

The Utilities Fund is a proprietary enterprise fund used to account for funds needed to operate, maintain and expand Stafford County's Water and Wastewater system. The Utilities Fund is financed and managed in a manner similar to private business industry.

#### Provision of Water Services:

Two reservoirs, Smith Lake and Lake Mooney, supply water to Stafford County's treatment facilities. The Smith Lake Water Treatment Facility (WTF), rated at 10 million gallons per day (mgd), provides water to the northern region of Stafford and to the Camp Barrett area of Marine Corps Base Quantico. The Lake Mooney WTF, rated at a maximum of 12 mgd, provides water to the southern region. Combined, the two reservoirs hold over 7.1 billion gallons of water. If needed, interconnecting piping in the water distribution system allows the transfer of treated water from one service area to the other. The Abel Lake WTF was taken offline December 2014; however, the water supply remains available for future use. The capacity is expected to be needed within the next ten to fifteen years.

The water distribution system is comprised of more than 638 miles of pipe ranging in size from 2 to 30 inches in diameter, with four primary pumping stations. Two ground storage tanks, two standpipes and eleven elevated tanks provide water storage of nearly 16.7 million gallons.

#### Provision of Wastewater Services:

Wastewater treatment is provided by the Little Falls Run and Aquia wastewater treatment facilities (WWTF). The treatment capacity at Little Falls Run WWTF is currently permitted at 8 mgd. The current treatment capacity at Aquia WWTF is 10 mgd. Both treatment facilities utilize biological nutrient removal, ultraviolet light disinfection, and the low-load aeration system that allows higher flow rates without adversely affecting treatment. The wastewater collection and transmission system consists of 519 miles of sewer lines and 89 pump stations.

#### Utilities Department Personnel:

The Utilities Department employees provide customer service, daily inspections, planning, administration, operation and maintenance of the systems. An on-call Field Operations crew and an on-call mechanic handle after-hours emergencies. All water and wastewater treatment facility operators are fully trained and most are licensed. The treatment facilities and field crews maintain an excellent safety record.

#### Projected Demand for Service:

The Utilities Department finished Fiscal Year 2015 with 34,518 billed customer accounts. The number of billed customer accounts served by the Utilities Department is expected to reach 35,277 by the end of Fiscal Year 2016, assuming 2.20% growth. For the remainder of the planning period (FY18-FY21), accounts are projected to grow at a moderate rate of 1.25% per year.

# Utilities Fund Budget

Stafford County FY17 Adopted Budget

## Revenues/Sources

|                             | User Fees           | Expansion Fees      | Total               |
|-----------------------------|---------------------|---------------------|---------------------|
| Water/Sewer Fees            | \$34,192,736        | \$0                 | \$34,192,736        |
| Availabilities/ProRata Fees | 0                   | 9,202,500           | 9,202,500           |
| Other Charges and Fees      | 1,108,000           | 0                   | 1,108,000           |
| Use of Money/Property       | 0                   | 116,295             | 116,295             |
| Bond Proceeds               | 0                   | 7,214,000           | 7,214,000           |
| Subtotal                    | \$35,300,736        | \$16,532,795        | \$51,833,531        |
| Prior Year Fund Balance     |                     |                     | 551,783             |
| <b>Total Revenues</b>       | <b>\$35,300,736</b> | <b>\$16,532,795</b> | <b>\$52,385,314</b> |

## Expenditures

|  | Operating           | Expansion           | Total               |
|--|---------------------|---------------------|---------------------|
| <b>Personnel &amp; Operating</b>                       |                     |                     |                     |
| Administration   | \$952,168           | \$0                 | \$952,168           |
| Customer Service/ Inspection/Engineering               | 5,849,038           | 0                   | 5,849,038           |
| Smith Lake WTP   | 2,432,093           | 0                   | 2,432,093           |
| Lake Mooney WTP  | 3,371,493           | 0                   | 3,371,493           |
| Field Operations                                       | 4,979,795           | 0                   | 4,979,795           |
| Aquia WWTF   | 2,855,462           | 0                   | 2,855,462           |
| Little Falls Run WWTF                                  | 2,228,570           | 0                   | 2,228,570           |
| Maintenance  | 4,276,606           | 0                   | 4,276,606           |
| <b>Total Personnel &amp; Operating:</b>                | <b>\$26,945,225</b> | <b>\$0</b>          | <b>\$26,945,225</b> |
| <b>Debt Service</b>                                    |                     |                     |                     |
|  | 0                   | 7,994,289           | 7,994,289           |
| <b>Total Personnel, Operating &amp; Debt Service</b>   | <b>\$26,945,225</b> | <b>\$7,994,289</b>  | <b>\$34,939,514</b> |
| <b>Capital Expenditures</b>                            |                     |                     |                     |
| Olde Concord to Wayside 18" Gravity Construct          | \$0                 | \$1,200,000         | \$1,200,000         |
| Construct Lower Accokeek PS                            | 0                   | 2,300,000           | 2,300,000           |
| 18" Gravity Accokeek Creek                             | 0                   | 1,050,000           | 1,050,000           |
| Lower Accokeek FM                                      | 0                   | 200,000             | 200,000             |
| Water Extension Projects                               | 0                   | 232,000             | 232,000             |
| Claiborne Run PS Parallel Force Main                   | 0                   | 381,000             | 381,000             |
| Sewer Extension Projects                               | 0                   | 232,000             | 232,000             |
| Small Sewer Projects                                   | 0                   | 438,000             | 438,000             |
| Hilldrup Pump Station                                  | 0                   | 1,339,000           | 1,339,000           |
| Hilldrup PS Force Main                                 | 0                   | 1,125,000           | 1,125,000           |
| Route 1 Sewer (Hidden Valley to Potomac Hills)         | 0                   | 200,000             | 200,000             |
| Berea Water Tank Removal                               | 200,000             | 0                   | 200,000             |
| Equipment Replacement - Aquia WWTF                     | 1,069,000           | 0                   | 1,069,000           |
| Water Distribution System Rehab Program                | 108,000             | 0                   | 108,000             |
| Austin Run Gravity Sewer Replacement -Stafford Village | 300,000             | 0                   | 300,000             |
| Wastewater Collection System Rehabilitation Projects   | 250,000             | 0                   | 250,000             |
| Wastewater Pump Station Rehabilitation Program         | 250,000             | 0                   | 250,000             |
| Abel Lake Dam Improvements                             | 4,250,000           | 0                   | 4,250,000           |
| Vehicles & Equipment Replacements                      | 475,000             | 0                   | 475,000             |
| Smith Lake WTF Filter Replacements                     | 716,000             | 0                   | 716,000             |
| Contingency Allowance                                  | 339,240             | 791,560             | 1,130,800           |
| <b>Total Capital Expenditures</b>                      | <b>\$7,957,240</b>  | <b>\$9,488,560</b>  | <b>\$17,445,800</b> |
| <b>Total Expenditures</b>                              | <b>\$34,902,465</b> | <b>\$17,482,849</b> | <b>\$52,385,314</b> |

## Mission

Our mission is to provide water and wastewater services that satisfy the current and future needs and expectations of our customers.



## Who Are We?

- The Utilities Fund is a proprietary enterprise fund used to account for funds needed to operate, maintain and expand Stafford County's Water and Wastewater system. The Utilities Fund is financed and managed in a manner similar to private business industry. The number of billed customer accounts served by the Utilities Department is expected to reach 35,277 by the end of Fiscal Year 2017, assuming 2.20% growth. For the remainder of the planning period (FY18-FY21), accounts are projected to grow at a conservative rate of 1.25% per year.

### Provision of Water Services:

- Smith Lake Water Treatment Facility (WTF), rated at 10 million gallons per day (mgd), provides water to the northern region of Stafford and to the Camp Barrett area of Marine Corps Base Quantico.
- Lake Mooney provides 5.4 billion gallons of water storage and up to 12 mgd of treated water for the southern portion of Stafford.

### Provision of Wastewater Services:

- Little Falls Run Wastewater Treatment Facility is currently permitted at 8 mgd.
- Aquia Wastewater Treatment Facility is currently permitted at 10 mgd.
- The wastewater collection and transmission system consists of 519 miles of sewer lines and 89 pump stations.

### Utilities Department Personnel:

- Personnel provide customer service, daily inspections, planning, administration, operation and maintenance of the systems.
- An on-call Field Operations crew and an on-call mechanic handle after-hours emergencies.

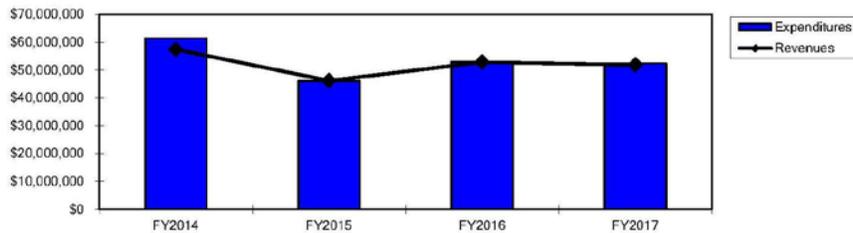
## Thinking Efficiently

The Department of Utilities strives to be as efficient as possible to keep costs to a minimum. Working with the Rappahannock Regional Landfill, staff plans to move the biosolids transportation activities in-house to save the County over \$175,000 each year, over the existing biosolids transportation contract.

## Budget Summary

|                                  | FY2014<br>Actual     | FY2015<br>Actual    | FY2016<br>Adopted<br>Budget | FY2017<br>Adopted<br>Budget | FY2017<br>16 to 17 |                |
|----------------------------------|----------------------|---------------------|-----------------------------|-----------------------------|--------------------|----------------|
| <b>Revenue/Sources</b>           |                      |                     |                             |                             |                    |                |
| Water/Sewer Fees                 | \$26,160,971         | \$29,018,679        | \$30,870,885                | \$34,192,736                | \$3,321,851        | 10.76%         |
| Availability/ProRata Fees        | 12,391,971           | 8,582,303           | 9,202,500                   | 9,202,500                   | 0                  | 0.00%          |
| Other Charges and Fees           | 1,271,040            | 1,700,181           | 1,108,000                   | 1,108,000                   | 0                  | 0.00%          |
| Use of Money/Property            | 327,112              | 173,872             | 116,295                     | 116,295                     | 0                  | 0.00%          |
| Revenue Bond Proceeds            | 17,240,766           | 6,707,417           | 11,528,821                  | 7,214,000                   | (4,314,821)        | -37.43%        |
| <b>Total Revenue/Sources</b>     | <b>\$57,391,860</b>  | <b>\$46,182,452</b> | <b>\$52,826,501</b>         | <b>\$51,833,531</b>         | <b>(\$992,970)</b> | <b>-1.88%</b>  |
| <b>Expenditures</b>              |                      |                     |                             |                             |                    |                |
| Personnel                        | \$11,430,007         | \$11,399,646        | \$11,568,488                | \$11,913,636                | \$345,148          | 2.98%          |
| Operating                        | 10,362,559           | 11,011,393          | 14,521,483                  | 15,031,633                  | 510,150            | 3.51%          |
| Operating -Capital Projects      | 1,364,238            | 5,762,438           | 1,418,000                   | 7,957,227                   | 6,539,227          | 461.16%        |
| Expansion-Capital Projects       | 31,977,657           | 11,100,898          | 17,879,950                  | 9,488,529                   | (8,391,422)        | -46.93%        |
| Debt Service                     | 6,272,352            | 6,707,417           | 7,556,214                   | 7,994,289                   | 438,075            | 5.80%          |
| <b>Total Expenditures</b>        | <b>\$61,406,813</b>  | <b>\$45,981,792</b> | <b>\$52,944,135</b>         | <b>\$52,385,314</b>         | <b>(\$558,821)</b> | <b>-1.06%</b>  |
| <b>Inc/(Dec) to Fund Balance</b> | <b>(\$4,014,953)</b> | <b>\$200,660</b>    | <b>(\$117,634)</b>          | <b>(\$551,783)</b>          | <b>(\$434,149)</b> | <b>369.07%</b> |

| <b>Funded Positions</b> |     |     |     |     |   |       |
|-------------------------|-----|-----|-----|-----|---|-------|
| Full-Time Positions     | 139 | 139 | 139 | 139 | 0 | 0.00% |
| Part-Time Positions     | 1   | 1   | 1   | 1   | 0 | 0.00% |



**Notes:**

- (1) In September of 2013 the Board of Supervisors approved \$45 million in water and sewer revenue bonds to meet critical infrastructure demands. Approximately \$7.2 million of capital project costs will be funded with bond proceeds in FY17.
- (2) FY17 Proposed Budget includes the continued improvement of the Courthouse Area Water system.

**Total Budget**  
**\$52,385,314**

**Notable Changes**

**Personnel**

- 2% salary increase
- Compensation plan implementation
- VRS changes

**Operating/Capital**

- Expenses for operating - capital projects increased 16.39%. The increase reflects additional mechanical improvements to the aging infrastructure and federal requirements.
- Expenses for capacity capital projects decreased due to timing of capital projects. Increased spending on capital projects

## Goals/Objectives

- Provide quality water and uninterrupted service by effectively managing and operating water and wastewater facilities, including water production and transmission, wastewater treatment and conveyance, and residuals disposal to meet customer demands and regulatory requirements.
- Prioritize and implement a capital improvement program to meet expansion, regulatory and other performance goals, while keeping within the constraints of the Utilities Funding sources and policies.
- Effectively manage capital projects, external consultants/contractors, schedules and quality of deliverables to ensure Stafford County citizens are getting the BEST value for every dollar invested in the water and wastewater system.
- Fund maintenance and repair of water and wastewater infrastructure at a level that will provide for continued sustainability of the system infrastructure.
- Develop and support professional and forward-thinking staff to fulfill the technical, administrative, operating and maintenance requirements of the water and wastewater system.

## Service Levels

|   | FY2015<br>Actual | FY2016<br>Budget | FY2017<br>Plan |
|---|------------------|------------------|----------------|
| Billion gallons of water treated (Manual Tracking)                          | 2.912            | 3.623            | 3.819          |
| Billion gallons of wastewater treated (Manual Tracking)                     | 2.795            | 2.746            | 2.794          |
| # of water and sewer billed accounts (HTE System)                           | 34,518           | 34,484           | 35,518         |
| # of Miss Utility locate requests processed (Manual Tracking)               | 17,936           | 20,000           | 20,000         |
| # of backflow preventers inspected and/or tested (Hansen Sys.)              | 230              | 500              | 300            |
| # of water meters read (HTE System)   | 396,583          | 400,000          | 455,000        |
| # of delinquency notices (HTE System)                                       | 32,287           | 31,500           | 39,000         |
| # of delinquent water turn-offs (HTE System)                                | 5,303            | 4,800            | 6,800          |
| Wastewater treatment effectiveness rate - % of days (Manual Tracking)       | 100%             | 100%             | 100%           |
| Drinking water compliance rate - % of days (Manual Tracking)                | 100%             | 100%             | 100%           |
| Operating Cost to treat water (per thousand gallons) (Manual Tracking)      | \$1.26           | \$1.48           | \$1.63         |
| Operating cost to treat wastewater (per thousand gallons) (Manual Tracking) | \$1.46           | \$1.82           | \$2.02         |

## Accomplishments

- Utility workers installed new radios for the water telemetry system. As Stafford County continues to grow, so to the need to streamline operations with increased cost savings. The telemetry system offers long term cost savings, flexibility and access to remote monitoring locations.
- The Little Falls Run and Aquia Wastewater Treatment Facilities both received the NACWA Peak Performance Award. The award recognizes member agency facilities for outstanding compliance of National Pollutant Discharge Elimination System permit limits.

## Did You Know?

Sanitation and drinking water investments have high rates of return: for every \$1 invested, there is a projected \$3-\$34 economic development return (UN WWAP2009).

### FINANCIAL AND RATE STRUCTURE

Stafford County operates the Utilities system as a self-supporting entity. The Utilities Department has three major sources of revenue:

- *Monthly User Fees* pay the operations and maintenance costs of the system and a portion of annual debt service costs.
- *Availability Fees* are used to pay for outstanding debt, the construction of new water supply sources, water and wastewater treatment facilities, and neighborhood projects.
- *Pro Rata Fees* are used to construct the water tanks, water and sewer mains, and pumping stations identified in the Water and Sewer Master Plan.

Other sources of revenue include connection charges, bulk sale of water, septic haulers fees, pump & haul fees, reconnection fees, and inspection fees.

The intent of the County in setting its rates and fees is to cover all costs of providing service to its customers. The rates are structured so that new customers connecting to the system pay the majority of the cost associated with the growth of the system and current users pay the entire cost associated with current operations, including maintenance and rehabilitation.

Stafford County has authority to establish and review water and wastewater rates and adopts an annual budget and capital improvements program. System earnings and issuance of revenue bonds provide financing of capital improvements.

### BILLING AND COLLECTION PROCEDURES

Customers receive a monthly bill for services, which is due within 25 days of the bill date. Meters are read monthly and are only estimated if the meter is inaccessible or cannot be read due to inclement weather.

A 10% penalty is added 25 days from the billing date, at which time the bill becomes delinquent. If the account remains unpaid 40 days from the billing date, the service may be terminated. There is a \$30 reconnection fee to re-establish service and an additional fee of \$25 if service is reconnected after normal working hours. The County utilizes the Virginia Set-off Debt Collection Program, Nationwide Credit Corporation (a recovery company) and the issuance of warrants in debt as a collection means.

# Utilities Fund Revenue

Stafford County FY17 Adopted Budget

|                           | FY 2015<br>Actual          | FY 2016<br>Adopted<br>Budget | Adopted<br>Budget          | FY 2017<br>Changes<br>'16 to '17 |                      |
|---------------------------|----------------------------|------------------------------|----------------------------|----------------------------------|----------------------|
| <b>Revenues</b>           |                            |                              |                            |                                  |                      |
| Water & Sewer Fees        | \$29,018,679               | \$30,870,885                 | \$34,192,736               | \$3,321,851                      | 10.76%               |
| Availability/ProRata Fees | 8,582,303                  | 9,202,500                    | 9,202,500                  | 0                                | 0.00%                |
| Other Charges & Fees      | 1,700,181                  | 1,108,000                    | 1,108,000                  | 0                                | 0.00%                |
| Use of Money & Property   | 173,872                    | 116,295                      | 116,295                    | 0                                | 0.00%                |
|                           | <u>\$39,475,035</u>        | <u>\$41,297,680</u>          | <u>\$44,619,531</u>        | <u>\$3,321,851</u>               | <u>8.04%</u>         |
| <b>Other Sources</b>      |                            |                              |                            |                                  |                      |
| Revenue Bonds             | \$6,707,417                | \$11,528,821                 | \$7,214,000                | (\$4,314,821)                    | -37.43%              |
| Prior Year Fund Balance   | 0                          | 117,634                      | 551,783                    | 434,149                          | 0.00%                |
|                           | <u>\$6,707,417</u>         | <u>\$12,131,000</u>          | <u>\$7,765,783</u>         | <u>(\$3,880,672)</u>             | <u>-31.99%</u>       |
| <b>Total</b>              | <u><u>\$46,182,452</u></u> | <u><u>\$53,428,680</u></u>   | <u><u>\$52,385,314</u></u> | <u><u>(\$558,821)</u></u>        | <u><u>-1.05%</u></u> |

## Water & Sewer Fees

Utilities customers are billed monthly for water consumption and wastewater usage. Stafford County projects 35,277 billed customer accounts by June 2016, a 2.20% increase. The Board of Supervisors approved a rate increase of 6% that became effective July 1, 2015. In order to meet the Department's financial policy and complete the adopted CIP, which includes numerous projects designed to enhance economic development, additional rate increases will be required in the coming years.

## Availability Fees

Customers desiring to use the Stafford County water or wastewater system pay a one-time fee per equivalent dwelling unit (EDU). Currently the availability fees are \$6,900 for water and \$3,500 for wastewater (per EDU). These fees are designated for capital expansion and are used as a source to pay debt service for expansion projects. The budget projects 750 EDUs per year for water service and 713 for sewer service based on recent trends.

## Pro-Rata Fees

Developers pay a pro-rata share of the cost of constructing Stafford's water or wastewater transmission systems. Fees are based on the estimated impact the development project will have on the appropriate water pressure or wastewater zone. The decline of Pro Rata revenue is due to prior year revenue recognition of various pro rata projects under construction.

## Use of Money & Property

Interest is earned on the cash and investment balances of the Utility Enterprise Fund. Interest revenue is expected to decline over the next five years as cash balances are spent down relative to large capital projects that are underway.

## Other Charges & Fees

This category includes all other fees that are not included in the categories listed above.

## Revenue Bonds

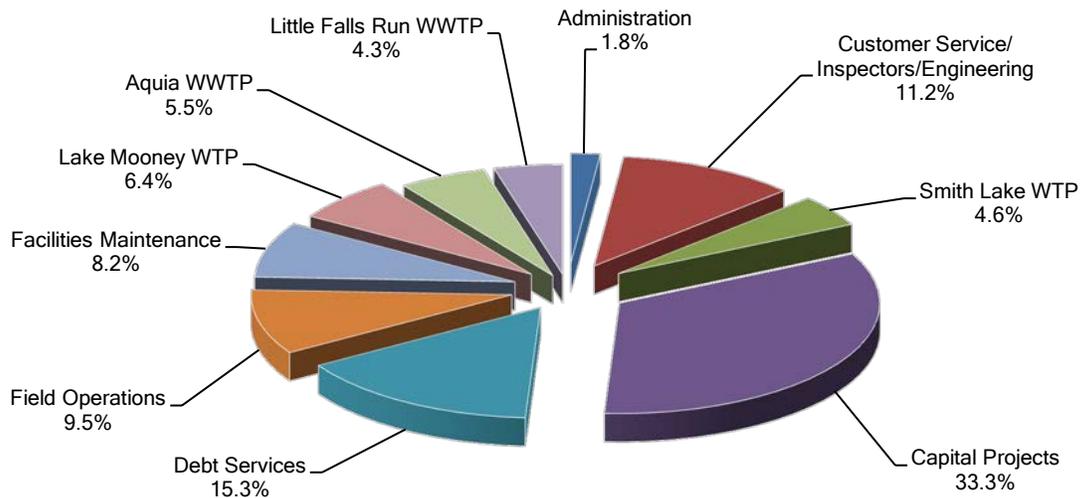
In September 2013, the Board of Supervisor's approved \$45 million of water and sewer revenue bonds. The County issued \$17 million in bonds in 2014 and \$9.5 in 2015 to fund various water and wastewater system improvements. The remaining authorization will be issued in 2017 and 2018. The FY17 & 18 Capital Improvement Plan identifies \$26.09 million of bond funded projects.

## Grants

No grant revenues are projected for FY17

# Utilities Fund Expenditures

| Expenditures                             | FY2015              | FY2016              | FY2017              | FY2017             |               |
|--|---------------------|---------------------|---------------------|--------------------|---------------|
|  | Actual              | Adopted Budget      | Adopted Budget      | Changes            | 16 to 17      |
| Administration                           | \$821,771           | \$869,387           | \$952,168           | \$82,781           | 9.5%          |
| Customer Service/ Inspectors/Engineering | 5,048,019           | 5,259,223           | 5,849,038           | 589,815            | 11.2%         |
| Smith Lake WTP                           | 1,818,293           | 2,358,933           | 2,432,093           | 73,160             | 3.1%          |
| Capital Projects                         | 15,959,991          | 19,297,950          | 17,445,800          | (1,852,150)        | -9.6%         |
| Debt Services                            | 6,707,417           | 7,556,214           | 7,994,289           | 438,075            | 5.8%          |
| Field Operations                         | 4,657,202           | 5,190,201           | 4,979,795           | (210,406)          | -4.1%         |
| Facilities Maintenance                   | 3,597,272           | 4,120,072           | 4,276,606           | 156,534            | 3.8%          |
| Lake Mooney WTP                          | 2,659,958           | 3,243,717           | 3,371,493           | 127,776            | 3.9%          |
| Aquia WWTP                               | 2,656,207           | 2,832,215           | 2,855,462           | 23,247             | 0.8%          |
| Little Falls Run WWTP                    | 1,815,856           | 2,216,223           | 2,228,570           | 12,347             | 0.6%          |
| Abel Lake WTP                            | 239,805             | 0                   | 0                   | 0                  | 0.0%          |
| <b>Total Expenditures</b>                | <b>\$45,981,791</b> | <b>\$52,944,135</b> | <b>\$52,385,314</b> | <b>(\$558,821)</b> | <b>-1.06%</b> |



# Projected Available Cash Balance

Stafford County FY17 Adopted Budget

6/30/2016 Projected Equity in Cash and Investments \$41,915,914

## FY17 Projections:

### Revenues

|                              |              |
|------------------------------|--------------|
| Water & Sewer Fees           | \$34,192,736 |
| Availability & Pro Rata Fees | 9,202,500    |
| Other Charges & Fees         | 1,108,000    |
| Use of Money & Property      | 116,295      |
| Revenue Bonds                | 7,214,000    |

Total Revenues \$51,833,531

### Expenses

|                  |              |
|------------------|--------------|
| Personnel        | \$11,913,636 |
| Operating        | 15,031,633   |
| Capital Projects | 17,445,756   |
| Debt Service     | 7,994,289    |

Total Expenses \$52,385,314

Change in fund balance (551,783)

6/30/2017 Projected Equity in Cash and Investments 41,364,131

### Less:

|                              |               |
|------------------------------|---------------|
| Debt Set Asides              | (\$2,416,344) |
| Construction and Maintenance | (26,559,739)  |

Total Restricted Funds (\$28,976,083)

Unrestricted \$12,388,048

