ 2,088,678	\$ 2,095,054	\$ 2,103,450	\$ 2,108,622	\$ 2,115,768	\$ 2,121,521	\$ 2,125,792	\$ 2,134,974
Coverage Realized	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COVERAGE SURPLUS (DEFICIENCY)	\$ 0	\$ 1,100,020	\$ 1,096,573	\$ 911,213	\$ 880,042	\$ 852,327	\$ 825,610	\$ 787,935	\$ 757,830	\$ 725,213	\$ 682,644	\$ 651,119



City of Surprise
Stormwater Utility Rate Study
Revenue Requirements Analysis

Maximum Revenue Deficiency	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Sufficiency Test Driving the Deficiency	None	None	None	None	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash
Maximum Deficiency From Tests	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 411,709	\$ 690,842	\$ 727,709	\$ 758,981	\$ 791,370	\$ 832,230	\$ 866,956
less: Net Revenue From Prior Rate Increases	-	-	-	-	-	(133,984)	(412,894)	(692,825)	(729,792)	(761,146)	(793,622)	(795,874)
Revenue Deficiency	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 277,725	\$ 277,948	\$ 34,884	\$ 29,189	\$ 30,223	\$ 38,608	\$ 71,082
Plus: Adjustment for State Excise Tax	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue Deficiency	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 277,725	\$ 277,948	\$ 34,884	\$ 29,189	\$ 30,223	\$ 38,608	\$ 71,082

Rate Increases	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Rate Revenue with no Increase	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Revenues from Prior Rate Increases	-	-	-	-	-	133,984	412,894	692,825	729,792	761,146	793,622	795,874
Rate Revenue Before Rate Increase (Incl. previous increases)	0	2,053,731	2,059,711	2,065,691	2,071,672	2,211,636	2,496,526	2,782,437	2,825,384	2,862,719	2,901,174	2,909,406
Required Annual Rate Increase	0.00%	0.00%	0.00%	0.00%	6.45%	12.56%	11.13%	1.25%	1.03%	1.06%	1.33%	2.44%
Number of Months New Rates Will Be In Effect	12	12	12	12	12	12	12	12	12	12	12	12
Info: Percentage Increase to Generate Required Revenue	0.00%	0.00%	0.00%	0.00%	6.45%	12.56%	11.13%	1.25%	1.03%	1.06%	1.33%	2.44%
Policy Induced Rate Increases	0.00%											
ANNUAL RATE INCREASE	0.00%	0.00%	0.00%	0.00%	6.45%	12.56%	11.13%	1.25%	1.03%	1.06%	1.33%	2.44%
CUMULATIVE RATE INCREASE	0.00%	0.00%	0.00%	0.00%	6.45%	19.82%	33.16%	34.83%	36.22%	37.66%	39.49%	42.90%

Impacts of Rate Increases	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Rate Revenues After Rate Increase	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,205,270	\$ 2,489,361	\$ 2,774,474	\$ 2,817,321	\$ 2,854,573	\$ 2,892,942	\$ 2,939,783	\$ 2,980,489
Full Year Rate Revenues After Rate Increase	0	2,053,731	2,059,711	2,065,691	2,205,270	2,489,361	2,774,474	2,817,321	2,854,573	2,892,942	2,939,783	3,020,153
Additional State Taxes Due to Rate Increases	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow After Rate Increase	0	1,100,020	438,317	123,435	-	0	0	-	0	-	-	-
Coverage After Rate Increase	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a



City of Surprise

Stormwater Utility Rate Study

Fund Activity

Funds	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
STORMWATER OPERATIONS FUND												
Beginning Balance	\$ -	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592	\$ 336,592
plus: Net Cash Flow after Rate Increase	0	1,100,020	438,317	123,435	-	0	0	-	0	-	-	-
less: Transfer of Surplus to Capital Fund	-	(825,665)	(432,440)	(67,075)	-	-	-	-	-	-	-	-
Ending Balance	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592								
Minimum Target Balance	\$ 98,707	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284	\$ 210,056	\$ 217,099	\$ 223,223	\$ 229,530	\$ 237,230	\$ 243,921
Maximum Funds to be Kept as Operating Reserves	\$ 172,738	\$ 274,355	\$ 280,232	\$ 336,592	\$ 347,690	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Info: No of Days of Cash Operating Expenses	0	105	105	105	102	99	96	93	91	88	85	83
OPERATIONS FUND - CAPITAL PORTION												
Beginning Balance	\$ -	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,645,233	\$ 1,564,437	\$ 1,681,026	\$ 1,658,300	\$ 1,487,379	\$ 1,807,525
plus: Rate Funded Capital	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
plus: Transfers from Operating Fund	-	825,665	432,440	67,075	-	-	-	-	-	-	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
plus: Other Loans	-	-	-	-	-	-	-	-	-	-	-	-
plus: Other Low Interest Loan Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
plus: Interest Earnings	-	-	8,257	12,778	13,641	14,036	16,452	15,644	16,810	16,583	14,874	18,075
Total Funding Sources	\$ -	\$ 825,665	\$ 1,916,362	\$ 2,132,653	\$ 2,377,736	\$ 2,667,674	\$ 3,161,685	\$ 3,080,082	\$ 3,197,836	\$ 3,174,883	\$ 3,002,253	\$ 3,325,601
less: Capital Expenditures	-	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)	(1,399,056)	(1,539,536)	(1,687,504)	(1,194,727)	(1,232,523)
Ending Capital Fund Balance	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,645,233	\$ 1,564,437	\$ 1,681,026	\$ 1,658,300	\$ 1,487,379	\$ 1,807,525	\$ 2,093,078
Minimum Target Balance	\$ 200,000	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018	\$ 327,999	\$ 358,790	\$ 392,540	\$ 416,435	\$ 441,085
DEBT RESERVE												
New Debt												
Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
plus: Reserve Funding from New Debt	-	-	-	-	-	-	-	-	-	-	-	-
less: Use of Reserves for Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Minimum Target Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



City of Surprise

Stormwater Utility Rate Study

Equivalent Dwelling Units (EDUs)

Customer Type	Accounts	Gross Parcel Area	Impervious Surface Area	Chargeable Pervious Area (Ag)	EDUs
Residential					
Single Family Residential	43,700				43,700
RV Parks	3,267				3,267
Non-Residential					
Commercial	1,869	135,587,096	135,587,096		39,645
Agricultural	10	139,479,120	6,973,956	132,505,164	5,914
Other	-	-	-		-
Subtotal	48,846	275,066,216	142,561,052	132,505,164	92,526
Less: EDU Lost to Credits					(15,858)
Total Chargeable EDUs					76,668

One bill to be sent to each RV Park based on lot count, up to HOA or owner to allocate (based on 7/2/15 email from David Kohlbeck)

Commercial (based on Excel file received 5/21)

Notes: Square feet for 1 EDU is determined by average Single Family Residence

1 EDU = 3,420 sq. ft. of impervious area

Each Single Family Residence is 1 EDU

Commercial and Other Non-Residential customers are charged based on sq. ft. of Impervious Surface Area

Agricultural is charged based on Impervious Surface Area, plus Chargeable Pervious Area times

10%

RV Dwelling Units are considered 1.00 EDU

Assumed to be 40% of Non-Residential EDUs lost to credits

Agricultural Lands (based on PDF file received 9/2)

Customer 1	1,150
Customer 2	229
Customer 3	148
Customer 4	47
Customer 5	283
Customer 6	277
Customer 7	285
Customer 8	72
Customer 9	559
Customer 10	152
Total Acres	3,202
Sq ft per Acre	43,560
Total Sq Ft	139,479,120
Assumed Portion of ISA	5%
Total ISA Sq Ft	6,973,956

RV Parks

	Spaces
MICASA Mobile Homes	50
Donorma RV Park	11
Sunflower RV Park	583
Sunflower RV Park	557
Hernandez, Antonio	13
Resendiz, Octavio	5
C & C Trailer Park	16
Desertaire Owner has three parcels	16
Desertaire only 1 designated as commercial	15
Happy Trails Comm Assoc	2,001
Total RV Parks	3,267



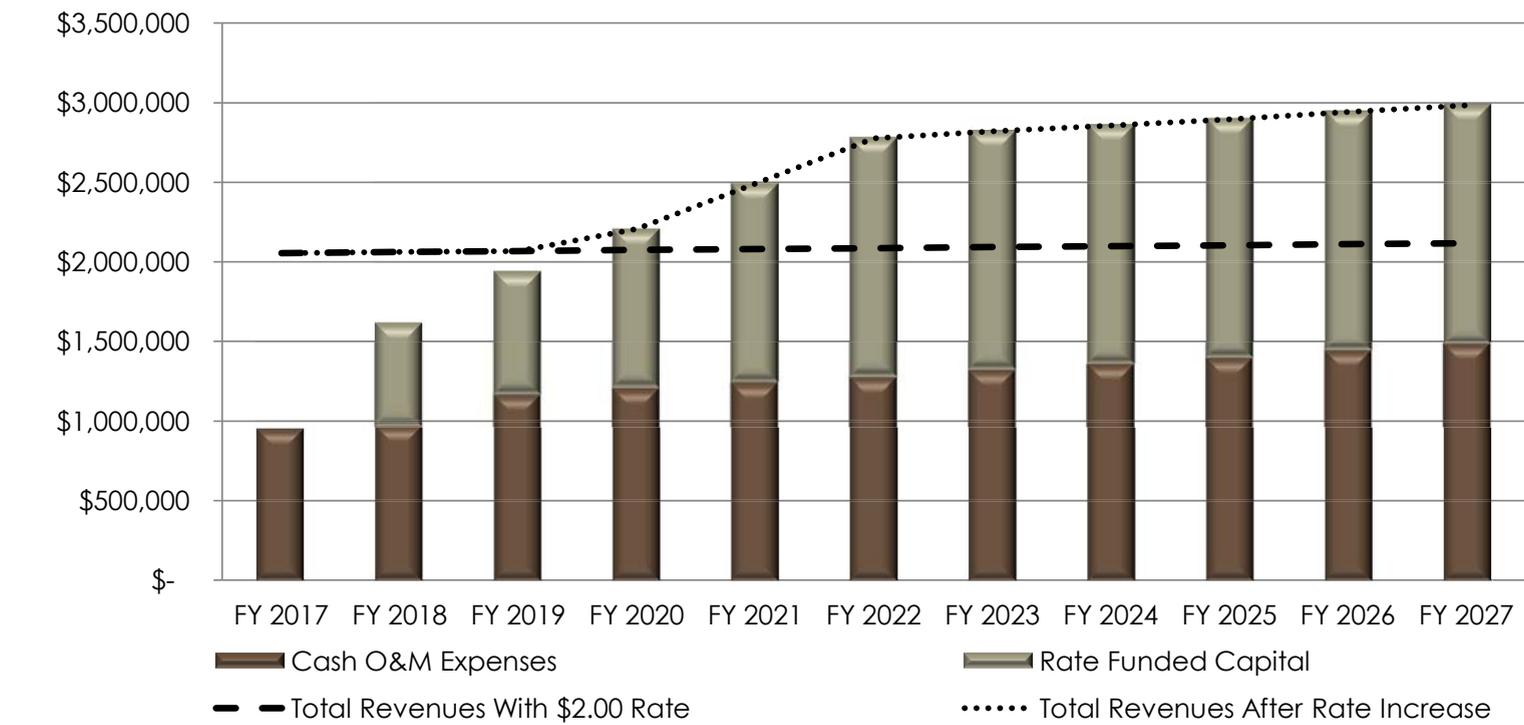
City of Surprise

Stormwater Utility Rate Study

Capital Funding Analysis

Summary of Expenditures	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
CAPITAL PROJECTS												
Improvement Upgrades & Expansions	\$ -	\$ -	\$ 319,281	\$ 384,279	\$ 487,049	\$ 511,221	\$ 798,624	\$ 699,528	\$ 769,768	\$ 843,752	\$ 597,364	\$ 616,261
Repairs and Replacements	-	-	319,281	384,279	487,049	511,221	798,624	699,528	769,768	843,752	597,364	616,261
TOTAL CAPITAL EXPENDITURES	\$ -	\$ -	\$ 638,562	\$ 768,557	\$ 974,098	\$ 1,022,441	\$ 1,597,248	\$ 1,399,056	\$ 1,539,536	\$ 1,687,504	\$ 1,194,727	\$ 1,232,523
Capital Financing Plan												
Additional Proceeds (Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Project Specific CIAC	-	-	-	-	-	-	-	-	-	-	-	-
Project to be Funded	\$ -	\$ -	\$ 638,562	\$ 768,557	\$ 974,098	\$ 1,022,441	\$ 1,597,248	\$ 1,399,056	\$ 1,539,536	\$ 1,687,504	\$ 1,194,727	\$ 1,232,523
OTHER FUNDING SOURCES												
Other Outside Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Funded System Reinvestment	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Connection Fee Revenue Towards Capital	-	-	-	-	-	-	-	-	-	-	-	-
Other Loans	-	-	-	-	-	-	-	-	-	-	-	-
Low Interest Loans	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL CAPITAL RESOURCES	\$ -	\$ -	\$ 650,000	\$ 775,000	\$ 1,000,000	\$ 1,250,000	\$ 1,500,000					
<i>Info: Working Capital Contingency Deficit</i>		(200,000)	-	-	-	-	-	-	-	-	-	-

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Cash O&M Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating F	156,774	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 1,110,485	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues	0	2,744	2,802	3,366	3,366	3,366	3,366	3,366	3,366	3,366	3,366
Total Revenues With \$2.00 Rate	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,081,018	\$ 2,086,998	\$ 2,092,978	\$ 2,098,958	\$ 2,104,938	\$ 2,110,918	\$ 2,116,899
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,205,270	\$ 2,489,361	\$ 2,774,474	\$ 2,817,321	\$ 2,854,573	\$ 2,892,942	\$ 2,939,783	\$ 2,980,489
Total Revenues After Rate Increase	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855



APPENDIX C: REVENUE REQUIREMENT – SCENARIO II



City of Surprise

Stormwater Utility Rate Study

Summary

Revenue Requirement	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Revenues											
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues	0	2,744	2,802	3,366	2,030	3,575	3,676	3,799	3,906	4,017	4,152
Total Revenues	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,079,682	\$ 2,087,207	\$ 2,093,288	\$ 2,099,391	\$ 2,105,479	\$ 2,111,569	\$ 2,117,684
Expenses											
Cash Operating Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating Fund Balance	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 953,711	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
Net Surplus (Deficiency)	\$ 1,100,020	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (413,045)	\$ (690,633)	\$ (727,399)	\$ (758,547)	\$ (790,829)	\$ (831,579)	\$ (866,170)
Additions to Meet Coverage	-	-	-	-	-	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ 1,100,020	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (413,045)	\$ (690,633)	\$ (727,399)	\$ (758,547)	\$ (790,829)	\$ (831,579)	\$ (866,170)
% of Rate Revenue	0.00%	0.00%	0.00%	6.45%	19.88%	33.15%	34.81%	36.20%	37.63%	39.46%	40.98%
Annual Rate Adjustment	0.00%	0.00%	0.00%	0.00%	37.50%	0.00%	0.00%	0.00%	3.75%	0.00%	0.00%
Cumulative Annual Rate Adjustment	0.00%	0.00%	0.00%	0.00%	37.50%	37.50%	37.50%	37.50%	42.66%	42.66%	42.66%
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,856,771	\$ 2,864,994	\$ 2,873,217	\$ 2,881,439	\$ 2,998,024	\$ 3,006,555	\$ 3,015,086
Additional Taxes from Rate Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Cash Flow After Rate Increase	1,100,020	438,317	123,435	(133,599)	366,074	90,729	56,206	27,300	105,623	67,424	35,383
Coverage After Rate Increases	n/a										
Sample Residential Monthly Bill	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.75	\$ 2.85	\$ 2.85	\$ 2.85
Monthly Average Increase (\$)	\$ 2.00	\$ -	\$ -	\$ -	\$ 0.75	\$ -	\$ -	\$ -	\$ 0.10	\$ -	\$ -



City of Surprise

Stormwater Utility Rate Study

Summary

Fund Balance	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
SEWER OPERATIONS FUND											
Beginning Balance	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592	\$ 202,994	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152
plus: Net Cash Flow after Rate Increase	1,100,020	438,317	123,435	(133,599)	366,074	90,729	56,206	27,300	105,623	67,424	35,383
less: Transfer of Surplus to Capital Fund	(825,665)	(432,440)	(67,075)	-	(211,571)	(80,628)	(43,880)	(16,584)	(94,585)	(53,949)	(23,673)
Ending Balance	\$ 274,355	\$ 280,232	\$ 336,592	\$ 202,994	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Target Balance	\$ 274,355	\$ 280,232	\$ 336,592	\$ 347,690	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Days	105	105	105	61	105	105	105	105	105	105	105
OPERATIONS FUND - CAPITAL PORTION											
Beginning Balance	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,856,804	\$ 1,858,752	\$ 2,022,163	\$ 2,019,433	\$ 1,946,708	\$ 2,325,397
plus: Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
plus: Transfers from Operating Fund	825,665	432,440	67,075	-	211,571	80,628	43,880	16,584	94,585	53,949	23,673
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-	-	-	-	-
plus: Transfers from SPA Funds for Deficit Repayment	-	-	-	-	-	-	-	-	-	-	-
plus: Net Debt Proceeds Available for Projects	-	-	-	-	-	-	-	-	-	-	-
plus: Interest Earnings	-	8,257	12,778	13,641	14,036	18,568	18,588	20,222	20,194	19,467	23,254
Total Funding Sources	\$ 825,665	\$ 1,916,362	\$ 2,132,653	\$ 2,377,736	\$ 2,879,246	\$ 3,456,000	\$ 3,421,219	\$ 3,558,969	\$ 3,634,212	\$ 3,520,124	\$ 3,872,324
less: Capital Expenditures	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)	(1,399,056)	(1,539,536)	(1,687,504)	(1,194,727)	(1,232,523)
less: Transfers to SPA Funds	-	-	-	-	-	-	-	-	-	-	-
Ending Working Capital Balance	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,856,804	\$ 1,858,752	\$ 2,022,163	\$ 2,019,433	\$ 1,946,708	\$ 2,325,397	\$ 2,639,801
Minimum Target Balance	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018	\$ 327,999	\$ 358,790	\$ 392,540	\$ 416,435	\$ 441,085
COMBINED BEGINNING BALANCE	\$ 0	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,606,632	\$ 2,214,301	\$ 2,226,350	\$ 2,402,087	\$ 2,410,073	\$ 2,348,385	\$ 2,740,549
COMBINED ENDING BALANCE	\$ 1,100,020	\$ 1,558,031	\$ 1,700,687	\$ 1,606,632	\$ 2,214,301	\$ 2,226,350	\$ 2,402,087	\$ 2,410,073	\$ 2,348,385	\$ 2,740,549	\$ 3,066,664



City of Surprise

Stormwater Utility Rate Study

Assumptions

July 2015 - June 2016

Economic & Financial Factors	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
1 General Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
2 Construction Cost Inflation	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%	3.16%
3 Labor Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
4 Benefit Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
5 Customer Growth	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.28%	0.28%
6 General Inflation plus Growth	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.30%	3.29%	3.29%	3.29%	3.29%
7 No Escalation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
8 PILOT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9 Franchise Fee	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10 Fuel Cost Escalation	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
11 [Extra]	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Fund Earnings	0.50%	0.75%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%

Accounting Assumptions	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
FISCAL POLICY RESTRICTIONS												
Min. Op. Fund Balance (days of O&M expense)	60	60	60	60	60	60	60	60	60	60	60	60
Max. Op. Fund Balance (days of O&M expense)	105	105	105	105	105	105	105	105	105	105	105	105
Minimum Capital Fund Balance Target												
Select Minimum Capital Fund Balance Target	1		Defined as % of Plant									
1 - Defined as % of Plant												
Plant-in-Service in 2015	\$ 10,000,000											
Minimum Capital Fund Balance - % of plant assets	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2 - Amount at Right ==>												
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RATE FUNDED SYSTEM REINVESTMENT												
Select Reinvestment Funding Strategy	3		User Input									
Amount of Annual Cash Funding from Rates												
1 - Equal to Annual Depreciation Expense	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
2 - Equal to Depreciation less Annual Debt Principal Payments	-	-	12,771	28,142	47,624	68,073	100,018	127,999	158,790	192,540	216,435	216,435
3 - Equal to Amount at Right ==>	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
4 - Do Not Fund Depreciation												

Capital Financing Assumptions	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
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City of Surprise Stormwater Utility Rate Study Assumptions

July 2015 - June 2016

FUNDING SOURCES																								
Grants	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Additional Proceeds (Costs)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
[Extra line]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Additional Proceeds	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
REVENUE BONDS																								
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Issuance Cost	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Revenue Bond Coverage Requirement	1.25																							
OTHER LOANS																								
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
OTHER LOW COST LOANS																								
Term (years)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Interest Cost	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
Issuance Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Other Assumptions	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Customer Growth															
Projected New Equivalent Dwelling Units (EDUs)	100.00% of Original Growth Projections							Based on previous 5 year average growth projections							
SPA 1	-	250	250	250	250	250	250	250	250	250	250	250	250	250	250
SPA 2	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20
SPA 3	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total New EDUs	-	271	271	271	271	271	271	271	271						
Cumulative EDUs	92,526	92,526	92,797	93,068	93,339	93,610	93,881	94,152	94,423	94,694	94,965	95,236	95,507	95,778	
EDU Growth Rate		0.00%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.28%	0.28%
PILOT Tax Components															
Capital Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARS Assessed Valuation Annual Year Percentage	19.50%	19.00%	18.50%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
ARS Assessed Valuation Fiscal Year Percentage	19.75%	19.25%	18.75%	18.25%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
Primary Property Tax Rate	0.7383%	0.7783%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%	0.7591%
Payment in Lieu of Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

			Actual	Budget	Projection										
FORECAST BASIS			FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Revenues															
Rate Revenues															
	Rate Revenues	5	\$ -	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
	[Extra]	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Rate Revenue		\$ -	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues															
31813	Interest Income	7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31543	Federal Grant Revenue - SPA 1	7	-	-	-	-	-	-	-	-	-	-	-	-	-
31432	Line Extension Fees	7	-	-	-	-	-	-	-	-	-	-	-	-	-
31461	Revenue Recovery-Utility Bill	7	-	-	-	-	-	-	-	-	-	-	-	-	-
31816	Unrealized Gain/Loss	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	[Extra]	7	-	600,470	-	-	-	-	-	-	-	-	-	-	-
	Total Non-Rate Revenues		\$ -	\$ 600,470	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL REVENUES			\$ -	\$ 600,470	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533

			Actual	Budget	Projection										
FORECAST BASIS			FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Expenses															
544 Stormwater Streets Fund															
516 ROW															
Personnel/Salaries															
36111	Full Time Salaries	3	24,479	28,640	29,499	30,384	31,296	32,235	33,202	34,198	35,224	36,280	37,369	38,490	39,644
36113	Overtime Compensation	3	368	700	721	743	765	788	811	836	861	887	913	941	969
36115	Holidays	4	1,338	-	-	-	-	-	-	-	-	-	-	-	-
36116	Paid Time Off	4	2,730	-	-	-	-	-	-	-	-	-	-	-	-
36151	Stipend	4	46	50	52	53	55	56	58	60	61	63	65	67	69
36211	FICA	4	2,081	2,250	2,318	2,387	2,459	2,532	2,608	2,687	2,767	2,850	2,936	3,024	3,115
36231	Medical	4	6,743	7,030	7,241	7,458	7,682	7,912	8,150	8,394	8,646	8,905	9,173	9,448	9,731
36232	Dental	4	330	330	340	350	361	371	383	394	406	418	431	443	457
36233	Vision	4	54	50	52	53	55	56	58	60	61	63	65	67	69
36234	Life	4	122	130	134	138	142	146	151	155	160	165	170	175	180
36252	AZ State Retirement	4	3,342	3,410	3,512	3,618	3,726	3,838	3,953	4,072	4,194	4,320	4,449	4,583	4,720
36278	Workers Compensation	4	1,790	1,730	1,782	1,835	1,890	1,947	2,006	2,066	2,128	2,192	2,257	2,325	2,395
Commodities/Supplies															
37111	Office Supplies	1	6	20	21	21	22	23	23	24	25	25	26	27	28
37131	Clothing & Uniforms	1	74	80	82	85	87	90	93	96	98	101	104	108	111
37142	Phone Supplies	1	89	-	-	-	-	-	-	-	-	-	-	-	-
37161	Operational Supplies	1	714	350	361	371	382	394	406	418	430	443	457	470	484
37165	Mach. & Equipment <\$10,000	1	1,155	1,550	1,597	1,644	1,694	1,745	1,797	1,851	1,906	1,963	2,022	2,083	2,146
37193	Safety & First Aid Supplies	1	371	500	515	530	546	563	580	597	615	633	652	672	692
37211	Gas & Fuel	1	5,193	5,200	5,356	5,517	5,682	5,853	6,028	6,209	6,395	6,587	6,785	6,988	7,198
37212	Auto Parts & Lubricants	1	1,673	5,160	5,315	5,474	5,638	5,808	5,982	6,161	6,346	6,537	6,733	6,935	7,143
37223	Agricultural/Grounds Supplies	1	1,434	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384
37233	Street Repair Supplies	1	199	-	-	-	-	-	-	-	-	-	-	-	-
Contractual Services															
38162	Landscape Services	1	29,078	36,695	37,796	38,930	40,098	41,301	42,540	43,816	45,130	46,484	47,879	49,315	50,794
38199	Other Prof/Tech Services	1	127	500	515	530	546	563	580	597	615	633	652	672	692
38211	Water	1	9,699	9,920	10,218	10,524	10,840	11,165	11,500	11,845	12,200	12,566	12,943	13,332	13,732
38212	Electricity	1	700	720	742	764	787	810	835	860	886	912	939	968	997
38216	Sanitary/Landfill	1	676	1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	2,016	2,076
38221	Cell Phone/Pagers	1	252	-	-	-	-	-	-	-	-	-	-	-	-
38324	Machinery & Equip. Maint.	1	337	-	-	-	-	-	-	-	-	-	-	-	-
38331	Vehicle Maintenance	1	3,334	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360	3,461
38372	Pest Control Services	1	124	120	124	127	131	135	139	143	148	152	157	161	166
38381	Grounds Maintenance	1	6,984	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063	8,305
38591	Other Rental/Leases	1	290	300	309	318	328	338	348	358	369	380	391	403	415
38922	Travel & Training	1	41	130	134	138	142	146	151	155	160	165	170	175	180
38924	Dues & Memberships	1	90	-	-	-	-	-	-	-	-	-	-	-	-
38927	EE Certification & Licensing	1	138	-	-	-	-	-	-	-	-	-	-	-	-
38991	Uniform/Laundry Services	1	113	200	206	212	219	225	232	239	246	253	261	269	277
517 Street Sweeping															
Personnel/Salaries															
36111	Full Time Salaries	3	113,701	167,130	172,144	177,308	182,627	188,106	193,749	199,562	205,549	211,715	218,067	224,609	231,347
36113	Overtime Compensation	3	6,164	4,545	4,681	4,822	4,966	5,115	5,269	5,427	5,590	5,757	5,930	6,108	6,291
36115	Holidays	4	5,883	-	-	-	-	-	-	-	-	-	-	-	-
36116	Paid Time Off	4	11,464	-	-	-	-	-	-	-	-	-	-	-	-
36151	Stipend	4	-	315	324	334	344	355	365	376	387	399	411	423	436
36211	FICA	4	9,872	13,140	13,534	13,940	14,358	14,789	15,233	15,690	16,161	16,645	17,145	17,659	18,189
36231	Medical	4	27,146	35,730	36,802	37,906	39,043	40,214	41,421	42,663	43,943	45,262	46,620	48,018	49,459
36232	Dental	4	2,151	2,610	2,688	2,769	2,852	2,938	3,026	3,116	3,210	3,306	3,405	3,508	3,613
36233	Vision	4	326	360	371	382	393	405	417	430	443	456	470	484	498



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

			Actual	Budget	Projection											
36234	Life	4	Benefit Cost Inflation	562	720	742	764	787	810	835	860	886	912	939	968	997
36252	AZ State Retirement	4	Benefit Cost Inflation	15,903	19,935	20,533	21,149	21,784	22,437	23,110	23,803	24,518	25,253	26,011	26,791	27,595
36278	Workers Compensation	4	Benefit Cost Inflation	9,450	9,270	9,548	9,835	10,130	10,433	10,746	11,069	11,401	11,743	12,095	12,458	12,832
Commodities/Supplies																
37131	Clothing & Uniforms	1	General Cost Inflation	322	315	324	334	344	355	365	376	387	399	411	423	436
37142	Phone Supplies	1	General Cost Inflation	351	-	-	-	-	-	-	-	-	-	-	-	-
37161	Operational Supplies	1	General Cost Inflation	498	-	-	-	-	-	-	-	-	-	-	-	-
37165	Mach. & Equipment <\$10,000	1	General Cost Inflation	13,270	12,600	12,978	13,367	13,768	14,181	14,607	15,045	15,496	15,961	16,440	16,933	17,441
37193	Safety & First Aid Supplies	1	General Cost Inflation	557	855	881	907	934	962	991	1,021	1,052	1,083	1,116	1,149	1,184
37211	Gas & Fuel	1	General Cost Inflation	30,734	29,385	30,267	31,175	32,110	33,073	34,065	35,087	36,140	37,224	38,341	39,491	40,676
37212	Auto Parts & Lubricants	1	General Cost Inflation	21,394	24,165	24,890	25,637	26,406	27,198	28,014	28,854	29,720	30,611	31,530	32,476	33,450
37232	Chemical Supplies	1	General Cost Inflation	917	-	-	-	-	-	-	-	-	-	-	-	-
Contractual Services																
38211	Water	1	General Cost Inflation	4,059	4,815	4,959	5,108	5,261	5,419	5,582	5,749	5,922	6,099	6,282	6,471	6,665
38216	Sanitary/Landfill	1	General Cost Inflation	29,138	20,250	20,858	21,483	22,128	22,792	23,475	24,180	24,905	25,652	26,422	27,214	28,031
38217	Postage & Mailings	1	General Cost Inflation	323	-	-	-	-	-	-	-	-	-	-	-	-
38324	Machinery & Equip. Maint.	1	General Cost Inflation	113	-	-	-	-	-	-	-	-	-	-	-	-
38331	Vehicle Maintenance	1	General Cost Inflation	9,927	5,040	5,191	5,347	5,507	5,673	5,843	6,018	6,199	6,385	6,576	6,773	6,977
38922	Travel & Training	1	General Cost Inflation	27	135	139	143	148	152	157	161	166	171	176	181	187
38924	Dues & Memberships	1	General Cost Inflation	405	-	-	-	-	-	-	-	-	-	-	-	-
38951	Printing	1	General Cost Inflation	26	-	-	-	-	-	-	-	-	-	-	-	-
38991	Uniform/Laundry Services	1	General Cost Inflation	457	990	1,020	1,050	1,082	1,114	1,148	1,182	1,218	1,254	1,292	1,330	1,370
643 Stormwater Sewer Fund																
601 Collections WW																
Personnel/Salaries																
36111	Full Time Salaries	3	Labor Cost Inflation	-	75,100	77,353	79,674	82,064	84,526	87,061	89,673	92,364	95,134	97,988	100,928	103,956
36151	Stipend	4	Benefit Cost Inflation	-	500	515	530	546	563	580	597	615	633	652	672	692
36211	FICA	4	Benefit Cost Inflation	-	4,700	4,841	4,986	5,136	5,290	5,449	5,612	5,780	5,954	6,132	6,316	6,506
36211	FICA	4	Benefit Cost Inflation	-	1,100	1,133	1,167	1,202	1,238	1,275	1,313	1,353	1,393	1,435	1,478	1,523
36231	Medical	4	Benefit Cost Inflation	-	11,000	11,330	11,670	12,020	12,381	12,752	13,135	13,529	13,934	14,353	14,783	15,227
36232	Dental	4	Benefit Cost Inflation	-	600	618	637	656	675	696	716	738	760	783	806	831
36233	Vision	4	Benefit Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
36234	Life	4	Benefit Cost Inflation	-	300	309	318	328	338	348	358	369	380	391	403	415
36252	AZ State Retirement	4	Benefit Cost Inflation	-	8,800	9,064	9,336	9,616	9,904	10,202	10,508	10,823	11,148	11,482	11,826	12,181
36278	Workers Compensation	4	Benefit Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
Commodities/Supplies																
37111	Office Supplies	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
37114	Books & Subscriptions	1	General Cost Inflation	-	500	515	530	546	563	580	597	615	633	652	672	692
37131	Clothing & Uniforms	1	General Cost Inflation	-	200	206	212	219	225	232	239	246	253	261	269	277
37193	Safety & First Aid Supplies	1	General Cost Inflation	-	300	309	318	328	338	348	358	369	380	391	403	415
Contractual Services																
38922	Travel & Training	1	General Cost Inflation	-	3,100	3,193	3,289	3,387	3,489	3,594	3,702	3,813	3,927	4,045	4,166	4,291
38924	Dues & Memberships	1	General Cost Inflation	-	2,800	2,884	2,971	3,060	3,151	3,246	3,343	3,444	3,547	3,653	3,763	3,876
38925	Federal Mileage Allowance	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
645 Stormwater General Fund																
112 General Operation																
Commodities/Supplies																
37111	Office Supplies	1	General Cost Inflation	80	100	103	106	109	113	116	119	123	127	130	134	138
37112	Computer Supplies	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
37114	Books & Subscriptions	1	General Cost Inflation	111	500	515	530	546	563	580	597	615	633	652	672	692
37131	Clothing & Uniforms	1	General Cost Inflation	217	-	-	-	-	-	-	-	-	-	-	-	-
37165	Mach. & Equipment <\$10,000	1	General Cost Inflation	19	-	-	-	-	-	-	-	-	-	-	-	-
37194	Community Relations Supplies	1	General Cost Inflation	660	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	1,613	1,661
37211	Gas & Fuel	1	General Cost Inflation	549	600	618	637	656	675	696	716	738	760	783	806	831
37212	Auto Parts & Lubricants	1	General Cost Inflation	30	200	206	212	219	225	232	239	246	253	261	269	277
37997	Education & Training Supplies	1	General Cost Inflation	151	200	206	212	219	225	232	239	246	253	261	269	277
Contractual Services																
38124	Audit Services	1	General Cost Inflation	-	-	-	-	-	-	-	-	-	-	-	-	-
38128	Recording, License & Permit Fees	1	General Cost Inflation	11,900	14,000	14,420	14,853	15,298	15,757	16,230	16,717	17,218	17,735	18,267	18,815	19,379
38199	Other Prof/Tech Services	1	General Cost Inflation	10,720	-	-	-	-	-	-	-	-	-	-	-	-
38217	Postage & Mailings	1	General Cost Inflation	-	100	103	106	109	113	116	119	123	127	130	134	138
38912	Risk Insurance Premium	1	General Cost Inflation	917	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344	1,384
38922	Travel & Training	1	General Cost Inflation	95	1,400	1,442	1,485	1,530	1,576	1,623	1,672	1,722	1,773	1,827	1,881	1,938
38924	Dues & Memberships	1	General Cost Inflation	2,750	2,600	2,678	2,758	2,841	2,926	3,014	3,105	3,198	3,294	3,392	3,494	3,599
38951	Printing	1	General Cost Inflation	831	-	-	-	-	-	-	-	-	-	-	-	-
Future Operational Needs																
22531-64	Wastewater Manager	1	General Cost Inflation	-	-	33,424	34,426	35,459	36,523	37,618	38,747	39,909	41,107	42,340	43,610	44,918
21111-54	Public Works Director	1	General Cost Inflation	-	-	19,271	19,849	20,445	21,058	21,690	22,341	23,011	23,701	24,412	25,145	25,899
22531-64	Assistant Director Utilities	1	General Cost Inflation	-	-	32,692	33,673	34,683	35,724	36,795	37,899	39,036	40,207	41,414	42,656	43,936
21111-54	Business Manager	1	General Cost Inflation	-	-	7,220	7,437	7,660	7,890	8,127	8,370	8,621	8,880	9,146	9,421	9,703



City of Surprise
Stormwater Utility Rate Study
Operating Revenue and Expenditure Forecast

			Actual	Budget	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection
21111-54	Administrative Technician - Business Support	1	-	-	3,394	3,496	3,601	3,709	3,820	3,934	4,052	4,174	4,299	4,428	4,561
21111-54	Sr. Financial Analyst	1	-	-	4,362	4,493	4,628	4,767	4,910	5,057	5,209	5,365	5,526	5,691	5,862
21111-54	Business Analyst	1	-	-	5,614	5,782	5,955	6,134	6,318	6,508	6,703	6,904	7,111	7,324	7,544
	Indirect Cost allocation Citywide Staff	7	-	-	66,800	66,800	66,800	72,280	72,280	72,280	78,960	78,960	78,960	86,280	86,280
	Franchise Fee		-	-	-	-	-	-	-	-	-	-	-	-	-
	Payments in lieu of property tax (PILOT)		-	-	-	-	-	-	-	-	-	-	-	-	-
22531-64	Collections & Stormwater Supervisor	1	-	-	49,700	51,191	52,727	54,309	55,938	57,616	59,344	61,125	62,958	64,847	66,793
22531-64	Stormwater Operator	1	-	-	-	-	84,700	87,241	89,858	92,554	95,331	98,191	101,136	104,170	107,295
22531-64	Stormwater Inspector/Code Compliance	1	-	-	-	-	84,000	86,520	89,116	91,789	94,543	97,379	100,300	103,309	106,409
22531-64	Maint of City owned drywells (3-5/yr)	1	-	-	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	33,598	34,606
37131	Uniform Purchase	1	-	-	400	412	424	437	450	464	478	492	507	522	538
37161	Operational Supplies	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
37162	Furniture, Fixtures, and Equipment (computers one-)	1	-	-	6,000	-	-	-	-	-	-	-	-	-	-
37165	Operational Equipment, Tools, and Parts	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
37193	Safety & First Aid Supplies	1	-	-	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	2,688
37211	Gas & Fuel	1	-	-	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	8,063
37212	Auto Parts & Lubricants	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
37998	Photography Supplies	1	-	-	100	103	106	109	113	116	119	123	127	130	134
38199	Professional & Outside Services	1	-	-	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
38216	Sanitary/Landfill	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
38221	Cell Phone/Pagers	1	-	-	500	515	530	546	563	580	597	615	633	652	672
38324	Machinery & Equipment Maintenance	1	-	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	6,720
38331	Vehicle Maintenance	1	-	-	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	4,704
38351	Wells/Sewer/Lines/Etc.	1	-	-	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317
38521	Equipment Rental	1	-	-	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	1,344
38922	Travel & Training	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
38991	Uniform/Laundry Services	1	-	-	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	3,360
	Other														
	Add'l O&M from CIP				From CIP	-	-	-	-	-	-	-	-	-	-
	Total Cash O&M Expenditures		\$ 450,487	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
	Depreciation Expense in FY2013		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Depreciation Expense														
	Last year's plus annual add'l from CIP		\$ -	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
	debt principal payments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	System Reinvestment Funding		\$ -	\$ -	\$ -	\$ 12,771	\$ 28,142	\$ 47,624	\$ 68,073	\$ 100,018	\$ 127,999	\$ 158,790	\$ 192,540	\$ 216,435	\$ 216,435
	TOTAL EXPENSES		\$ 450,487	\$ 600,470	\$ 953,711	\$ 986,909	\$ 1,198,201	\$ 1,256,260	\$ 1,310,800	\$ 1,377,858	\$ 1,448,686	\$ 1,516,729	\$ 1,588,848	\$ 1,659,583	\$ 1,700,289
	Capital Outlays		\$ 19	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Project Costs and O&M Impacts in Year: **FY 2016**

No	Description	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
1	Fund 21112												
2	Martin Acres Flood Control	\$ -											
3	107th & Union Hills Drainage	-											
4	Elm Street & Nash OTS Drainage Improvements												
5	Greasewood Street & Lizard Acres Wash OTS			250,000									
6	Paradise Lane & El Mirage Rd OTS Drainage			250,000	650,000								
7	Santa Fe Drive OTS Drainage Improvements					350,000							
8	Greenway Rd OTS Drainage Improvements					300,000							
9	Sections 10 & 11 Drainage & Roadway Improvements					150,000	350,000	250,000	250,000	250,000	250,000		
10	Additional Projects												
11	Cactus & Reems					50,000	250,000	250,000					
12	Bell Rd (EB)-Sarival to Reems												
13	Peoria & Litchfield					10,000	50,000	50,000					
14	Peoria & Sarival						25,000	125,000	125,000				
15	Greenway-Litchfield To Bullard						25,000	125,000	125,000				
16	WB Waddell-BT Cotton & 175TH						25,000	125,000	125,000				
17	Cactus & 155th Ave												
18	Cotton Ln-BT Peoria & Greenway						150,000	400,000	500,000	750,000	500,000	500,000	500,000
19	Laural Lane & Litchfield Rd									200,000	400,000		
20	Jerry St & Ironwood										25,000	125,000	125,000
21	211th & Deer Valley										25,000	125,000	125,000
22	Pinnacle Peak-W of Citrus										25,000	125,000	125,000
23	219th & Pinnacle Peak										25,000	125,000	125,000
24	183rd & Happy Valley												
25	Enoch-West OF Citrus												
26	NW Cor Peoria/Greer Ranch Pkwy												
27	Cactus Rd between Litchfield and Bullard												
28	Deer Valley Road SPA3 Interceptor Sewer												
29	Acoma & Cotton Lane												
30	Norwich - Citrus to Grand												
31	152nd @ Acoma												
32	Happy Valley 1/4 mile west of Citrus												
33	Retention Basin south of Ocotillo, East of Litchfield												
34	SEC Litchfield/Greenway			50,000	50,000								
35	Autoshow and Cactus												
36	Heritage Park in Marley Park										50,000		
37	Auto Show Dr-BT Waddell & Cactus												
38	CACTUS & L303												
39	Cactus and Citrus			15,000									
40	151st Avenue and Tierra Buena			35,000									
41													
Total Capital Projects		\$ -	\$ -	\$ 600,000	\$ 700,000	\$ 860,000	\$ 875,000	\$ 1,325,000	\$ 1,125,000	\$ 1,200,000	\$ 1,275,000	\$ 875,000	\$ 875,000
Projects by Grants / Developer Donations		-	-	-	-	-	-	-	-	-	-	-	-
Projects by Enterprise Fund		-	-	600,000	700,000	860,000	875,000	1,325,000	1,125,000	1,200,000	1,275,000	875,000	875,000



City of Surprise
Stormwater Utility Rate Study
Revenue Requirements Analysis

Cash Flow Sufficiency Test	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
EXPENSES												
Cash Operating Expenses	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating Fund Balance	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 600,470	\$ 953,711	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
REVENUES												
Rate Revenue	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non Rate Revenue	600,470	-	-	-	-	-	-	-	-	-	-	-
Operating Fund & Debt Reserve Fund Interest Earnings	-	0	2,744	2,802	3,366	2,030	3,575	3,676	3,799	3,906	4,017	4,152
Total Revenue	\$ 600,470	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,079,682	\$ 2,087,207	\$ 2,093,288	\$ 2,099,391	\$ 2,105,479	\$ 2,111,569	\$ 2,117,684
NET CASH FLOW (DEFICIENCY)	\$ 0	\$ 1,100,020	\$ 438,317	\$ 123,435	\$ (133,599)	\$ (413,045)	\$ (690,633)	\$ (727,399)	\$ (758,547)	\$ (790,829)	\$ (831,579)	\$ (866,170)
% of Rate Revenue	-100.00%	-53.56%	-21.28%	-5.98%	6.45%	19.88%	33.15%	34.81%	36.20%	37.63%	39.46%	40.98%

Coverage Sufficiency Test - Revenue Bonds	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
EXPENSES												
Total Cash Operating Expenses (less Capital Outlays)	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Revenue Bond Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Bond Coverage Requirement at 1.25	-	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 600,470	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
ALLOWABLE REVENUES												
Rate Revenue	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Other Revenue	600,470	-	-	-	-	-	-	-	-	-	-	-
Interest Earnings - All Funds	-	0	11,000	15,580	17,007	16,066	22,143	22,263	24,021	24,101	23,484	27,405
Total Revenue	\$ 600,470	\$ 2,053,731	\$ 2,070,711	\$ 2,081,272	\$ 2,088,678	\$ 2,093,718	\$ 2,105,775	\$ 2,111,876	\$ 2,119,613	\$ 2,125,673	\$ 2,131,036	\$ 2,140,938
Coverage Realized	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COVERAGE SURPLUS (DEFICIENCY)	\$ 0	\$ 1,100,020	\$ 1,096,573	\$ 911,213	\$ 880,042	\$ 850,991	\$ 827,935	\$ 791,189	\$ 761,674	\$ 729,365	\$ 687,888	\$ 657,084



City of Surprise
Stormwater Utility Rate Study
Revenue Requirements Analysis

Maximum Revenue Deficiency	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Sufficiency Test Driving the Deficiency	None	None	None	None	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash
Maximum Deficiency From Tests	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 413,045	\$ 690,633	\$ 727,399	\$ 758,547	\$ 790,829	\$ 831,579	\$ 866,170
less: Net Revenue From Prior Rate Increases	-	-	-	-	-	-	(781,362)	(783,605)	(785,847)	(788,090)	(899,003)	(901,554)
Revenue Deficiency	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 413,045	\$ -	\$ -	\$ -	\$ 2,740	\$ -	\$ -
Plus: Adjustment for State Excise Tax	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue Deficiency	\$ -	\$ -	\$ -	\$ -	\$ 133,599	\$ 413,045	\$ -	\$ -	\$ -	\$ 2,740	\$ -	\$ -

Rate Increases	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Rate Revenue with no Increase	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Revenues from Prior Rate Increases	-	-	-	-	-	-	781,362	783,605	785,847	788,090	899,003	901,554
Rate Revenue Before Rate Increase (Incl. previous increases)	0	2,053,731	2,059,711	2,065,691	2,071,672	2,077,652	2,864,994	2,873,217	2,881,439	2,889,662	3,006,555	3,015,086
Required Annual Rate Increase	0.00%	0.00%	0.00%	0.00%	6.45%	19.88%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%
Number of Months New Rates Will Be In Effect	12	12	12	12	12	12	12	12	12	12	12	12
Info: Percentage Increase to Generate Required Revenue	0.00%	0.00%	0.00%	0.00%	6.45%	19.88%	0.00%	0.00%	0.00%	0.09%	0.00%	0.00%
Policy Induced Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	37.50%				3.75%		
ANNUAL RATE INCREASE	0.00%	0.00%	0.00%	0.00%	0.00%	37.50%	0.00%	0.00%	0.00%	3.75%	0.00%	0.00%
CUMULATIVE RATE INCREASE	0.00%	0.00%	0.00%	0.00%	0.00%	37.50%	37.50%	37.50%	37.50%	42.66%	42.66%	42.66%

Impacts of Rate Increases	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
Rate Revenues After Rate Increase	\$ 0	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,856,771	\$ 2,864,994	\$ 2,873,217	\$ 2,881,439	\$ 2,998,024	\$ 3,006,555	\$ 3,015,086
Full Year Rate Revenues After Rate Increase	0	2,053,731	2,059,711	2,065,691	2,071,672	2,856,771	2,864,994	2,873,217	2,881,439	2,998,024	3,006,555	3,015,086
Additional State Taxes Due to Rate Increases	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow After Rate Increase	0	1,100,020	438,317	123,435	(133,599)	366,074	90,729	56,206	27,300	105,623	67,424	35,383
Coverage After Rate Increase	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a



City of Surprise

Stormwater Utility Rate Study

Fund Activity

Funds	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
STORMWATER OPERATIONS FUND												
Beginning Balance	\$ -	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592	\$ 202,994	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152
plus: Net Cash Flow after Rate Increase	0	1,100,020	438,317	123,435	(133,599)	366,074	90,729	56,206	27,300	105,623	67,424	35,383
less: Transfer of Surplus to Capital Fund	-	(825,665)	(432,440)	(67,075)	-	(211,571)	(80,628)	(43,880)	(16,584)	(94,585)	(53,949)	(23,673)
Ending Balance	\$ 0	\$ 274,355	\$ 280,232	\$ 336,592	\$ 202,994	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Minimum Target Balance	\$ 98,707	\$ 156,774	\$ 160,132	\$ 192,338	\$ 198,680	\$ 204,284	\$ 210,056	\$ 217,099	\$ 223,223	\$ 229,530	\$ 237,230	\$ 243,921
Maximum Funds to be Kept as Operating Reserves	\$ 172,738	\$ 274,355	\$ 280,232	\$ 336,592	\$ 347,690	\$ 357,497	\$ 367,598	\$ 379,924	\$ 390,640	\$ 401,678	\$ 415,152	\$ 426,862
Info: No of Days of Cash Operating Expenses	0	105	105	105	61	105	105	105	105	105	105	105
OPERATIONS FUND - CAPITAL PORTION												
Beginning Balance	\$ -	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,856,804	\$ 1,858,752	\$ 2,022,163	\$ 2,019,433	\$ 1,946,708	\$ 2,325,397
plus: Rate Funded Capital	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
plus: Transfers from Operating Fund	-	825,665	432,440	67,075	-	211,571	80,628	43,880	16,584	94,585	53,949	23,673
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
plus: Other Loans	-	-	-	-	-	-	-	-	-	-	-	-
plus: Other Low Interest Loan Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
plus: Interest Earnings	-	-	8,257	12,778	13,641	14,036	18,568	18,588	20,222	20,194	19,467	23,254
Total Funding Sources	\$ -	\$ 825,665	\$ 1,916,362	\$ 2,132,653	\$ 2,377,736	\$ 2,879,246	\$ 3,456,000	\$ 3,421,219	\$ 3,558,969	\$ 3,634,212	\$ 3,520,124	\$ 3,872,324
less: Capital Expenditures	-	-	(638,562)	(768,557)	(974,098)	(1,022,441)	(1,597,248)	(1,399,056)	(1,539,536)	(1,687,504)	(1,194,727)	(1,232,523)
Ending Capital Fund Balance	\$ -	\$ 825,665	\$ 1,277,800	\$ 1,364,095	\$ 1,403,638	\$ 1,856,804	\$ 1,858,752	\$ 2,022,163	\$ 2,019,433	\$ 1,946,708	\$ 2,325,397	\$ 2,639,801
Minimum Target Balance	\$ 200,000	\$ 200,000	\$ 212,771	\$ 228,142	\$ 247,624	\$ 268,073	\$ 300,018	\$ 327,999	\$ 358,790	\$ 392,540	\$ 416,435	\$ 441,085
DEBT RESERVE												
New Debt												
Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
plus: Reserve Funding from New Debt	-	-	-	-	-	-	-	-	-	-	-	-
less: Use of Reserves for Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Minimum Target Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -



City of Surprise

Stormwater Utility Rate Study

Equivalent Dwelling Units (EDUs)

Customer Type	Accounts	Gross Parcel Area	Impervious Surface Area	Chargeable Pervious Area (Ag)	EDUs
Residential					
Single Family Residential	43,700				43,700
RV Parks	3,267				3,267
Non-Residential					
Commercial	1,869	135,587,096	135,587,096		39,645
Agricultural	10	139,479,120	6,973,956	132,505,164	5,914
Other	-	-	-		-
Subtotal	48,846	275,066,216	142,561,052	132,505,164	92,526
Less: EDU Lost to Credits					(15,858)
Total Chargeable EDUs					76,668

One bill to be sent to each RV Park based on lot count, up to HOA or owner to allocate (based on 7/2/15 email from David Kohlbeck)

Commercial (based on Excel file received 5/21)

Notes: Square feet for 1 EDU is determined by average Single Family Residence

1 EDU = 3,420 sq. ft. of impervious area

Each Single Family Residence is 1 EDU

Commercial and Other Non-Residential customers are charged based on sq. ft. of Impervious Surface Area

Agricultural is charged based on Impervious Surface Area, plus Chargeable Pervious Area times

10%

RV Dwelling Units are considered 1.00 EDU

Assumed to be 40% of Non-Residential EDUs lost to credits

Agricultural Lands (based on PDF file received 9/2)

Customer 1	1,150
Customer 2	229
Customer 3	148
Customer 4	47
Customer 5	283
Customer 6	277
Customer 7	285
Customer 8	72
Customer 9	559
Customer 10	152
Total Acres	3,202
Sq ft per Acre	43,560
Total Sq Ft	139,479,120
Assumed Portion of ISA	5%
Total ISA Sq Ft	6,973,956

RV Parks

	Spaces
MICASA Mobile Homes	50
Donorma RV Park	11
Sunflower RV Park	583
Sunflower RV Park	557
Hernandez, Antonio	13
Resendiz, Octavio	5
C & C Trailer Park	16
Desertaire Owner has three parcels	16
Desertaire only 1 designated as commercial	15
Happy Trails Comm Assoc	2,001
Total RV Parks	3,267



City of Surprise

Stormwater Utility Rate Study

Capital Funding Analysis

Summary of Expenditures	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027
CAPITAL PROJECTS												
Improvement Upgrades & Expansions	\$ -	\$ -	\$ 319,281	\$ 384,279	\$ 487,049	\$ 511,221	\$ 798,624	\$ 699,528	\$ 769,768	\$ 843,752	\$ 597,364	\$ 616,261
Repairs and Replacements	-	-	319,281	384,279	487,049	511,221	798,624	699,528	769,768	843,752	597,364	616,261
TOTAL CAPITAL EXPENDITURES	\$ -	\$ -	\$ 638,562	\$ 768,557	\$ 974,098	\$ 1,022,441	\$ 1,597,248	\$ 1,399,056	\$ 1,539,536	\$ 1,687,504	\$ 1,194,727	\$ 1,232,523
Capital Financing Plan												
Additional Proceeds (Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Project Specific CIAC	-	-	-	-	-	-	-	-	-	-	-	-
Project to be Funded	\$ -	\$ -	\$ 638,562	\$ 768,557	\$ 974,098	\$ 1,022,441	\$ 1,597,248	\$ 1,399,056	\$ 1,539,536	\$ 1,687,504	\$ 1,194,727	\$ 1,232,523
OTHER FUNDING SOURCES												
Other Outside Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Funded System Reinvestment	-	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Connection Fee Revenue Towards Capital	-	-	-	-	-	-	-	-	-	-	-	-
Other Loans	-	-	-	-	-	-	-	-	-	-	-	-
Low Interest Loans	-	-	-	-	-	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL CAPITAL RESOURCES	\$ -	\$ -	\$ 650,000	\$ 775,000	\$ 1,000,000	\$ 1,250,000	\$ 1,500,000					
<i>Info: Working Capital Contingency Deficit</i>		(200,000)	-	-	-	-	-	-	-	-	-	-

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Cash O&M Expenses	\$ 953,711	\$ 974,138	\$ 1,170,058	\$ 1,208,636	\$ 1,242,727	\$ 1,277,840	\$ 1,320,687	\$ 1,357,939	\$ 1,396,308	\$ 1,443,149	\$ 1,483,855
Existing Debt Service	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	-	-	-	-	-
Rate Funded Capital	-	650,000	775,000	1,000,000	1,250,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Additions Required to Meet Operating F	-	-	-	-	-	-	-	-	-	-	-
Total Expenses	\$ 953,711	\$ 1,624,138	\$ 1,945,058	\$ 2,208,636	\$ 2,492,727	\$ 2,777,840	\$ 2,820,687	\$ 2,857,939	\$ 2,896,308	\$ 2,943,149	\$ 2,983,855
Rate Revenues Under Existing Rates	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,077,652	\$ 2,083,632	\$ 2,089,612	\$ 2,095,592	\$ 2,101,572	\$ 2,107,553	\$ 2,113,533
Non-Rate Revenues	0	2,744	2,802	3,366	2,030	3,575	3,676	3,799	3,906	4,017	4,152
Total Revenues With \$2.00 Rate	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,079,682	\$ 2,087,207	\$ 2,093,288	\$ 2,099,391	\$ 2,105,479	\$ 2,111,569	\$ 2,117,684
Rate Revenues After Rate Increase	\$ 2,053,731	\$ 2,059,711	\$ 2,065,691	\$ 2,071,672	\$ 2,856,771	\$ 2,864,994	\$ 2,873,217	\$ 2,881,439	\$ 2,998,024	\$ 3,006,555	\$ 3,015,086
Total Revenues After Rate Increase	\$ 2,053,731	\$ 2,062,455	\$ 2,068,494	\$ 2,075,037	\$ 2,858,801	\$ 2,868,569	\$ 2,876,893	\$ 2,885,239	\$ 3,001,931	\$ 3,010,572	\$ 3,019,238

