



**FAIRFAX COUNTY WATER AUTHORITY
RETIREMENT PLAN**

**Management's Discussion and Analysis, Financial Statements and Required
Supplementary Information
December 31, 2016 and 2015
(With Independent Auditor's Report Thereon)**



ASSURANCE, TAX & ADVISORY SERVICES

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

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December 31, 2016 and 2015

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INDEPENDENT AUDITOR'S REPORT

To the Benefits Trust Committee
Fairfax County Water Authority Retirement Plan
Fairfax, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the Fairfax County Water Authority Retirement Plan (the Plan), which comprise the Statements of Fiduciary Net Position as of December 31, 2016 and 2015, and the related Statements of Changes in Fiduciary Net Position for the years then ended, and the related notes to the financial statements.

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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards 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 Plan'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 Plan'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 the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, information regarding the Plan's fiduciary net position as of December 31, 2016 and 2015, and the changes therein for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

Accounting principles generally accepted in the United States of America require the Management's Discussion and Analysis and the required supplementary information on pages 3-4 and 17-19, respectively, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on such information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

PBMares, LLP

Harrisonburg, Virginia
May 18, 2017

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Management's Discussion and Analysis

This section of the Fairfax County Water Authority Retirement Plan (the Plan) annual financial report presents our discussion of the Plan's financial performance during the years ended December 31, 2016 and 2015. Please read it in conjunction with the Plan's financial statements which follow this section.

Overview of the Financial Statements and Supplementary Information

Financial Statements. The Plan presents Statements of Fiduciary Net Position as of December 31, 2016 and 2015 and Statements of Changes in Fiduciary Net Position for the years then ended. These statements reflect the resources available for the payment of benefits as of year-end and the sources and uses of those funds during the year.

Notes to Financial Statements. The Notes to the Financial Statements are an integral part of the financial statements and include additional information and schedules to provide a better understanding of the financial statements. The Notes to the Financial Statements immediately follow the financial statements.

Required Supplementary Information. The required supplementary information and related notes provide information regarding the Plan's funding progress, certain ratios, employer contributions and investment returns. The required supplementary information and related notes follow the Notes to the Financial Statements.

Financial Analysis

Plan Net Position

The following table reflects the Plan's net position at December 31, 2016, 2015 and 2014:

	2016	2015	Increase (Decrease)	2014	Increase (Decrease)
Cash and investments	\$ 235,002,539	\$ 221,810,512	\$ 13,192,027	\$ 223,659,038	\$ (1,848,526)
Other assets	349,919	311,484	38,435	262,250	49,234
Total assets	235,352,458	222,121,996	13,230,462	223,921,288	(1,799,292)
Total liabilities	325,050	485,821	(160,771)	477,298	8,523
Total net position	\$ 235,027,408	\$ 221,636,175	\$ 13,391,233	\$ 223,443,990	\$ (1,807,815)

Net Position of the Plan increased \$13.4 million or 6.0% during 2016 and decreased \$1.8 million or 0.8% during 2015. Appreciation in fair value of investments was the main contributing factor for the increase in net position in 2016.

The Plan's return on investments, net of investment management fees for 2016 and 2015, was 6.2% and (1.1)%, respectively. The higher return on investments in 2016 was primarily due to a positive outlook in the stock market after the presidential election. The ratio between equity and other investments at the end of 2016 and 2015 was approximately 75:25.

Changes in Plan Net Position

The following table reflects the Plan's changes in net position for the year ended December 31, 2016, 2015 and 2014:

	2016	2015	Increase (Decrease)	2014	Increase (Decrease)
Contributions:					
Employer	\$ 17,465,972	\$ 17,459,685	\$ 6,287	\$ 20,657,623	\$ (3,197,938)
Plan members	1,076,246	1,128,898	(52,652)	1,192,845	(63,947)
Net investment income	13,262,972	(2,396,517)	15,659,489	14,221,258	(16,617,775)
Total additions	31,805,190	16,192,066	15,613,124	36,071,726	(19,879,660)
Benefits	18,275,892	17,773,913	501,979	16,439,731	1,334,182
Refunds and other	138,065	225,968	(87,903)	277,232	(51,264)
Total deductions	18,413,957	17,999,881	414,076	16,716,963	1,282,918
Change in net position	\$ 13,391,233	\$ (1,807,815)	\$ 15,199,048	\$ 19,354,763	\$ (21,162,578)

The slight increase in employer contributions of \$6,287 in 2016 is attributed to a 2.4% increase in the number of plan participants over 2015 and was offset by decreases in salaries for active employees that retired. The actuarially determined employer contribution rate increased from 42.3% in 2015 to 44.35% in 2016. In an effort to increase the funded status of the Plan, Fairfax Water chose to use a 48% contribution rate in 2016 and 2015, which exceeded the actuarially determined requirements.

Net investment income is the aggregate of earnings from dividends and interest, realized and unrealized gains and losses on investments, and investment fees and expenses. The increase in net investment income from 2015 to 2016 was mainly due to higher investment performance in 2016. The dividends and interest portions of investment earnings were \$4,471,940 and \$4,692,957 in 2016 and 2015, respectively. Realized and unrealized gains (losses) on investments, net of investment expense, were \$8,791,032 and \$(7,089,474), in 2016 and 2015, respectively.

Benefit payments increased 2.8% from 2015 to 2016. This was primarily a result of increases in the number of retirees and beneficiaries receiving benefits and the amount of the average benefit. Retirees received a 0.6% and 1.2% cost of living increase on May 1, 2016, and May 1, 2015, respectively. Refunds of contributions and other expenses decreased 38.9% from 2015 to 2016. The amount of refunds varies from year to year based on changes in employee turnover rates and decisions of terminated vested employees.

Request for Information

This financial report is designed to provide an overview of the Plan's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Fairfax Water
 Benefits Trust Committee
 8570 Executive Park Avenue
 Fairfax, Virginia 22031

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Statements of Fiduciary Net Position December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Assets		
Cash and cash equivalents	\$ 6,120,100	\$ 5,425,080
Contribution receivable	41,289	42,841
Accrued interest	207,506	181,156
Other current assets	<u>101,124</u>	<u>87,487</u>
Investments, at fair value:		
U.S. government obligations	15,167,876	14,919,594
Asset-backed securities	150,972	220,855
Corporate bonds	10,047,307	10,085,158
Common and preferred stock	154,445,902	142,421,293
Equity mutual funds	18,548,148	18,890,252
Fixed income pooled funds	30,466,399	29,792,971
Short-term bond funds	<u>55,835</u>	<u>55,309</u>
Total investments	<u>228,882,439</u>	<u>216,385,432</u>
Total assets	<u>235,352,458</u>	<u>222,121,996</u>
Liabilities		
Accrued expenses	325,050	443,723
Refund payable	<u>-</u>	<u>42,098</u>
Total liabilities	<u>325,050</u>	<u>485,821</u>
Net Position Restricted for Pensions and Health Benefits	<u>\$ 235,027,408</u>	<u>\$ 221,636,175</u>

The accompanying notes are an integral part of these financial statements.

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Statements of Changes in Fiduciary Net Position For the years ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Additions		
Contributions:		
Employer	\$ 17,465,972	\$ 17,459,685
Plan members	<u>1,076,246</u>	<u>1,128,898</u>
Total contributions	<u>18,542,218</u>	<u>18,588,583</u>
Investment income:		
Net appreciation (depreciation) in fair value of investments	9,728,257	(6,014,708)
Interest	1,893,092	1,760,994
Dividends	<u>2,578,848</u>	<u>2,931,963</u>
Total investment earnings (loss)	14,200,197	(1,321,751)
Less investment expense	<u>937,225</u>	<u>1,074,766</u>
Net investment income (loss)	<u>13,262,972</u>	<u>(2,396,517)</u>
Total additions	<u>31,805,190</u>	<u>16,192,066</u>
Deductions		
Retirement benefits	15,576,188	15,097,399
Health insurance benefits	2,699,704	2,676,514
Refunds of contributions	(21,248)	31,759
Administrative expenses	<u>159,313</u>	<u>194,209</u>
Total deductions	<u>18,413,957</u>	<u>17,999,881</u>
Change in net position	13,391,233	(1,807,815)
Net Position Restricted for Pensions		
Beginning of the year	<u>221,636,175</u>	<u>223,443,990</u>
End of the year	<u>\$ 235,027,408</u>	<u>\$ 221,636,175</u>

The accompanying notes are an integral part of these financial statements.

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Notes to Financial Statements December 31, 2016 and 2015

1. The Plan

The Fairfax County Water Authority Retirement Plan (the Plan) is a single-employer public employee defined benefit pension plan sponsored by the Fairfax County Water Authority (Fairfax Water). The Plan's investments are managed by various investment management firms. All retiree benefit payments are the responsibility of the Plan's management. Overall responsibility for the Plan's operations is vested in a six-member Benefits Trust Committee. The Plan provides retirement benefits under six different benefit structures, five of which are closed to new entrants (Plan A, Plan B, Plan C, Modified Plan D, and Plan E). Newly hired employees currently earn benefits under Plan D. The assets of the Plan are invested with the objective of ensuring that sufficient funds will be available for meeting benefit payments. As the Plan's asset pool provides collectively for benefit payments of all six plans, the Plan is considered a single "pension plan" for purposes of financial reporting in accordance with accounting principles generally accepted in the United States of America. Participants should refer to the Plan documents for more complete information. The Plan is not subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA). A summary of Plan membership at January 1, 2016 and 2015 is as follows:

	2016	2015
Active employees:		
Plan A	5	7
Plan B	66	71
Plan C	134	135
Plan D (includes Modified Plan D)	196	173
Plan E	35	37
Subtotal	<u>436</u>	<u>423</u>
Inactive employees:		
Retirees and beneficiaries	307	303
Vested terminated	28	26
Disabled	2	3
Subtotal	<u>337</u>	<u>332</u>
Total number of members	<u>773</u>	<u>755</u>

2. Summary of Significant Accounting Policies

Basis of Accounting – The Plan's financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America as applicable to governmental units.

Investments – Short-term investments are reported at cost, which approximates fair value. Investments in mutual funds, which are Securities and Exchange Commission 2a-7 investment pools, are stated at share price which is substantially the same as fair value. All other investments are reported at fair value which is based on quoted market price. Interest and dividends on investments are recognized as earned on an accrual basis and net appreciation (depreciation) for the year is reflected in the Statements of Changes in Fiduciary Net Position.

Contributions – Contributions from employees are recorded in the period in which Fairfax Water makes payroll deductions from Plan participants as determined by the Plan Document (see Note 5). Employer contributions are paid annually, based on amounts required to fund the Plan in accordance with recommendations made by the Plan's actuary and approved by Fairfax Water.

Benefits and Refunds – Retirement and health premium benefit deductions and contribution refunds are recognized in the period they are incurred.

Administrative Expenses – Certain administrative functions are performed by officers and employees of Fairfax Water. No such officer or employee receives compensation from the Plan. Administrative expenses, such as actuarial and legal fees, are paid from the Plan.

Estimates and Assumptions – The preparation of financial statements in conformity 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 and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from those estimates.

3. Cash and Cash Equivalents

Cash in bank accounts is insured by the Federal Deposit Insurance Corporation and/or collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400 et. Seq. of the *Code of Virginia*. Under the Act, banks holding public deposits in excess of the amounts insured by the Federal Deposit Insurance Corporation (FDIC) must pledge collateral to the State Treasury Board. Savings and loan institutions are required to collateralize 100% of deposits in excess of FDIC limits. Financial institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

As of December 31, 2016 and 2015, the carrying value of the Plan's deposits with banks was \$2,228,155 and \$2,103,854 respectively, with a bank balance of \$2,329,995 and \$2,191,340, respectively.

As of December 31, 2016 and 2015, the Plan held \$3,891,945 and \$3,321,226 of cash equivalents in the Raymond James Bank Deposit Program (RJBDP) and DB Alex. Brown Cash Reserve Fund Inc. Prime, respectively. The RJBDP is a multibank sweep program that provides FDIC insurance coverage.

4. Investments

The Plan’s policy authorizes investment in the following securities: (1) obligations of the United States or agencies thereof; (2) corporate debt; (3) mortgage and asset-backed securities; (4) domestic and foreign common stock; (5) convertible preferred and debt securities; and (6) repurchase agreements. All fixed income, mortgage and asset-backed securities shall be rated “A” or better by a nationally recognized rating agency at the time of purchase.

Interest Rate Risk – Interest rate risk is the risk adversely affecting the fair value of an investment as a result of changes in interest rates. The Plan’s policy addresses risk that can be managed, but not eliminated, by establishing constraints on the investment portfolio and by properly monitoring the investment markets, the Plan’s asset allocation and the investment managers hired by the Plan. The following table reflects the fair value and the weighted average maturity (WAM) of the Plan’s fixed income portfolio as of December 31, 2016 and 2015. WAM expresses investment time horizons (i.e., the time when investments become due and payable) in years, weighted to reflect the dollar size of the individual investments within an investment type. For purposes of the WAM calculation, the Plan assumes that all of its investments will be held to maturity.

Investment Type	2016 Fair Value	WAM (Years)	2015 Fair Value	WAM (Years)
U.S. Government Treasury Bonds	\$ 3,235,945	3.6	\$ 5,197,525	2.9
U.S. Government Agency	11,931,931	6.5	9,722,069	4.0
Corporate Bonds	10,047,307	3.8	10,085,158	3.9
Asset-backed Securities	150,972	2.6	220,855	3.5
Short-term Bond Funds	55,835	0.1	55,309	0.1
Fixed Income Pooled Funds	30,466,399	4.0	29,792,971	4.0
Total Fixed Income Portfolio	\$ 55,888,389	4.5	\$ 55,073,887	3.9

Credit Risk – Credit risk is the risk that obligations to the Plan will not be fulfilled by an issuer or other counterparty to an investment. The Plan’s policy is to minimize the risk of loss due to the failure of an issuer or other counterparty to an investment to fulfill its obligations. The Plan’s trustees and the investment consultant pre-qualify investment managers with which they do business. In addition, the Plan limits its investments to the safest types of securities and diversifies its investment portfolio so that potential losses will be minimized. The Plan’s current target asset allocation is as follows:

Asset Class	Target Allocation
Domestic equity	30-70%
International equity	0-10%
Fixed income	20-70%
Real estate	0-10%
Cash	0-50%
Other	0-10%

Notes to Financial Statements

Rate of return – For the year ended December 31, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 6.2 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

The tables below reflect the allocation of credit quality ratings by Standard & Poor's and Moody's Investors Service Rating Services as a percent of the Plan's total fixed income portfolio.

As of December 31, 2016, the Plan's investments were rated as follows:

Investment Type	Credit Quality (Rating)	Rating Agency(ies)	Credit Exposure as a % of Total Investments
U.S. Government Treasury Bonds*	AA+/Aaa	S&P/Moody's	5.8%
U.S. Government Agency	AA+/Aaa	S&P/Moody's	21.3%
Corporate Bonds**	A	S&P	18.0%
Asset-backed Securities	NR/NR	S&P/Moody's	0.3%
Short-term Bond Funds	NR/NR	S&P/Moody's	0.1%
Fixed Income Pooled Funds**	BBB	S&P	54.5%
Total Fixed Income Portfolio			100.0%

* Backed by the full faith and credit of the U.S. Government

** These investments show the agency's average credit quality rating for the Plan's investments

As of December 31, 2015, the Plan's investments were rated as follows:

Investment Type	Credit Quality (Rating)	Rating Agency(ies)	Credit Exposure as a % of Total Investments
U.S. Government Treasury Bonds*	AA+/Aaa	S&P/Moody's	9.4%
U.S. Government Agency	AA+/Aaa	S&P/Moody's	17.7%
Corporate Bonds**	A	S&P	18.3%
Asset-backed Securities	NR/NR	S&P/Moody's	0.4%
Short-term Bond Funds	NR/NR	S&P/Moody's	0.1%
Fixed Income Pooled Funds**	BBB	S&P	54.1%
Total Fixed Income Portfolio			100.0%

* Backed by the full faith and credit of the U.S. Government

** These investments show the agency's average credit quality rating for the Plan's investments

Custodial Credit Risk – Custodial risk is the risk that in the event of the failure of the counterparty, the Plan will not be able to recover the value of investments that are in the possession of an outside party. However, the Plan's investment policy requires that all investments purchased by the Plan be properly and clearly labeled as an asset of the Plan and held in safekeeping by a third party custodial bank or institution in compliance with Section 2.2-4515 of the *Code of Virginia*. Therefore, Plan management believes there is custodial risk with Plan investments.

Derivative Financial Instruments – The Plan may invest in derivative instruments on a limited basis in accordance with the Plan’s policy. Derivative instruments are financial contracts whose value depends on the values of one or more underlying assets, reference rates or financial indexes. Derivatives include futures, forwards and options or swap contracts. In addition, some traditional securities can have derivative-like characteristics. These include structured notes in which the return may be linked to one or more indexes, and asset-backed securities such as collateralized mortgage obligations which are sensitive to changes in interest rates and prepayments. Futures, forwards, options and swaps are generally not recorded on the financial statements, whereas structured notes and asset-backed investments generally are reported. In 2016 and 2015, the Plan did not invest in derivative instruments that were not reported on the financial statements.

Regarding on-financial statement instruments with derivative-like characteristics, the Plan invests in asset-backed securities such as pass-through participation certificates, which entitle the holder to a pro-rata share of all principal and interest payments made on the pool of loan assets. These securities were purchased to increase earnings, provide exposure to portions of the mortgage market or to control duration within the portfolio. The credit risk of these investments results from the creditworthiness of the counterparties to the contracts. There is an additional credit risk related to the creditworthiness of the related consumers or mortgages. The market risk of these securities is dependent on changes in interest rates and the level of the underlying prepayments, i.e., when the underlying principal and interest are repaid to the mortgagors. At December 31, 2016 and 2015, the Plan held \$150,972 and \$220,855 respectively, in asset-backed securities. These amounts represent 0.1% and 0.1% of the fair value of Plan investments, respectively.

Fair Value Measurement – The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets and liabilities; and Level 3 inputs are significant unobservable inputs. All of the Plan’s investments are Level 1 inputs.

5. Participation and Funding Policy

All regular full-time employees of Fairfax Water are participants in the Plan as well as Board members of Fairfax Water who elected to participate prior to July 1, 2002. Prior to July 1, 1988, as a condition of participation, employees elected to be covered under either Plan A or Plan B. Employees who elected Plan A contribute 4% of their annual creditable compensation up to the Social Security taxable wage base, plus 5% of annual creditable compensation in excess of the Social Security taxable wage base. Those who elected Plan B contribute 5% of their annual creditable compensation. Between July 1, 1988 and December 31, 1996, all new employees participating in the Plan were required to be members of Plan B. Between January 1, 1997 and December 31, 2006, all newly eligible employees were required to be members of Plan C, with contributions also equal to 5% of their annual creditable compensation. Effective January 1, 2007, the Plan was amended and all newly eligible employees are covered under Plan D, with no employee contributions. On January 3, 2014, the Plan was amended and all new participants from the Cities of Fairfax and Falls Church are covered under the Modified Plan D and Plan E, respectively. There is no employee contribution for Modified Plan D while employees in Plan E contribute 5% of their annual creditable compensation.

Effective July 1, 1988, each employee who was a member of Plan A was given the option to join Plan B. Each Plan A member who elected to join Plan B was required to pay into the Plan. The payment requirement equaled the member's difference between the Plan A and Plan B contributions for the period January 1, 1982 through June 30, 1988, including interest at 10%. Such contributions and interest were credited to the member's contribution account. Most employees elected to deposit the additional contributions through payroll deductions for the period July 1, 1988 through December 31, 1990.

Fairfax Water's funding policy is to make an annual contribution to the Plan in an amount estimated to fully fund all employee benefits at the time of their retirement. The authority is granted by Article 2, Section E of the Plan Document, which assigns all of the responsibilities of maintaining the Plan to the Fairfax Water Board, including the approval of Plan changes, setting benefit and contribution levels under the Plan, and ensuring that the Plan is funded sufficiently to meet its benefit obligations. Fairfax Water's contribution rate for 2016 and 2015 was 48.0% of covered employees' compensation.

6. Retirement Benefit Payments

Upon service retirement, a member of the Plan shall receive a monthly basic retirement allowance, payable for life, and shall be an amount determined by the Plan. For Plan A, the amount is 1.9% of the average final compensation up to the Social Security breakpoint, plus 2.1% of average final compensation exceeding the Social Security breakpoint, multiplied by years of creditable service. For Plan B, the amount is 2.1% of the average final compensation multiplied by the number of years of creditable service. For Plan C, the amount is 2.1% of the average final compensation multiplied by years of creditable service not to exceed 25 years, plus 1% of the average final compensation multiplied by years of creditable service in excess of 25 years up to a maximum of 10 years. For Plan D, the amount is 1.7% of the average final compensation multiplied by years of creditable service not to exceed 25 years, plus 1% of the average final compensation multiplied by years of creditable service in excess of 25 years up to a maximum of 10 years. Modified Plan D members are entitled to the retirement allowance that is equal to the greater of the basic benefit for Plan D members or the basic benefit to which the member was entitled under the City of Fairfax Retirement Plan. For Plan E, the amount is 2% of the average final compensation multiplied by the years of creditable service for those members hired prior to January 1, 2012 and 1.8% of average final compensation multiplied by the years of creditable service for members hired on or after January 1, 2012.

In addition to the basic retirement allowance, members of Plan A, B, and C who retire prior to the earliest date of eligibility for Social Security benefits shall receive a supplemental benefit of 1.0% of average final compensation up to the Social Security breakpoint multiplied by the number of years of creditable service. Such allowance will cease upon attaining the age of Social Security eligibility, whether or not application for such benefits has been made or awarded.

A member of the Plan under Plan A or Plan B is eligible for normal retirement at the earlier of (a) the first of the month following the date upon which the member has attained a combination of age plus creditable service that equals eighty years, provided that the member is not less than fifty years of age and has completed at least five years of creditable service, or (b) the first of the month following the member's sixty-fifth birthday, provided that the member has completed at least five years of creditable service. Under Plan C, a member is eligible for normal retirement at the earlier of (a) the first of the month following the date upon which the member has attained a combination of age plus creditable service that equals eighty years and has completed at least five years of creditable service, provided

that the member is not less than fifty-five years of age, or (b) the first of the month following the member's sixty-fifth birthday, provided that the member has completed at least five years of creditable service. Under Plan D and Modified Plan D, a member is eligible for normal retirement at the earlier of (a) the first of the month following the date upon which the member has attained a combination of age plus creditable service which equals eighty years, provided said member is not less than sixty years of age and has completed at least five years of creditable service, or (b) the first of the month following the member's sixty-fifth birthday, provided that the member has completed at least five years of creditable service. The Plan also permits early retirement at the later of (a) the first of the month following the date upon which the member has attained a combination of age plus creditable service that equals seventy-five years, or (b) the first of the month following the date upon which the member has completed ten years of service. Under Plan E, a member hired prior to January 1, 2012 is eligible for normal retirement at the age of 62. For Plan E members hired after January 1, 2012, the normal retirement age is the member's Social Security Normal Retirement Age. Plan E members are eligible for early retirement on the first day of any calendar month after which the member has attained either (a) age of fifty-two and completed ten or more years of creditable service, or (b) age fifty and a combination of age and completed years of creditable service that equals at least 80 (for those hired prior to January 1, 2012) or 90 (for those hired on or after January 1, 2012).

For a member who elects early retirement, benefit payments will be determined based on the Plan elected by the employee and computed in the same manner as stated earlier for normal retirement but computed with average final compensation and years of creditable service being determined at the actual retirement date, plus the supplemental benefit for members of Plan A, B, and C (if the normal retirement date would have been prior to the earliest date of eligibility for Social Security benefits), reduced by 0.5% per month for the period that the actual retirement date precedes what would have been the normal retirement date. For Plan E members hired before January 1, 2012, an early retirement reduction factor of 0.33% is applied to the basic retirement benefit for each month that retirement precedes what would have been the normal retirement date. For Plan E members hired after January 1, 2012, an early retirement reduction factor of 0.63% is applied to the basic retirement benefit for each month that retirement precedes what would have been the normal retirement date. For purposes of early retirement, the date that would have been the member's normal retirement date shall be determined assuming no additional creditable service accrues after the member's termination of employment.

As part of the application for service retirement, a member may elect to receive a decreased basic retirement allowance during the member's lifetime and have such basic retirement allowance, or designated fraction thereof, continued after the member's death to the member's named beneficiary during the remainder of the designated payment period.

7. Net Pension Liability

Fairfax Water's net pension liability was measured as of January 1, 2016. The January 1, 2017 actuarial valuation was not available at the time of this report. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of January 1, 2015, using updated actuarial assumptions applied to all periods included in the measurement date and rolled forward to the measurement date of January 1, 2016.

Notes to Financial Statements

The components of the net pension liability of the Plan at December 31, 2015 and 2014 were as follows:

	2015	2014
Total pension liability	\$ 308,650,567	\$ 300,234,080
Plan fiduciary net position	(184,171,003)	(185,654,808)
Net pension liability	<u>\$ 124,479,564</u>	<u>\$ 114,579,272</u>
Plan fiduciary net position as a percentage of the total pension liability	59.67%	61.84%

Actuarial Methods and Assumptions

The total pension liability as of January 1, 2016 was based on the following assumptions:

Valuation date	January 1, 2016
Actuarial cost method	Entry age normal
Amortization method	Level percent of payroll over a 30 year period
Investment rate of return, net of expense	7.50%
Projected salary increases:	
Under the age of 45	8.0%
Age 45 and over	5.0%
Cost-of-living adjustments	3.0% for Plan A, B, C, D, and Modified D; and 1.375% for Plan E
Inflation	3.0%
Retiree Medical Trend Rates:	
Pre 65	8.00%
Post 65	6.25%
Dental	5.00%

Long-Term Expected Rate of Return

The long-term expected rate of return on the Plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan 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. Best estimates of arithmetic real rates of return for each major asset class included in the Plan's target asset allocation as of January 1, 2016 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	30-70%	6.75%
International equity	0-10%	7.45%
Fixed income	20-70%	1.75%
Real estate	0-10%	4.55%
Cash	0-50%	1.15%
Other	0-10%	N/A

Discount Rate

The discount rate used to measure the total pension liability was 7.5%. The projections of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. 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 plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of Fairfax Water, calculated using the discount rate of 7.5%, as well as what Fairfax Water’s net pension liability would be if calculated using a discount rate that is one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Total pension liability	\$ 346,356,830	\$ 308,650,567	\$ 277,238,093
Plan fiduciary net position	(184,171,003)	(184,171,003)	(184,171,003)
Fairfax Water’s net pension liability	\$ 162,185,827	\$ 124,479,564	\$ 93,067,090

8. Retiree Health Insurance Benefits

Retirees or their surviving spouses are also eligible for partial payment of certain health insurance premium costs. Fairfax Water advance funds the health insurance benefit on an actuarially determined basis through the Plan. There were 269 active participants receiving health insurance benefits in 2016. The monthly premium payment for members of Plan A, B, C, D and Modified Plan D is equal to 3% times years of creditable service under the Plan up to a maximum of 75%, times the designated premium. Plan D and Modified Plan D members are not eligible for this benefit until the age of fifty-five and the Plan’s share of the premium cost is reduced by 0.25% for each month that the member’s retirement date precedes age sixty. For Plan E, members hired prior to April 1, 2008, the monthly premium payment is 50% of the designated premium. For Plan E members hired on or after April 1,

2008, the monthly premium payment is 2% times years of creditable service up to 25 years times the designated premium. The payment is subject to a maximum cap of 116% of the designated premium as of January 1, 1992, increased by 4% for each completed year after that date. The Plan incurred and paid \$2,699,704 and \$2,676,514 health insurance benefits in 2016 and 2015, respectively. The significant assumptions used by the actuary in determining the contribution requirements are the same as those disclosed in Note 7 above. At December 31, 2015 and 2014, the Plan had net assets available for other post-employment benefits of \$38,679,550 and \$36,466,309, respectively, based on the most recent actuarial valuation of January 1, 2016.

9. Tax Status

The United States Treasury Department advised Fairfax Water on July 19, 2016, that the Plan constitutes a qualified trust under Section 401(b)(3) of the income tax regulations and is, therefore, exempt from federal income taxes under provisions of Section 501(a) of the Internal Revenue Code.

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Required Supplementary Information

(Unaudited – See accompanying independent auditor’s report)

Schedule of Changes in the Net Pension Liability and Related Ratios

Information presented is based on the actuarial information for the plan year ended:

Reporting as of December 31,	2015	2014	2013
Total pension liability			
Service cost	\$ 6,138,436	\$ 6,154,281	\$ 5,924,302
Interest	22,410,595	20,645,855	19,501,417
Differences between expected and actual experience	(5,057,514)	11,343,166	3,140,137
Changes of assumptions	54,126	-	-
Benefit payments, including refunds of member contributions	(15,129,156)	(14,066,004)	(12,776,355)
Net change in total pension liability	8,416,487	24,077,298	15,789,501
Total pension liability – beginning	300,234,080	276,156,782	260,367,281
Total pension liability – ending (a)	\$ 308,650,567	\$ 300,234,080	\$ 276,156,782
Plan fiduciary net position			
Contributions – employer	\$ 14,362,903	\$ 14,197,131	\$ 12,784,823
Contributions – member	1,128,898	1,192,841	1,148,647
Net investment income	(1,694,011)	9,411,421	31,895,805
Benefit payments, including refunds of member contributions	(15,129,156)	(14,066,004)	(12,776,355)
Administrative expense	(152,439)	(108,171)	(211,425)
Net change in plan fiduciary net position	(1,483,805)	10,627,218	32,841,495
Plan fiduciary net position – beginning	185,654,808	175,027,590	142,186,095
Plan fiduciary net position – ending (b)	184,171,003	185,654,808	175,027,590
Fairfax Water’s net pension liability – ending (a) – (b)	\$ 124,479,564	\$ 114,579,272	\$ 101,129,192
Plan fiduciary net position as a percentage of the total pension liability	59.67%	61.84%	63.38%
Covered-employee payroll	\$ 36,374,344	\$ 35,701,952	\$ 32,066,918
Net pension liability as a percentage of covered-employee payroll	342.22%	320.93%	315.37%

Notes:

This schedule is intended to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

Covered-employee payroll figures have been determined by dividing actual employer contributions by the actuarially determined rate or 48%, whichever is greater, given Fairfax Water’s funding practice.

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Required Supplementary Information

(Unaudited – See accompanying independent auditor’s report)

Schedule of Fairfax Water Contributions (in thousands)

Year Ended December 31	Actuarially Determined Contribution	Contribution in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
2013	\$ 12,785	\$ 12,785	\$ -	\$ 32,067	39.9%
2014	12,925	14,197	(1,272)	35,702	39.8%
2015	12,657	14,363	(1,706)	36,374	39.5%

Note:

This schedule is intended to show information for ten years. However, until a full ten-year trend is compiled, Fairfax Water will present information for those years which information is available.

Schedule of Investment Returns Last Ten Fiscal Years Available

Year Ended December 31	Market Value	Actuarial Value
2006	11.5%	7.7%
2007	9.4%	8.3%
2008	(25.1%)	(10.1%)
2009	15.1%	3.9%
2010	12.0%	6.5%
2011	2.2%	5.1%
2012	10.1%	6.7%
2013	19.8%	11.0%
2014	6.8%	9.5%
2015	(1.3%)	5.8%

FAIRFAX COUNTY WATER AUTHORITY RETIREMENT PLAN

Notes to Required Supplementary Information

(Unaudited – See accompanying independent auditor’s report)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	January 1, 2016
Actuarial cost method	Entry age normal
Amortization method	Level percent of payroll over a 30 year period
Investment rate of return, net of expense	7.50%
Projected salary increases:	
Under the age of 45	8.0%
Age 45 and over	5.0%
Cost-of-living adjustments	3.0% for Plan A, B, C, D, and Modified D; and 1.375% for Plan E
Inflation	3.0%
Retiree Medical Trend Rates:	
Pre 65	8.00%
Post 65	6.25%
Dental	5.00%

The actuarial assumptions used have been recommended by the actuary and adopted by Fairfax Water’s Board based on the most recent review of the Plan’s experience, completed in 2016.

The rate of employer contributions to the Plan is composed of the normal cost and the amortization of the unfunded actuarial accrued liability. The normal cost is a level percent of payroll which, along with the member contributions, will pay for projected benefits at retirement. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability.

The actuarially determined contribution rate for the year ended December 31, 2016 was 44.35%, based on an actuarial valuation dated January 1, 2015, an increase in the rate of 2.05% from the 2015 rate of 42.3%. The rate increase is primarily due to demographic experience losses and changes in actuarial methodology resulting from the change in actuary. Demographic experience showed earlier retirements than assumed among active participants, driving losses in both the pension and post-retirement health portions of the Plan. Exclusive to the pension portion, the losses were offset by gains due to smaller cost of living increases and greater mortality among retirees than projected. The remainder of the non-investment loss is attributable to changes in actuarial methodology from the prior actuary that would not be categorized as assumption changes.