South Central Wastewater Authority

Financial Statements

Year Ended June 30, 2016

DIXON HUGHES GOODMAN LLP

South Central Wastewater Authority

Petersburg, Virginia

(A Public Body Politic and Corporation Chartered July, 1996)

- Board of Directors -

Robert B. Wilson, Chairman
Dinwiddie County Water Authority

Percy C. Ashcraft, Vice-Chairman
Prince George County

William E. Johnson III, Secretary/Treasurer
City of Petersburg

James J.L. Stegmaier, Member
Chesterfield County

Thomas L. Mattis, Member
City of Colonial Heights

- Officials -

Robert C. Wichser, Executive Director

James C. Gordon, Assistant Executive Director

McGuire Woods, Counsel

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DIXON HUGHES GOODMAN LLP

Independent Auditors' Report

Board of Directors
South Central Wastewater Authority
Petersburg, Virginia

We have audited the accompanying financial statements of the business-type activities of the South Central Wastewater Authority as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the South Central Wastewater Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States; Specifications for Audits of Authorities, Boards and Commissions, issued by the Auditor of Public Accounts of the Commonwealth of Virginia; and the U.S. Department of Agriculture Rural Development Water and Waste Program Audit Guide, issued by the Office of Inspector General. Those standards, specifications and the Guide require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

DIXON HUGHES GOODMAN LLP

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of the South Central Wastewater Authority as of June 30, 2016, and the changes in net assets thereof for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information
Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 – 6 and schedule of changes in net pension liability and related ratios and schedule of contributions on pages 33 – 35 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Government Auditing Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards
In accordance with Government Auditing Standards, we have also issued our report dated November 9, 2016, on our consideration of South Central Wastewater Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the South Central Wastewater Authority's internal control over financial reporting and compliance.

Dixon Hughes Goodman LLP

Chester, Virginia
November 9, 2016

Management's Discussion and Analysis

As management of the South Central Wastewater Authority (Authority), we offer readers of the South Central Wastewater Authority's financial statements this narrative overview and analysis of the financial activities of South Central Wastewater Authority for the fiscal year ended June 30, 2016.

Overview of the financial statements

The Authority's basic financial statements are comprised of two components: (1) financial statements, and (2) notes to the financial statements.

The financial statements of the Authority offer both short and long-term financial information about its activities. The statement of net position provides information about the nature and amounts of the Authority's cash, investments and receivables (assets), and its obligations to creditors (liabilities). All of the Authority's current fiscal year revenues and expenses are accounted for in the statement of revenues, expenses, and changes in net position. This statement measures whether the Authority successfully recovered all of its costs through user charges from the jurisdictions served.

The statement of cash flows provides information on the Authority's cash receipts, cash payments, and net changes in cash resulting from operating, investing, capital, and noncapital financial activities. It also provides insight on the source of cash, the use of cash, and cash changes during the reporting period.

Summary of South Central Wastewater Authority Operations

The South Central Wastewater Authority (SCWWA) staff includes thirty-five (35) full-time employees and contributes to the salaries of the Executive Director, Assistant Executive Director, Office/Business Manager, Laboratory Manager, Maintenance Manager, Chief of Maintenance, and Painter/Carpenter who are shared employees with the Appomattox River Water Authority. The Authority operates a 23 million gallon per day (mgd) wastewater treatment plant located on Pocahontas Island in the City of Petersburg. The Authority treats flow from the cities of Colonial Heights and Petersburg as well as portions of Chesterfield, Dinwiddie, and Prince George counties. Wastewater from the cities is pumped directly to the Authority through five (5) pumping stations. Wastewater from the counties is conveyed through the collection systems of the cities by conveyance agreements executed in 1996.

	2016	**2015**
Total Annual Flow (mg)	**4,867**	4,259
Minimum Day (mgd)	**8.495 (Sept. 2015)**	.329 (Oct. 2014)
Maximum Day (mgd)	**36.658 (Dec. 2015)**	35.008 (June 2015)
Annual Average Day (mgd)	**13.322**	11.668

Financial Highlights

- Selected financial information for 2016 and 2015 is as follows:

	2016	2015
Total capital assets, net	**$ 18,187,291**	$ 17,785,223
Total assets and deferred outflows of resources	**$ 25,135,069**	$ 22,287,677
Total liabilities and deferred inflows of resources	**$ 1,774,272**	$ 1,299,827
Total operating revenues	**$ 6,421,058**	$ 6,152,573
Total operating expenses	**$ 5,388,192**	$ 5,014,114
Change in net position	**$ 2,393,947**	$ (1,051,189)
Ending net position	**$ 23,381,797**	$ 20,987,850

- Operating revenues increased from fiscal year 2015 to fiscal year 2016 by $268,485. Total septage revenues increased as a result of continuing to accept and treat landfill stormwater from Atlantic Waste Management. Electrical credit revenues from EnerNoc (peak-shaving program) ended in May 2016 due to Clean Air Act generator requirements.
- Operating expenses increased by $374,078 from fiscal year 2015 to fiscal year 2016. Equipment repair ($76,500), Salaries ($55,352-based on ARWA salary split true-up), and Equipment Replacement ($295,000). Decreased costs were seen in some categories such as Nutrient Credit Costs, Utilities, Fuel, Sludge Disposal, and Laboratory Services.
- The Authority had paid off all debt service in October 2014.
- Fiscal year 2016 was the fifth year that nutrient credit purchases were due to the Virginia Nutrient Exchange. These credits were for calendar year 2015 and were due in April 2016. The credits are to offset excess nutrients (Total Nitrogen and Total Phosphorus) generated and released in the facility effluent above the permitted annual waste-load allocation. The Authority spent $564,874 on nutrient credits during 2016.
- Also, during 2016, the Authority was able to sell $390,865 in nutrient credits to other governmental entities.

Authority Highlights

- The treatment facility discharge effluent quality met all VPDES permit limits during the fiscal year and no significant problems were encountered with operating the plant.
- The average flow for fiscal year 2016 was 1.654 mgd higher than for fiscal year 2015. Rainfall in fiscal year 2016 (49.68 inches) was slightly lower than in fiscal year 2015 (50.77 inches). Fiscal year 2016 was moderately wet at the treatment plant's rain gauge with the maximum facility flow occurring on December 23, 2015 during a rain event. The treatment plant recorded 8.86 inches of rain for December 2015.
- Authority staff developed and implemented private exchanges of nutrient credits for the 2016 through contracts with Chesterfield and Henrico counties and contracts for 2017, 2018, and 2019 through Chesterfield. These credits cost less than credits purchased through the Virginia Nutrient Credit Exchange Association and provide both Chesterfield and Henrico counties (who have excess nutrient credits to sell at this time) more revenue than they would have received through the Virginia Nutrient Credit Exchange Association.

The Authority is also maintaining an active watch on regulatory issues such as the potential for point source nutrient waste-load changes in the James River Estuary. The following provides more detail.

Nutrients

The Virginia Department of Environmental Quality (DEQ) finalized regulations establishing reduced limits for nitrogen and phosphorus discharges into the Chesapeake Bay and its tributaries in November 2005. The allocations for the Authority adopted by the Virginia State Water Control Board are based on concentrations of 5 milligrams per liter of total nitrogen and 0.5 milligrams per liter of total phosphorus.

In December 2010, U.S. EPA finalized the Chesapeake Bay Total Maximum Daily Load (TMDL). This is a Bay-wide program that could result in further reductions to wastewater treatment facility allocations of nutrients. The individual states in the Bay watershed will be responsible for compliance with these mandates from the U.S. EPA. One of the requirements of the TMDL is that each state submits Watershed Implementation Plans (WIP's) detailing how they intend to meet the nutrient load caps imposed by U.S. EPA. States including Virginia also will need to develop two-year milestone reports and submit these bi-annual progress reports to U.S. EPA showing what progress had been made.

Facilities within the James River watershed are facing the possibility of additional annual nutrient waste-load reductions. One of the issues raised during the TMDL was the harmful and toxic algae blooms in the middle segment of the James River. The end result was that DEQ adopted the task of conducting a detailed and scientifically acceptable study on algae chlorophyll within the middle segment of the James River to determine if further reductions to nutrient loads within the James River basin are necessary to prevent and control harmful and toxic algae blooms. The results of this study and any potential reductions to nutrient allocations will not be known until 2017. Such consequences may include reductions to wastewater plant nutrient allocations to be based on current actual flows rather than design flows. Such reductions would have a significant impact on wastewater plants discharging into the James River, including SCWWA.

The SCWWA Board of Directors elected to defer the nutrient reduction upgrade project at this time and instead purchase nutrient credits. In February 2012, the Board gave indication that constructing a nutrient reduction project would probably not be approved by their various governing bodies until the cost of debt service was less than the purchase of nutrient credits. Given current project cost estimates and credit costs, this is expected to take place no earlier than 2022. It is possible, however, that regulatory drivers that would eliminate surplus credits available (such as a reduction in middle James River point-source allocations or localities using excess nutrient credits to offset non-point loads) would require the project be on-line by 2022 or perhaps even earlier..

Wet Weather Infiltration & Inflow (I&I)

The wastewater facility biological treatment process is very vulnerable to upsets due to high influent flows during wet-weather events. The base design of the SCWWA plant allows for a peak day flow of 57.5 MGD (2.5 times average) and a peak hour flow of 69.0 MGD (3.0 times average). The Authority does not own the wastewater collection systems transporting the influent to the SCWWA facility. From the regulatory perspective, there is the potential that the contributing jurisdictions will be responsible for finding and eliminating I & I sources in their collection systems. The jurisdictions may also need to consider constructing and operating flow equalization facilities to mitigate the I & I that is not practicable to eliminate to prevent surges to the Authority treatment plant. The City of Petersburg has installed a wastewater equalization (holding) basin at their Poor Creek Pump Station to mitigate peak flows from this sewer-shed. In recent years, the Authority has begun noting that U.S. EPA has begun compliance actions in Virginia against facilities/jurisdictions with flows in the range of 10 to 100 MGD that have noted sewer system overflows in the collection system.

Biosolids Handling

South Central Wastewater Authority utilizes land application for disposal of generated biosolids. Revised Virginia biosolids regulations were approved by the Virginia State Water Control Board in September 2011 and while not all aspects of the regulatory changes were favorable, the regulations do not constitute any significant additional regulatory burden for South Central's biosolids land application program. The Authority presently has an agreement with the Hopewell Regional Wastewater Facility (HRWWF) for back-up incineration of SCWWA biosolids at the HRWWF should the need arise. As of June 30, 2016, SCWWA had not encountered the need to send biosolids to HRWWF for disposal by incineration.

Economic conditions

The Authority continues to operate under sound management current working capital and positive cash flows from operations. Overall finances for the Authority for fiscal year 2016 as viewed by management, including the Board of Directors, is considered sound.

Contacting the Authority

Questions concerning this report or requests for additional information should be directed to the Executive Director, 21300 Chesdin Road, Petersburg, Virginia 23803, telephone (804) 590-1145.

South Central Wastewater Authority
Statement of Net Position
June 30, 2016

	Business-Type Activities
ASSETS	
Unrestricted current assets:	
Cash and cash equivalents	$ 3,807,791
Accounts receivable	436,968
Inventories	538,664
Total unrestricted current assets	4,783,423
Restricted current assets:	
Board restricted - cash and cash equivalents for equipment repair and replacement	2,027,965
Total current assets	6,811,388
Property, plant and equipment - net	18,187,291
DEFERRED OUTFLOW OF RESOURCES	
Deferred pension contributions	136,390
Total assets and deferred outflows	$ 25,135,069
LIABILITIES	
Current liabilities payable from unrestricted assets:	
Accounts payable	$ 350,869
Compensated absences payable	179,905
Total current liabilities	530,774
Long-term liabilities:	
Net pension liability	526,652
Other post-employment benefit obligations	59,700
Total long-term liabilities	586,352
Total liabilities	1,117,126

	Business-Type Activities
DEFERRED INFLOW OF RESOURCES	
Refunds due to member localities	491,870
Deferred pension investment experience	165,276
Total deferred inflow of resources	657,146
Total liabilities and deferred inflows	1,774,272
NET POSITION	
Invested in capital assets, net of related debt	18,187,291
Unrestricted	5,173,506
Total net position	23,360,797
	$ 25,135,069

South Central Wastewater Authority
Statement of Revenues, Expenses and Changes in Net Position
Year Ended June 30, 2016

	Business-Type Activities
Revenues - charges for services - intergovernmental	$ 6,421,058
Operating expenses:	
Salaries and benefits	2,360,385
Equipment rental, repair and replacement	650,030
Nutrient credit purchases	564,874
Chemicals	519,798
Utilities	409,935
Sludge disposal	291,811
Professional fees	200,110
Laboratory	93,545
Training and meetings	77,750
Office supplies and software	72,691
Insurance	55,705
Fuel	34,022
Machinery tax	31,773
Supplies	25,763
Total operating expenses	5,388,192
Operating income before depreciation	1,032,866
Depreciation expense	961,959
Net operating income	70,907
Nonoperating revenues	
Intergovernmental:	
Equipment repair and replacement	577,514
Operations and maintenance reserves	488,086
Total intergovernmental expenses	1,065,600
Miscellaneous income - primarily septage revenue	835,075
Sale of nutrient credits	390,865
Gain on sale of equipment	10,500
Total nonoperating revenue	2,302,040
Change in net position	2,372,947
Net position - beginning of year	20,987,850
Net position - end of year	$ 23,360,797

See accompanying notes.

South Central Wastewater Authority
Statement of Cash Flows
Year Ended June 30, 2016

	Business-Type Activities
Cash flows from operating activities:	
Cash receipts from localities	$ 7,090,183
Cash payments to employees for services	(2,340,683)
Cash payments for goods and services	(2,785,117)
Net cash provided by operating activities	1,964,383
Cash flows from noncapital financing activities:	
Operations and maintenance reserves	488,086
Sale of nutrient credits	390,865
Miscellaneous income	835,075
Net cash provided by noncapital financing activities	1,714,026
Cash flows from capital and related financing activities:	
Cash received from localities for equipment repair and replacement	577,514
Proceeds from sale of equipment	10,500
Plant and equipment purchases/disposals (net)	(1,364,027)
Net cash used by capital and related financial activities	(776,013)
Net change in cash and cash equivalents	2,902,396
Cash and cash equivalents, beginning of year	2,933,360
Cash and cash equivalents, end of year	$ 5,835,756
Cash and cash equivalents - as shown on the statement of net position:	
Cash and cash equivalents	$ 3,807,791
Cash and cash equivalents - board restricted for equipment repair and replacement	2,027,965
	$ 5,835,756
Reconciliation of net operating loss to net cash from operating activities:	
Operating income	$ 70,907
Adjustments to reconcile to net cash from operating activities:	
Depreciation	961,959
Change in:	
Accounts receivable	354,520
Inventories	102,421
Accounts payable	140,269
Net pension liability and related deferred inflows/outflows of resources	(71,998)
Compensated absences payable	23,072
Refunds due to member localities	378,733
Other post employment benefit obligations	4,500
Net cash provided by operating activities	$ 1,964,383

See accompanying notes.

Notes to Financial Statements

1. Organization and Nature of Business

The South Central Wastewater Authority (Authority) is a public body organized under the provisions of the Virginia Water and Sewer Authorities Act, by the governing bodies of the City of Petersburg, Virginia, the City of Colonial Heights, Virginia, and the Counties of Chesterfield, Dinwiddie, and Prince George, Virginia. The purpose of the Authority is to operate and maintain wastewater treatment and related facilities for the members of the Authority.

2. Summary of Significant Accounting Policies

Reporting entity

The Authority's governing body is comprised of one member appointed by each of the five participating jurisdictions. These governmental entities have an ongoing financial responsibility to the Authority because its continued existence depends on continued funding by the participants. The Authority is a legally separate entity from the participating governments and no participating government has access to its resources or surpluses, nor is any participant liable for the Authority's debts or deficits. The Authority also has the ability to finance its capital projects through user charges or the sale of revenue bonds.

The Authority has been determined to be a joint venture of the five participating jurisdictions. The Authority is not a component unit of any of the participating governments. There are no component units to be included in the Authority's financial statements.

Basis of accounting

The Authority utilizes the economic resources management focus and the accrual basis of accounting in preparing its financial statements where revenues are recognized when earned and expenses when incurred. The Authority has adopted allowable standard set by the Governmental Accounting Standards Board (GASB).

The Statement of Net Assets presents the Authority's assets and liabilities, with the difference reported as net assets. Net assets are categorized into three components:

Invested in capital assets, net of related debt - represents the Authority's total investment in capital assets, net of accumulated depreciation reduced by outstanding balances for bonds, notes and other debt that are attributed to the acquisition, construction or improvement of those assets.

Restricted net assets - result when constraints placed on net asset use are either externally imposed by law through constitutional provisions or enabling legislation.

Unrestricted net assets - consist of net assets which do not meet the definition of the two preceding categories.

Cash and cash equivalents and restricted cash and cash equivalents

Cash and cash equivalents and restricted cash and cash equivalents include amounts in demand deposits as well as short-term investments, stated at cost which approximates fair value, with original maturity dates within three months of the dates acquired by the Authority. Restricted cash as presented in the Statement of Net Position is comprised of board restricted funds to be used for the future repair and replacement of equipment throughout the plant. This is not included in restricted net assets as it is not externally imposed by law through constitutional provisions or enabling legislation.

Accounts receivable

The Authority determined that no allowance for doubtful accounts is necessary at June 30, 2016, due to substantially all of the receivables being due from member localities and considered to be fully collectable.

Inventories

Inventories are valued at cost using the first-in, first-out method. Inventories consist of expendable supplies held for consumption and are recorded as expenses when used (consumption method).

Property, plant and equipment

Property, plant and equipment received at the Authority's inception were reported at the net depreciable value, which approximated market value.

Purchased property, plant and equipment with a value of $5,000 or greater is recorded at cost. Maintenance and repairs are expensed in the period incurred; major renewals and betterments are capitalized. When items of property are sold or retired, the related costs are removed from the accounts and any gain or loss is included in current year's operations. Depreciation is charged as an expense against operations and has been provided generally using the straight-line method over the following estimated useful lives:

Sewer system and plant	40 years
Plant machinery	15 years
Equipment and vehicles	5 years

Compensated absences payable

Authority employees are granted vacation and sick leave in varying amounts. In the event of termination other than retirement, Authority employees are paid for accumulated vacation days based on years of service and are not paid for accumulated sick leave. Upon retirement, Authority employees are paid for accumulated vacation days and a portion of accumulated sick leave. The unused vested portion of vacation and sick leave is recorded as a liability at year end.

Credit risk

Financial instruments that potentially subject the Authority to concentrations of credit risk consist principally of cash, cash equivalents, investments, and trade accounts receivable. The Authority places its cash and cash equivalents with high credit quality financial institutions whose credit ratings are monitored by management to minimize credit risk. Investments of the Authority are comprised of obligations of the United States or agencies thereof to minimize credit risk. The concentration of credit risk for accounts receivable is limited due to the fact that almost all of the receivables being due from member localities.

Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses and disclosure of contingent assets and liabilities for the reported periods. Actual results could differ from those estimates and assumptions.

Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Political Subdivision's Retirement Plan and the additions to/deductions from the Political Subdivision's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Subsequent events

In preparing these financial statements, the Authority has evaluated events and transactions for potential recognition or disclosure through November 9, 2016, the date the financial statements were available to be issued.

3. Deposits and Investments

Deposits

The Authority follows a deposit policy in accordance with statutes of the Commonwealth of Virginia. $6,517,435 of the Authority's deposits were insured by federal depository insurance or the provisions of the Commonwealth of Virginia Security for Public Deposits Act (Act). Under the Act, banks holding public deposits in excess of the amounts insured by federal depository insurance must pledge collateral in the amount of 50 percent of excess deposits to a collateral pool in the name of the State Treasury Board. Savings and loan institutions are required to collateralize 100 percent of deposits in excess of federal depository insurance limits. The State Treasury Board has the authority to assess additional collateral from participating financial institutions to cover collateral shortfalls in the event of default and is responsible for monitoring compliance with the collateralization and reporting requirements of the Act and for notifying local governments of compliance by banks and savings and loan institutions. At June 30, 2016, the carrying amount of the Authority's deposits was $5,835,756 and the associated bank balance was $6,517,435. Differences between the Authority's carrying value of deposits and the bank balance were due to outstanding checks, deposits in transit and other reconciling items.

Investment policy

In accordance with the Code of Virginia (1950), as amended, and other applicable laws and regulations, the Authority's investment policy (Policy) permits investments in U.S. government obligations, obligations of the Commonwealth of Virginia or political subdivisions thereof, negotiable certificates of deposit, negotiable bank deposit notes, repurchase agreements, bankers' acceptances, prime quality commercial paper, corporate notes, mortgage or asset-backed securities, money market funds, guaranteed investment contracts (GICs), and the State Treasurer's Local Government Investment Pool.

Concentration of credit risk

The Policy establishes limitations on portfolio composition by issuer in order to control concentration of credit risk. No more than 5% of the Authority's portfolio will be invested in the securities of any one issuer with the exception of: (1) the U.S. government or agencies thereof, (2) fully insured/collateralized certificates of deposit or repurchase agreements that are collateralized by the U.S. government or agencies thereof, and (3) mutual funds whereby the portfolio is limited to U.S. government or agency securities.

As of June 30, 2016, the Authority held no investments.

4. Property, Plant and Equipment

Property, plant and equipment owned by the Authority consist of the following:

	Balance July 1, 2015	Increases	Decreases	Balance June 30, 2016
Capital assets not being depreciated:				
Land	$ 92,968	$ -	$ -	**$ 92,968**
Construction in progress	1,961,618	1,121,633	(1,058,416)	**2,024,835**
Total capital assets not being depreciated	2,054,586	1,121,633	(1,058,416)	**2,117,803**
Other capital assets:				
Sewer system and plant	31,393,912	1,024,080	-	**32,417,992**
Plant machinery	7,184,207	135,435	-	**7,319,642**
Equipment and vehicles	2,707,320	141,295	(12,852)	**2,835,763**
Total other capital assets at historical cost	41,285,439	1,300,810	(12,852)	**42,573,397**
Accumulated depreciation for:				
Sewer system and plant	(17,654,090)	(682,564)	-	**(18,336,654)**
Plant machinery	(5,672,129)	(170,109)	-	**(5,842,238)**
Equipment and vehicles	(2,228,583)	(109,286)	12,852	**(2,325,017)**
Total accumulated depreciation	(25,554,802)	(961,959)	12,852	**(26,503,909)**
	$ 17,785,223	$ 1,460,484	$ (1,058,416)	**$ 18,187,291**

6. Defined Benefit Pension Plan

The Authority contributes to the Virginia Retirement System (VRS), an agent and cost-sharing multiple-employer defined benefit pension plan administered by the VRS.

Plan description

All full-time, salaried permanent (professional) employees of the Authority are automatically covered by VRS Retirement Plan upon employment. This plan is administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. The Political Subdivision Retirement Plans are an agent, multiple-employer plan. Members earn one month of service credit for each month they are employed and they and their employer are paying contributions to VRS. Members are eligible to purchase prior public service, based on specific criteria as defined in the Code of Virginia, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave and previously refunded service.

The System administers three different benefit structures for covered employees – Plan 1, Plan 2, and, Hybrid. Each of these benefit structures has a different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out below:

VRS PLAN 1:

About VRS Plan 1

VRS Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. Employees are eligible for VRS Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013.

Eligible members

Employees are in VRS Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013.

Hybrid opt-in election

VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.

The Hybrid Retirement Plan's effective date for eligible VRS Plan 1 members who opted in was July 1, 2014.

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.

Members who were eligible for an optional retirement plan (ORP) and had prior service under VRS Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as VRS Plan 1 or ORP.

Retirement contributions

Members contribute up to 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Some school divisions and political subdivisions elected to phase in the required 5% member contribution; all employees will be paying the full 5% by July 1, 2016. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment. Beginning July 1, 2012, the Authority opted for employees to pay the entire 5% member contribution.

Creditable service

Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.

Vesting

Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund.

Members are always 100% vested in the contributions that they make.

Calculating the benefit

The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement.

An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.

Average final compensation

A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.

Service retirement multiplier

The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.7%. The retirement multiplier for sheriffs and regional jail superintendents is 1.85%. The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.7% or 1.85% as elected by the employer.

Normal retirement age

Age 65 with credit of 5 years of service.

Earliest unreduced retirement eligibility

Members who are not in hazardous duty positions are eligible for an unreduced retirement benefit at age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service.

Hazardous duty members are eligible for an unreduced retirement benefit at age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.

Earliest reduced retirement eligibility

Members who are not in hazardous duty positions may retire with a reduced benefit as early as age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service.

Hazardous duty members are eligible for a reduced retirement benefit at age 50 with at least five years of creditable service.

Cost-of-living adjustment (COLA) in retirement

The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%.

Eligibility:

For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date.

For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.

Exceptions to COLA effective dates

The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:

- The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013.
- The member retires on disability.
- The member retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP).
- The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program.
- The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.

Disability coverage

Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.

Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.

VSDP members are subject to a one-year waiting period before becoming eligible for non-work related disability benefits.

Purchase of prior service

Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. When buying service, members must purchase their most recent period of service first. Members also may be eligible to purchase periods of leave without pay.

VRS PLAN 2:

About VRS Plan 2

VRS Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. Employees are eligible for VRS Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.

Eligible members

Employees are in VRS Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.

Hybrid opt-in election

VRS Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.

The Hybrid Retirement Plan's effective date for eligible VRS Plan 2 members who opted in was July 1, 2014.

If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.

Members who were eligible for an optional retirement plan (ORP) and have prior service under VRS Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as VRS Plan 2 or ORP.

Retirement contributions

Same as VRS Plan 1.

Creditable service

Same as VRS Plan 1.

Vesting

Same as VRS Plan 1.

Calculating the benefit

See definition under VRS Plan 1.

Average final compensation

A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.

Service retirement multiplier

Same as Plan1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013.

Normal retirement age

Normal Social Security retirement age. Political subdivisions hazardous duty employees: same as Plan 1.

Earliest unreduced retirement eligibility

Members are eligible for an unreduced retirement benefit when they reach normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90.

Earliest reduced retirement eligibility

Members may retire with a reduced benefit as early as age 60 with at least five years (60 months) of creditable service.

Hazardous duty members are eligible for a reduced retirement benefit at age 50 with at least five years of creditable service.

Cost-of-living adjustment (COLA) in retirement

The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%.

Eligibility

Same as VRS Plan 1
Exceptions to COLA Effective Dates:
Same as VRS Plan 1

Disability coverage

Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.

Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.

VSDP members are subject to a one-year waiting period before becoming eligible for non-work related disability benefits.

Purchase of prior service

Same as VRS Plan 1.

HYBRID RETIREMENT PLAN

About the hybrid retirement plan

The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. Most members hired on or after January 1, 2014 are in this plan, as well as VRS Plan 1 and VRS Plan 2 members who were eligible and opted into the plan during a special election window. (See "Eligible Members")

The defined benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.

The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions.

In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.

Eligible members

Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:

- State employees*
- School division employees
- Political subdivision employees*
- Judges appointed or elected to an original term on or after January 1, 2014

  Members in VRS Plan 1 or VRS Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014.

***Non-eligible members**

Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:

- • Members of the State Police Officers' Retirement System (SPORS)
- • Members of the Virginia Law Officers' Retirement System (VaLORS)
- • Political subdivision employees who are covered by enhanced benefits for hazardous duty employees

Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under VRS Plan 1 or VRS Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select VRS Plan 1 or VRS Plan 2 (as applicable) or ORP.

Creditable service

Defined benefit component

Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit

Defined contributions component

Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

Vesting

Defined benefit component

Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. VRS Plan 1 or VRS Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.

Defined contributions component

Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan.

Retirement contributions

A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

Members are always 100% vested in the contributions that they make.

Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service:

- After two years, a member is 50% vested and may withdraw 50% of employer contributions.
- After three years, a member is 75% vested and may withdraw 75% of employer contributions.
- After four or more years, a member is 100% vested and may withdraw 100% of employer contributions.

Distribution is not required by law until age 70½.

Calculating the benefit

Defined benefit component

See definition under VRS Plan 1

Defined contribution component

The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.

Average final compensation

Same as VRS Plan 2. It is used in the retirement formula for the defined benefit component of the plan.

Service retirement multiplier

The retirement multiplier is 1.0%.

For members that opted into the Hybrid Retirement Plan from VRS Plan 1 or VRS Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans.

Normal retirement age

Defined benefit component

Same as VRS Plan 2.

Defined contribution component

Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest unreduced retirement eligibility

Defined benefit component

Members are eligible for an unreduced retirement benefit when they reach normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90.

Defined contribution component

Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Earliest reduced retirement eligibility

Defined benefit component

Members may retire with a reduced benefit as early as age 60 with at least five years (60 months) of creditable service.

Defined contribution component

Members are eligible to receive distributions upon leaving employment, subject to restrictions.

Cost-of-living adjustment (COLA) in retirement

Cost of living adjustment (COLA) in retirement

Defined benefit component

Same as VRS Plan 2.

Defined contribution component

Not applicable.

Eligibility

Same as VRS Plan 1 and VRS Plan 2.

Exceptions to COLA effective dates

Same as VRS Plan 1 and VRS Plan 2.

Disability coverage

Eligible political subdivision and school division (including VRS Plan 1 and VRS Plan2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides and employer-paid comparable program for its members.

State employees (including VRS Plan 1 and VRS Plan2 opt-ins) participating in the Hybrid Retirement Plan are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.

Hybrid members (including VRS Plan 1 and VRS Plan 2 opt-ins) covered under VSDP or VLDP are subject to a one-year waiting period before becoming eligible for non-work related disability benefits.

Purchase of prior service

Defined benefit component

Same as VRS Plan 1 with the following exceptions:

- Hybrid Retirement Plan members are ineligible for ported service
- The cost for purchasing refunded service is the higher of 4% of creditable compensation or average final compensation
- Plan members have one year from their date of hire or return from leave to purchase all but refunded prior service at approximate normal cost. After the one-year period, the rate for most categories of service will change to actuarial cost

Defined contribution component

Not applicable.

Employees covered by benefit terms

As of the June 30, 2014, actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	Number
Inactive members or their beneficiaries currently receiving benefits	18
Inactive members:	
Vested	3
Non-vested	18
Active elsewhere in VRS	10
Total inactive members	31
Active members	33
Total	82

Contributions

Plan members are required by Title 51.1 of the Code of Virginia (1950), as amended, to contribute 5% of their compensation toward retirement. All or part of the 5% member contribution may be assumed by the employer. Beginning July 1, 2012 new employees were required to pay the 5% member contribution. In addition, for existing employees, employers were required to begin making the employee pay the 5% member contribution. This could be phased in over a period up to 5 years and the employer is required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution. In addition, the Authority is required to contribute the remaining amounts necessary to fund its participation in the VRS using the actuarial basis specified by the Code of Virginia and approved by the VRS Board of Trustees. The Authority's contribution rate for the fiscal year ended June 30, 2016 was 8.84% of annual covered payroll.

Net pension liability

The Authority's net pension liability was measured as of June 30, 2015. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2014, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2015.

Actuarial assumptions

The total pension liability for General Employees in the Authority's Retirement Plan was based on an actuarial valuation as of June 30, 2014, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2015.

Inflation	2.5%
Salary increases, including inflation	3.5% - 5.35%
Investment rate of return	7.0%, net of pension plan investment expenses, Including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of pension liabilities.

Mortality rates: 14% of deaths are assumed to be service related

Largest 10 – Non-LEOS:

Pre-Retirement:

RP-2000 Employee Mortality Table Projected with Scale AA to 2020 with males set forward 4 years and females were set back 2 years.

Post-Retirement:

RP-2000 Combined Mortality Table Projected with Scale AA to 2020 with males set forward 1 year.

Post-Disablement:

RP-2000 Disability Life Mortality Table Projected to 2020 with males set back 3 years and no provision for future mortality improvement

All Others (Non 10 Largest) – Non-LEOS:

Pre-Retirement:

RP-2000 Employee Mortality Table Projected with Scale AA to 2020 with males set forward 4 years and females were set back 2 years.

Post-Retirement:

RP-2000 Combined Mortality Table Projected with Scale AA to 2020 with males set forward 1 year.

Post-Disablement:

RP-2000 Disability Life Mortality Table Projected to 2020 with males set back 3 years and no provision for future mortality improvement

The actuarial assumptions used in the June 30, 2015 valuation were based on the results of an actuarial experience study for the period from July 1, 2008 through June 30, 2014. Changes to the actuarial assumptions as a result of the experience study are as follows:

Largest 10 – Non-LEOS:

- - Update mortality table
- - Decrease in rates of service retirement
- - Decrease in rates of disability retirement
- - Reduce rates of salary increase by 0.25% per year

All Others (Non 10 Largest) – Non-LEOS:

- - Update mortality table
- - Decrease in rates of service retirement
- - Decrease in rates of disability retirement
- - Reduce rates of salary increase by 0.25% per year

Long-term expected rate of return

The long-term expected rate of return on pension investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-Term Expected Rate of Return	Weighted Average Long-Term Expected Rate of Return
U.S. Equity	19.50%	6.46%	1.26%
Developed Non U.S. Equity	16.50%	6.28%	1.04%
Emerging Market Equity	6.00%	10.00%	0.60%
Fixed Income	15.00%	0.09%	0.01%
Emerging Debt	3.00%	3.51%	0.11%
Rate Sensitive Credit	4.50%	3.51%	0.16%
Non Rate Sensitive Credit	4.50%	5.00%	0.23%
Convertibles	3.00%	4.81%	0.14%
Public Real Estate	2.25%	6.12%	0.14%
Private Real Estate	12.75%	7.10%	0.91%
Private Equity	12.00%	10.41%	1.25%
Cash	1.00%	(1.50%)	(0.02%)
Total	100.00%		5.83%
	Inflation		2.50%
*Expected arithmetic nominal return			8.33%

*Using stochastic projection results provides an expected range of real rates of return over various time horizons. Looking at one year results produces an expected real return of 8.33% but also has a high standard deviation, which means there is high volatility. Over larger time horizons, the volatility declines significantly and provides a median return of 7.44%, including expected inflation of 2.50%.

Discount rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2018, the rate contributed by the employer for the Political Subdivision Retirement Plan will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2018 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore the Long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in net pension liability (asset)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) – (b)
Balances at June 30, 2015	$ 3,742,577	$ 3,170,606	$ 571,971
Changes for the year:			
Service cost	171,384	-	171,384
Interest	257,015	-	257,015
Difference between expected and actual results	(116,926)	-	(116,926)
Contributions – employer	-	134,611	(134,611)
Contributions – employee	-	76,008	(76,008)
Net investment income	-	148,134	(148,134)
Benefit payments, including refunds of employee contributions	(141,873)	(141,873)	-
Administrative expense	-	(1,930)	1,930
Other changes	-	(31)	(31)
Net changes	169,600	214,919	(45,319)
Balances at June 30, 2016	$ 3,912,177	$ 3,385,525	$ 526,652

Sensitivity of the net pension liability to changes in the discount rate

The following represents the net pension liability calculated using the stated discount rate, as well as what the net position liability would be if it were calculated using a stated discount rate that is one-percentage-point lower or one-percentage-point higher than the current rate:

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Plan's Net Pension Liability (Asset)	$ 1,040,837	$ 526,652	$ 100,440

Pension expense and deferred outflows of resources and deferred inflows of resources related to pensions

For the year ending June 30, 2016, the Authority recognized pension expense of $93,783. At June 30, 2016, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred of Outflows of Resources	Deferred Inflows of Resources
Employer contributions made subsequent to the measurement date	$ 136,390	$ -
Differences between expected and actual experience	-	82,127
Net difference between projected and actual earnings on plan investments	-	83,149
	$ 136,390	$ 165,276

Amounts reported as deferred inflows of resources related to pensions as of June 30, 2016, will be recognized in pension expense as follows:

2017	$ (67,591)
2018	(67,591)
2019	(45,323)
2020	15,229
Total	$ (165,276)

8. Other Post-Employment Benefits Plan

The Authority implemented GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (GASB 45), for the fiscal year ended June 30, 2016. This implementation required the Commission to report an actuarially determined liability for the present value of projected future other than postemployment benefits (OPEB) for retired and active employees on the financial statements.

Plan description

General employees can purchase health insurance at published rates if they retire under the VRS general employees plan. Reduced retirement under the VRS plan is at the earlier of age 50 with 10 years of service or age 55 with 5 years of service. If hired after July 1, 2010 and do not have 5 years of vested service by January 1, 2013 then the earlier retirement age is the earlier of age 60 with 5 years of service or 90 combined age and service points for other employees.

Funding policy

These benefits are financed on a pay-as-you-go basis.

Annual OPEB cost and net OPEB obligation

The Authority's annual other post-employment benefit (OPEB) cost (expense) is calculated based on the annual required contribution of the employer (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement 45.

The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize the unfunded actuarial liabilities (or funding excess) over a period not exceed thirty years. The following table shows the components of the Authority's annual OPEB cost for the year, the amount actually contributed to the plan, and changes in the Authority's net OPEB obligation.

Annual required contribution	$ 18,100
Interest on net OPEB obligation	1,900
Adjustment to annual required contribution	(2,500)
Annual OPEB cost (expense)	17,500
Contributions made	(13,000)
Increase in net OPEB obligation	4,500
Net OPEB obligation, beginning of year	55,200
Net OPEB obligation, end of year	$ 59,700

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

For the fiscal year ended June 30, 2016, the annual OPEB cost was $17,500, the percentage of annual OPEB cost contributed to the plan was 74.30% and the net OPEB liability was $59,700. The net OPEB liability at June 30, 2016 of $59,700 is included in the accompanying statement of net assets.

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded (Unfunded) Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL as % Payroll
July 1, 2015	$ -	$ 176,000	$ 176,000	0.00%	$ 1,637,239	10.75%
July 1, 2014	$ -	$ 172,000	$ 172,000	0.00%	$ 1,589,883	11.07%
July 1, 2013	$ -	$ 166,800	$ 166,800	0.00%	$ 1,522,352	10.96%

Actuarial methods and assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan member to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the July 1, 2013 actuarial valuation, the projected unit credit actuarial cost method was used. The actuarial assumptions included a 3.50% investment rate of return (net of administrative expenses), which is expected long-term investment returns on the employer's own investments calculated, and an annual healthcare cost trend rate of 7.5% initially, gradually decreasing over time. By 2030 the rate of increase is 5.70%, and by 2050 5.0 percent. The rates include a 2.5% inflation assumption. The UAAL is being amortized as a level percentage of projected payroll on a closed basis over thirty years.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, so actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

9. Deferred Compensation Plan

Eligible employees of the Authority may participate in a deferred compensation plan in accordance with Internal Revenue Code section 457. The plan permits participants to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination of employment, retirement, death or an unforeseen emergency. The Authority has no fiduciary responsibility for the plan, has no liability for losses incurred under the plan as the plan is administered by the U.S. Conference of Mayors and the plan is not accessible by the Authority's creditors; therefore, any related assets and liabilities are not reflected in the financial statements.

10. Nutrient Credit Purchases and Sales of Excess Nutrient Credits

During the current year, the Authority was required to purchase nutrient credits in order to remain in compliance with environmental regulations. The total cost of these credits in the current year was $564,874 and these credits will be required to be purchased in future years to continue to meet environmental regulations until the Authority completes the nutrient upgrade project (see Note 11) to reduce the levels of nitrogen and phosphorus. The SCWWA Board committed to purchase credits from the Virginia Nutrient Credit Exchange Association or from the counties of Chesterfield and Henrico through calendar year 2017.

During the current year, the Authority was able to sell excess nutrient credits through the Virginia Nutrient Credit Exchange Association. The total sale price of these credits in the current year was $390,865.

11. Commitments

The Authority is still in the initial stages of an approximately $55,000,000 (in 2010 dollars – year in which estimate was established) plant improvement to reduce nitrogen and phosphorus in the effluent, as required by the Chesapeake Bay restoration standards. This improvement will be primarily financed by obtaining grant funding and through the issuance of bonds. The bonds will be repaid by the member localities based on their share of the plant capacity. The Board originally deferred this upgrade for at least 10 years due to the cost of debt service versus nutrient credits. However, regulatory drivers may require it to be done in 2017.

12. Contingency

The Authority relies on its member localities' dues for operating income as well as certain reserves. The City of Petersburg is the Authority's largest member locality as it has historically accounted for over 50% of total wastewater flow. During the year ended June 30, 2016, Petersburg accounted for 57.85% of the Authority's wastewater flow. The City of Petersburg has faced significant financial difficulties in recent years, including an operating deficit of $57,998,939 for 2015 (most recently audited fiscal year). As of June 30, 2016, Petersburg was behind on their payments to the Authority by two months, totaling $367,681. Also, Petersburg was delinquent by up to six months during 2016 and has continued to fall behind on payments subsequent to year-end. Petersburg's inability to pay its member dues would have a significant effect on the Authority's earnings and ability to fund operations without using reserve funds.

13. Related Party Transactions

During 2014, the Authority entered into an agreement for the partial reimbursement of salaries with Appomattox River Water Authority (ARWA), which shares a common Board of Directors with the Authority. There are certain employees that split their time equally between the Authority and ARWA and, as such, each party is liable for half of the related payroll expense. At June 30, 2016, amounts included in accounts receivable from ARWA is $66,446 for the reimbursement of these expenses. The Authority's total reimbursement for these expenses during the year was $96,904. At June 30, 2016, amounts included in accounts payable owed to ARWA is $103,374 for the reimbursement of these expenses. The Authority's total portion of the expense during the year was $128,104.

In addition, ARWA shares a health insurance policy with the Authority. All invoices are paid to the insurance provider by the Authority and they then bill ARWA for their portion of the expenditure. At June 30, 2016, there were no amounts included in accounts receivable for the reimbursement of these insurance expenses.

During 2013, the Authority entered into an agreement with Chesterfield County (the "County"), a member locality, to begin purchasing nitrogen and phosphorus credits from the County to remain in compliance with environmental regulations as discussed in Note 10. This agreement was set to begin for compliance year 2015 and for each year thereafter through and including compliance year 2016. During 2014, the Authority executed an agreement with the County to further extend this agreement for compliance years 2017 and 2018. Subsequent to June 30, 2016, the Authority again extended this agreement through compliance year 2019.

During 2014, the Authority entered into an agreement with Henrico County (the "County"), a non-member locality, to begin purchasing nitrogen and phosphorus credits from the County to remain in compliance with environmental regulations as discussed in Note 10. This agreement was set to begin for compliance year 2015 and for each year thereafter through and including compliance year 2016.

14. Commitments

The Authority enters into contracts throughout the year in order to complete various projects. As of June 30, 2016, the Authority had three outstanding contracts totaling $1,671,126 related to electrical upgrades and waste water treatment plant upgrades. As of June 30, 2016, the Authority has incurred expenses of $817,578 related to these contracts, with a remaining amount of $853,548 to be completed in 2017.

South Central Wastewater Authority

Compliance Report

June 30, 2016

DIXON HUGHES GOODMAN LLP

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards

Board of Directors
South Central Wastewater Authority
Petersburg, Virginia

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the financial statements of the business-type activities of South Central Wastewater Authority as of and for the year ended June 30, 2016 and the related notes to the financial statements, which collectively comprise the South Central Wastewater Authority's basic financial statements, and have issued our report thereon dated November 9, 2016.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements we considered South Central Wastewater Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of South Central Wastewater Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the entity's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency or combination of deficiencies in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified. We did identify a deficiency in internal control, described in the accompanying schedule of findings and responses that we consider to be a significant deficiency (see IC 16-01 on page 32).

Compliance and Other Matters

As part of obtaining reasonable assurance about whether South Central Wastewater Authority's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

South Central Wastewater Authority's Response to the Finding

The Authority's response to the finding identified in our audit is described in the accompanying schedule of findings and responses. The Authority's response was not subjected to auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Dixon Hughes Goodman LLP

Chester, Virginia
November 9, 2016

Schedule of Findings and Responses - Financial Statements

Finding No. IC 16-01

Comment	Management relies on the auditors to prepare financial statements compliant with Generally Accepted Accounting Principles (GAAP) and the Governmental Accounting Standards Board (GASB) and related disclosures.
Condition and Criteria	Auditors assist in the preparation of GAAP and GASB compliant financial statements and footnotes. These financial statements are reviewed and approved by management; however, auditors feel that this review would only detect material misstatements, and that a misstatement that is more than inconsequential may not be prevented or detected.
Effect	Financial statements and related disclosures may be misstated by an amount that is more than inconsequential.
Cause	Due to the small size of the Authority, there is a limited accounting staff, which does not allow for the hiring of an accountant with the background needed to prepare GAAP and GASB compliant financial statements and related disclosures.
Recommendation	Management will meet regularly with the auditors to keep up to date on changes in GAAP and GASB and continue to review the draft GAAP and GASB compliant financial statements and related disclosures prior to issuance.
View of Management and Planned Corrective Action	Recommendations made by auditors will be implemented.

South Central Wastewater Authority

Required Supplementary Information

June 30, 2016

South Central Wastewater Authority
Schedule of Changes in Net Pension Liability and Related Ratios
Year Ended June 30,

	2016	2015
Total pension liability		
Service cost	$ 171,384	164,219
Interest	257,015	238,485
Change in assumptions	(116,926)	-
Benefit payments	(141,873)	(134,116)
Net change in total pension liability	169,600	268,588
Total pension liability - beginning	3,742,577	3,473,989
Total pension liability - ending (a)	3,912,177	3,742,577
Plan fiduciary net position:		
Contributions - employer	134,611	136,218
Contributions - employee	76,008	73,798
Net investment income	148,134	429,411
Benefit payments	(141,873)	(134,116)
Administrative expenses	(1,930)	(2,224)
Other changes	(31)	22
Net change in plan fiduciary net position	214,919	503,109
Plan fiduciary net position - beginning	3,170,606	2,667,497
Plan fiduciary net position - ending (b)	3,385,525	3,170,606
Authority's net pension liability (asset) - ending (a) - (b)	$ 526,652	$ 571,971
Plan fiduciary net position as a percentage of the total pension liability	86.5%	84.7%
Covered payroll	1,660,130	1,738,361
Net pension liability as a percentage of covered payroll	31.7%	32.9%

*Covered payroll reprsents the total pensionable payroll for emplyees covered under the pension plan, in accordance with GASB 82

Note: Information in this schedule is presented for the year in which information is available. Information will be added each year until a full 10-year trend is presented.

South Central Wastewater Authority
Schedule of Contributions
Year Ended June 30,

	2016	2015	2014
Actuarially determined contribution	$ 136,390	$ 134,611	$ 136,218
Contributions in relation to the actuarially determined contribution	136,390	134,611	136,218
Contribution deficiency (excess)	$ -	$ -	$ -
Covered payroll	$ 1,660,130	$ 1,738,361	$ 1,602,262
Contributions as a percentage covered payroll	8.2%	7.7%	8.5%

Notes to Schedule:

Actuarily determined contribution rates are based on the most recent valuation date, which was June 30, 2014. Methods and assumptions used to determine contribution

Actuarial cost method	Entry age normal
Amortization method	Level percent closed
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	5-years for investment gains and losses
Investment rate of return*	7.00%
Projected salary increases*	3.50% - 5.35%
Cost-of-living adjustments	2.25% - 2.50%

*Includes inflation at 2.50%

*Covered payroll reprsents the total pensionable payroll for emplyees covered under the pension plan, in accordance with GASB 82

Note: Information in this schedule is presented for the year in which information is available. Information will be added each year until a full 10-year trend is presented.

Changes of benefit terms:

There have been no significant changes to the System benefit provisions since the prior actuarial valuation. A hybrid plan with changes to the defined benefit plan structure and a new defined contribution component were adopted in 2012. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. The liabilities reflect the hybrid plan since new members have joined the System since implementation. However, the impact on the liabilities as of the measurement date of June 30, 2016 are minimal.

Changes of assumptions:

The following changes in actuarial assumptions were made effective June 30, 2013 based on the most recent experience study of the System for the four-year period ending June 30, 2012:

Largest 10 - Non-LEOS:
- Update mortality table
- Decrease in rates of service retirement
- Decrease in rates of disability retirement
- Reduce rates of salary increase by 0.25% per year

Largest 10 - LEOS:
- Update mortality table
- Decrease in male rates of disability

All Others (Non 10 Largest) - Non-LEOS:
- Update mortality table
- Decrease in rates of service retirement
- Decrease in rates of disability retirement
- Reduce rates of salary increase by 0.25% per year

All Others (Non 10 Largest) - LEOS:
- Update mortality table
- Adjustments to rates of service retirement for females
- Increase in rates of withdrawal
- Decrease in male and female rates of disability