



**Statistical
Section
(Unaudited)**

Statistical Section (Unaudited)

This section contains statistical tables that reflect financial trends information, revenue capacity information, debt capacity information, demographic and economic information, and operating information. These tables differ from the basic financial statements because they usually cover more than two fiscal years and may present non-accounting data.

The statistical section is divided into five sections as follows:

1. Financial Trends
 2. Revenue Capacity
 3. Debt Capacity
 4. Demographic and Economic Information
 5. Operating Information
-

1. Financial Trends

These schedules contain trend information to better understand how the Authority's financial performance and well-being have changed over time.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 1
CHANGE IN NET POSITION
LAST TEN FISCAL YEARS
(\$000)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Operating revenues										
Residential, commercial and multi-family customers	\$ 382,552	\$ 335,711	\$ 295,209	\$ 275,337	\$ 256,846	\$ 241,475	\$ 209,796	\$ 191,543	\$ 183,553	\$ 182,327
Federal government	63,417	54,274	39,001	45,187	48,381	43,033	37,845	35,195	35,888	30,751
District government and DC Housing Authority	38,185	32,948	28,852	21,677	24,713	25,123	21,947	16,804	16,193	17,266
Charges for w holesale w astew ater treatment	91,873	112,522	96,845	87,178	94,549	90,414	87,505	85,519	82,854	73,378
Other	19,762	14,460	13,917	9,700	16,077	8,210	6,655	3,337	3,846	2,735
Total Operating Revenues	595,789	549,915	473,824	439,079	440,566	408,255	363,748	332,398	322,334	306,457
Operating expenses										
Personnel services	124,239	115,233	108,467	103,908	97,784	93,240	88,210	82,248	75,838	70,956
Contractual services	74,086	66,241	68,172	68,417	64,939	71,055	69,497	64,513	58,730	56,568
Chemicals, supplies and small equipment	29,524	32,935	31,748	28,987	28,815	28,188	29,003	29,074	28,816	24,510
Utilities and rent	23,934	30,848	29,939	26,098	26,786	29,429	29,929	32,813	37,843	32,238
Depreciation and amortization	89,512	83,857	77,833	77,330	74,342	70,209	64,425	59,291	54,418	49,355
Water purchases	26,345	29,109	28,407	27,223	28,389	27,170	27,587	25,371	25,746	24,042
Payment in lieu of taxes and right of way fee	20,744	20,437	11,458	21,982	21,982	21,982	20,474	19,183	17,525	17,514
Total operating expenses	388,384	378,660	356,024	353,945	343,037	341,273	329,125	312,493	298,916	275,183
Operating income	207,405	171,255	117,800	85,134	97,529	66,982	34,623	19,905	23,418	31,274
Non-operating revenue (expenses)										
Interest income	2,629	1,316	977	1,144	749	2,036	1,343	1,704	11,444	16,224
Interest expense and fiscal charges	(69,118)	(61,409)	(69,288)	(63,905)	(74,001)	(73,335)	(57,479)	(53,197)	(44,338)	(33,667)
Total non-operating (expenses)	(66,489)	(60,093)	(68,311)	(62,761)	(73,252)	(71,299)	(56,136)	(51,493)	(32,894)	(17,443)
Change in net position before capital contributions	140,916	111,162	49,489	22,373	24,277	(4,317)	(21,513)	(31,588)	(9,476)	13,831
Capital contributions	32,431	67,965	94,690	58,310	58,957	47,374	30,403	27,752	42,208	25,083
Change in net position	173,347	179,127	144,179	80,683	83,234	43,057	8,890	(3,836)	32,732	38,914
Net position, beginning of year	1,529,942	1,350,815	1,206,636	1,125,953	1,042,719	999,662	990,772	994,608	961,876	922,962
Net position, end of year	\$ 1,703,289	\$ 1,529,942	\$ 1,350,815	\$ 1,206,636	\$ 1,125,953	\$ 1,042,719	\$ 999,662	\$ 990,772	\$ 994,608	\$ 961,876

Source: FY 2007 - 2016 Statements of Revenues, Expenses and Changes in Net Position.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

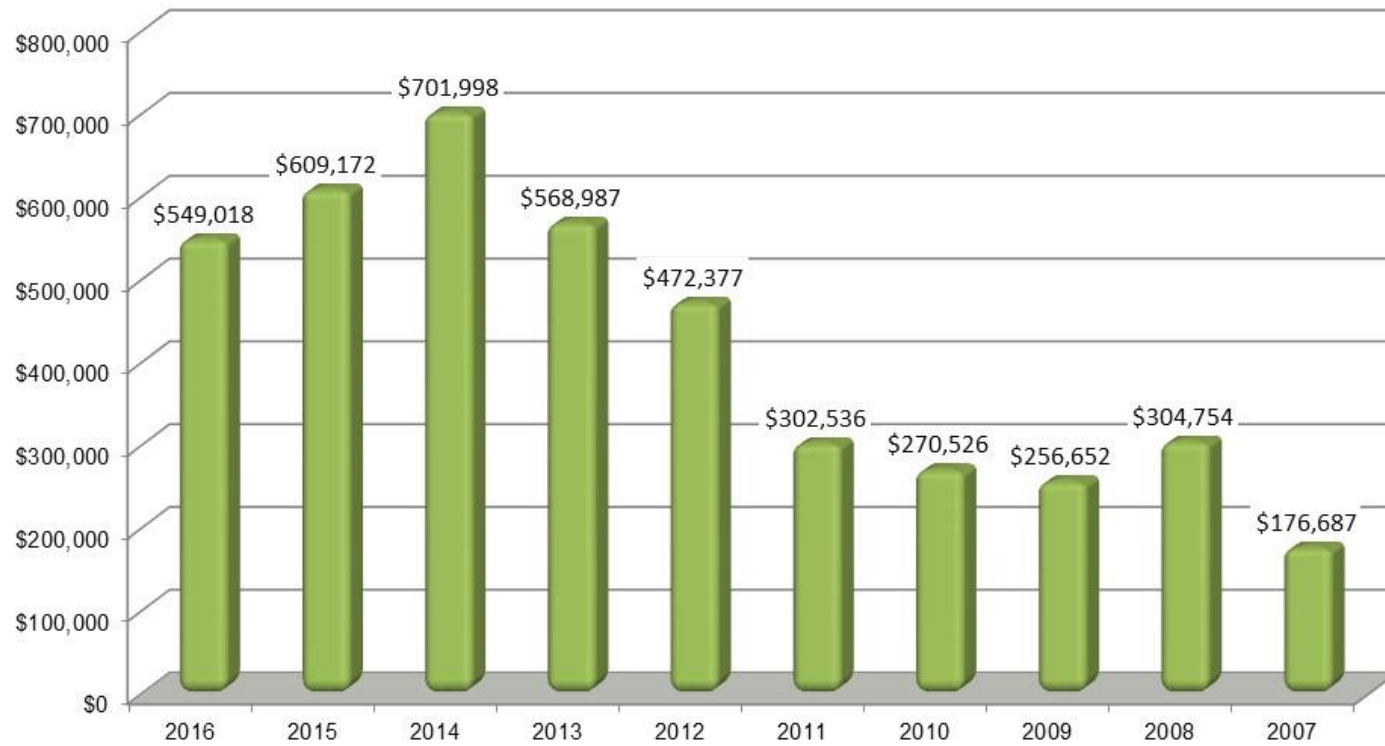
**EXHIBIT 2
SUMMARY OF NET POSITION
LAST TEN FISCAL YEARS
(\$000)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Net investments in capital assets	\$ 1,491,925	\$ 1,348,056	\$ 1,130,952	\$ 1,042,620	\$ 956,397	\$ 874,356	\$ 818,001	\$ 765,709	\$ 726,747	\$ 766,119
Restricted	33,135	27,054	28,863	29,010	27,297	26,825	17,257	10,244	8,297	6,267
Unrestricted	178,229	154,832	191,000	135,006	142,259	141,538	164,404	214,819	259,564	189,490
Total net position	<u>\$ 1,703,289</u>	<u>\$ 1,529,942</u>	<u>\$ 1,350,815</u>	<u>\$ 1,206,636</u>	<u>\$ 1,125,953</u>	<u>\$ 1,042,719</u>	<u>\$ 999,662</u>	<u>\$ 990,772</u>	<u>\$ 994,608</u>	<u>\$ 961,876</u>

Source: FY 2007 - 2016 Statements of Net Position.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 3 CAPITAL DISBURSEMENTS LAST TEN FISCAL YEARS (\$000)



Note: These disbursements include DC Water's share of Washington Aqueduct's capital disbursements.

Source: FY 2007 – 2016 Statements of Cash Flows.

2. Revenue Capacity

These schedules contain information regarding the Authority's most significant revenue sources.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 4
OPERATING REVENUES AND RATE INCREASES
LAST TEN FISCAL YEARS
(\$000)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Operating Revenues										
Retail Customers										
Residential, Commercial and Multifamily	\$ 382,552	\$ 335,711	\$ 295,209	\$ 275,337	\$ 256,846	\$ 241,475	\$ 209,796	\$ 191,543	\$ 183,553	\$ 182,327
Federal Government	63,417	54,274	39,001	45,187	48,381	43,033	37,845	35,195	35,888	30,751
DC Government	28,890	24,453	21,205	14,714	18,213	17,827	15,628	10,116	9,391	10,580
DC Housing Authority	9,295	8,495	7,647	6,963	6,500	7,296	6,319	6,688	6,802	6,686
Other Revenues	19,762	14,460	13,917	9,700	16,077	8,210	6,655	3,337	3,846	2,735
Total Retail Customers	503,916	437,393	376,979	351,901	346,017	317,841	276,243	246,879	239,480	233,079
Wholesale Customers	91,873	112,522	96,845	87,178	94,549	90,414	87,505	85,519	82,854	73,378
Total Operating Revenues	\$ 595,789	\$ 549,915	\$ 473,824	\$ 439,079	\$ 440,566	\$ 408,255	\$ 363,748	\$ 332,398	\$ 322,334	\$ 306,457
Retail Rate Increases	6.50%	7.50%	5.50%	5.50%	4.50%	12.50%	9.00%	7.50%	5.50%	5.00%

Source: FY 2007 - 2016 Statements of Revenues, Expenses and Changes in Net Position

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 5
NUMBER AND TYPE OF CUSTOMER ACCOUNTS
LAST TEN FISCAL YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Retail Accounts										
Residential	106,120	105,735	104,965	104,477	103,887	103,857	103,315	103,665	103,674	103,263
Commercial ^(A)	18,828	18,947	19,433	19,343	19,242	19,165	19,049	19,060	18,528	18,513
Governmental										
Federal	558	550	542	542	538	549	546	540	533	531
District of Columbia	641	638	641	630	605	607	603	606	590	589
DC Housing Authority	1,462	1,446	1,452	1,460	1,435	1,431	1,431	1,220	1,218	1,175
Total Retail Accounts	127,609	127,316	127,033	126,452	125,707	125,609	124,944	125,091	124,543	124,071
DC Water	39	39	37	36	36	35	35	30	30	30
Washington Aqueduct	2	2	2	2	2	2	1	2	2	1
Wholesale	7	7	7	7	7	7	7	7	7	7
Total Number of Accounts	127,657	127,364	127,079	126,497	125,752	125,653	124,987	125,130	124,582	124,109

^(A) Included in commercial are multi-family and exempt accounts

Source: D.C. Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 6
TEN LARGEST COMMERCIAL CUSTOMERS
LAST TEN FISCAL YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Howard University	\$ 3,823,023	\$ 3,237,999	\$ 2,662,949	\$ 2,699,376	\$ 2,596,564	\$ 1,862,880	\$ 1,735,598	\$ 1,640,815	\$ 1,706,124	\$ 1,751,425
William C Smith & Co	2,455,990	2,076,534	2,277,833	1,782,719	1,787,150	1,709,334	1,505,145	-	-	-
George Washington University	2,338,974	2,763,055	2,609,611	2,161,183	2,530,632	2,122,176	1,618,618	1,777,659	2,020,849	1,609,061
Washington Hospital Center	1,991,344	1,830,586	1,671,855	1,693,655	933,027	1,270,788	1,113,672	823,743	514,275	606,120
Horning Brothers	1,335,613	-	1,347,287	1,258,995	1,163,586	1,122,879	993,115	-	-	-
Georgetown University	1,324,563	1,413,714	2,605,884	1,865,068	1,842,860	2,238,766	2,100,705	2,135,768	2,055,644	841,585
Amtrak	1,019,570	1,028,989	984,336	1,004,177	937,430	903,475	761,235	963,925	795,825	-
Metropolitan Washington Airports Authority	1,008,250	923,394	807,803	716,929	661,509	-	-	-	-	-
American University	1,001,742	1,078,412	1,125,050	1,253,038	869,211	-	694,565	1,524,262	773,109	689,676
Georgetown University Hospital	920,681	720,247	955,353	1,053,659	1,643,380	1,371,035	-	-	-	1,070,099
Shoreham Hotel	-	1,035,982	-	-	-	-	-	656,182	458,828	-
The Barac Company	-	-	-	-	-	927,022	776,134	-	-	-
Soldiers Home	-	-	-	-	-	897,121	804,533	818,641	948,708	-
Marriott Wardman Park Hotel	-	-	-	-	-	-	-	1,037,663	681,480	592,663
JW Marriott Hotel	-	-	-	-	-	-	-	556,985	-	-
Children's Hospital	-	-	-	-	-	-	-	-	841,774	676,570
Washington Hilton Hotel	-	-	-	-	-	-	-	-	792,227	756,085
L'Enfant Plaza Properties	-	-	-	-	-	-	-	-	-	533,726
Total	\$ 17,219,750	\$ 16,108,912	\$ 17,047,961	\$ 15,488,799	\$ 14,965,349	\$ 14,425,476	\$ 12,103,320	\$ 11,935,643	\$ 11,588,843	\$ 9,127,010
% of Total Operating Revenues	2.89%	2.93%	3.60%	3.53%	3.40%	3.53%	3.33%	3.59%	3.60%	2.98%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 7
TEN LARGEST GOVERNMENT CUSTOMERS
LAST TEN FISCAL YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
U.S. General Services Administration	\$ 11,670,623	\$ 6,425,889	\$ 7,598,077	\$ 7,184,034	\$ 7,443,691	\$ 6,877,787	\$ 6,575,977	\$ 6,773,195	\$ 8,199,985	\$ 7,324,115
D.C. Housing Authority	6,999,037	6,922,176	6,308,902	5,879,383	5,669,475	6,277,722	5,750,927	6,266,786	6,339,434	6,122,875
National Park Service	3,656,234	2,233,857	1,363,657	2,577,096	2,481,144	2,217,698	2,384,771	2,844,549	2,257,749	1,958,612
U.S. Congress	3,223,507	6,524,863	4,019,627	4,926,790	5,225,952	4,214,640	3,559,903	4,028,564	4,096,695	2,668,328
Smithsonian Institution	2,768,661	3,219,324	2,810,786	3,038,455	2,681,705	3,997,326	2,564,033	3,605,478	4,325,576	3,196,837
Bolling Air Force Base	2,602,439	2,509,536	1,928,617	2,265,348	2,925,847	-	-	2,279,861	-	-
D.C. Board of Education	2,228,498	2,166,846	2,391,393	2,092,748	2,213,636	2,142,907	2,534,044	2,292,454	3,062,431	3,344,959
Federal Naval Research Lab	1,975,742	1,802,150	1,542,370	1,833,491	1,788,497	-	-	-	-	-
Department of the Navy	1,708,908	-	-	1,521,264	1,886,750	3,832,568	2,851,611	3,504,547	3,011,883	2,835,280
D.C. Recreation and Parks	1,695,630	1,702,488	1,216,398	-	-	-	-	-	-	-
D.C. Department of Human Services	-	-	-	-	-	3,272,747	2,047,213	-	1,914,251	1,741,170
Department of Defense DC	-	-	-	-	-	2,151,529	1,608,642	2,248,076	3,292,402	3,907,312
Department Defense VA	-	4,020,624	3,275,936	3,275,936	3,527,613	2,873,310	2,759,264	2,136,653	2,425,139	1,998,095
Total	\$ 38,529,279	\$ 37,527,753	\$ 32,455,763	\$ 34,594,545	\$ 35,844,310	\$ 37,858,234	\$ 32,636,385	\$ 35,980,163	\$ 38,925,545	\$ 35,097,583
% of Total Operating Revenues	6.47%	6.82%	6.85%	7.88%	8.14%	9.27%	8.97%	10.82%	12.08%	11.45%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 8
RETAIL WATER AND SEWER RATES
LAST TEN FISCAL YEARS**

<u>FISCAL YEAR</u>	<u>(a) METERING FEE</u>	<u>(b) WATER SYSTEM REPLACEMENT FEE</u>	<u>(c) DISTRICT PUBLIC SPACE OCCUPANCY FEE AND PILOT</u>	<u>(d) WATER CONSUMPTION RATE</u>	<u>(e) SEWER CONSUMPTION RATE</u>	<u>(f) COMBINED CONSUMPTION RATE</u>	<u>(g) IMPERVIOUS SURFACE AREA CHARGE ²</u>	<u>AVERAGE MONTHLY BILL ¹</u>
2007	2.010	-	0.44	2.03	3.06	5.09	-	36.30
2008	2.010	-	0.47	2.14	3.23	5.37	-	38.22
2009	2.010	-	0.52	2.30	3.31	5.61	1.24	41.26
2010	2.010	-	0.57	2.51	3.61	6.12	2.20	45.69
2011	3.860	-	0.63	3.10	3.79	6.89	3.45	53.93
2012	3.860	-	0.64	3.24	3.96	7.20	6.64	59.11
2013	3.860	-	0.66	3.42	4.18	7.60	9.57	64.64
2014	3.860	-	0.70	3.61	4.41	8.02	11.85	69.77
2015	3.860	-	0.63	3.88	4.74	8.62	16.75	77.96
2016	3.860	6.30	0.64	3.36 ³	5.44	8.80	20.30	88.99

¹ Average residential customer consumption is 6.2 Ccf per month. The average monthly bill is calculated as follows (a)+(b)+(g)+(((c)+(f)) x 6.2 Ccf)

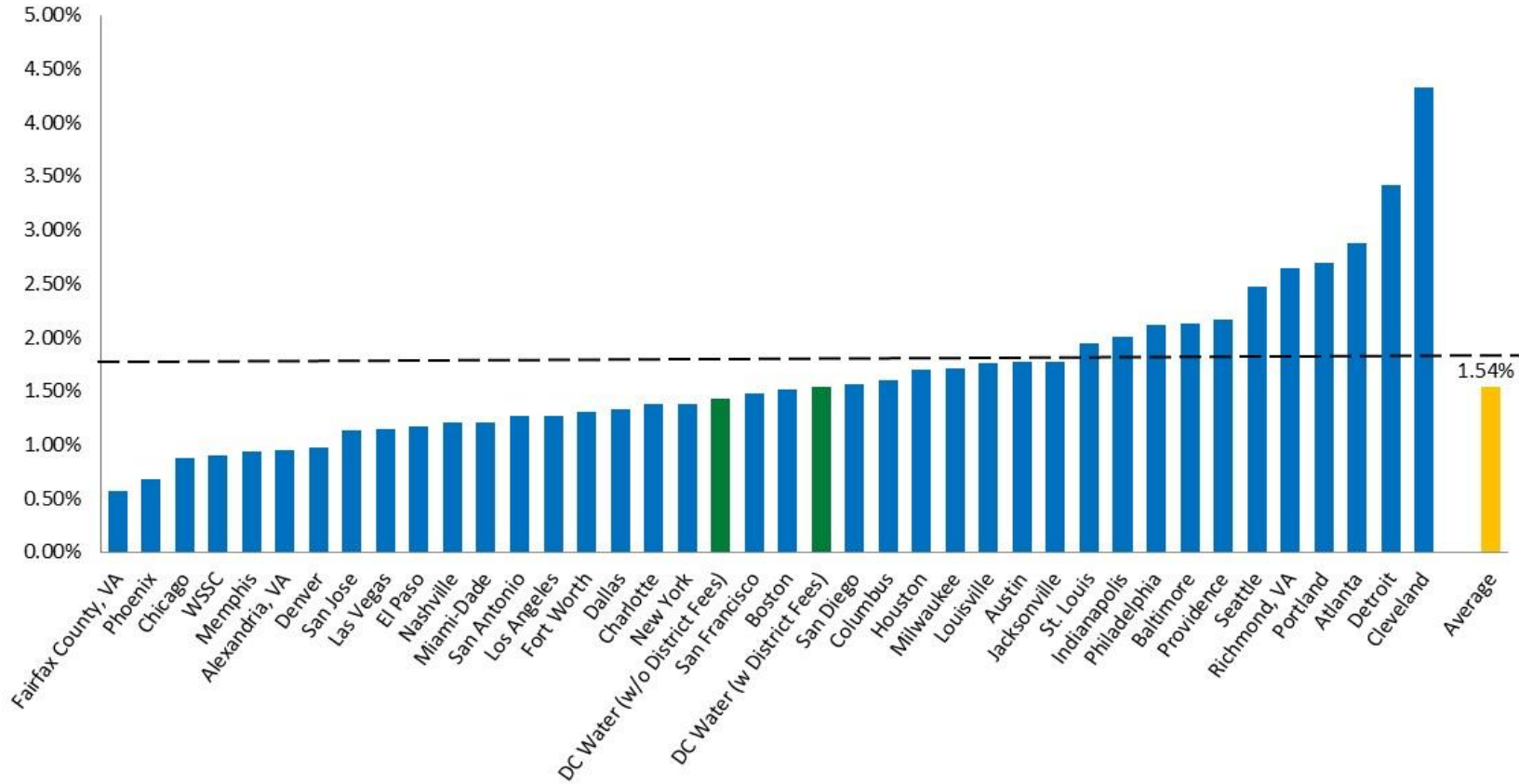
² Per Equivalent Residential Unit (ERU).

³ Weighted average water rate for residential customers.

Source: D.C. Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 9 RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS AS A PERCENTAGE OF MEDIAN HOUSEHOLD INCOME (1)

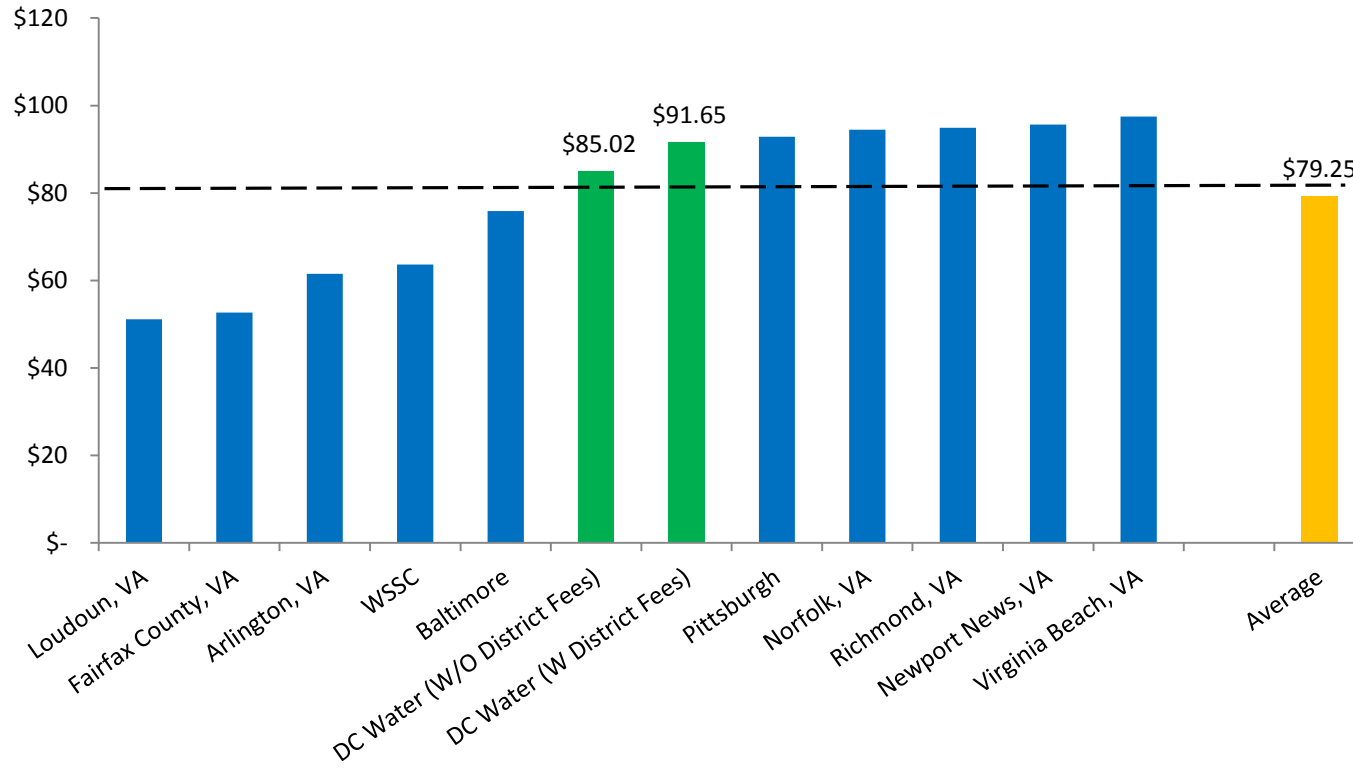


(1) This analysis is based on a single family residential monthly bill as a percentage of median household income for large national utilities based on rates in effect fall 2016.

Source: DC Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 10 RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS TO LOCAL AND REGIONAL UTILITIES (1)



(1) This analysis represents single family residential average monthly bill based on rates in effect fall 2016.

Source: DC Water Department of Finance & Budget

3. Debt Capacity

These schedules present information showing the Authority's current levels of outstanding debt and the Authority's ability to issue additional debt in the future.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 11 OUTSTANDING DEBT AND DEBT RATIOS LAST TEN FISCAL YEARS (\$'000, EXCEPT PER CAPITA)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Senior Debt:										
2014 Public Utility Revenue Bonds	\$ 350,000	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2009 Series A Public Utility Revenue Bonds	11,535	159,520	291,145	293,720	296,205	298,225	300,000	300,000	-	-
1998 Public Utility Revenue Bonds	170,525	183,660	196,050	207,735	218,815	229,315	239,270	248,705	257,645	266,120
Total Senior Debt	532,060	693,180	837,195	501,455	515,020	527,540	539,270	548,705	257,645	266,120
Subordinate Debt:										
2016 Series A Public Utility Revenue Bonds	389,110									
2016 Series B Public Utility Revenue Bonds	25,000									
2015 Series A Public Utility Revenue Bonds	100,000									
2015 Series B Public Utility Revenue Bonds	250,000									
2014 Series B-1 Public Utility Revenue Bonds	50,000	50,000	50,000	-	-	-	-	-	-	-
2014 Series B-2 Public Utility Revenue Bonds	50,000	50,000	50,000	-	-	-	-	-	-	-
2014 Series C Public Utility Revenue Bonds	377,110	377,700	-	-	-	-	-	-	-	-
2013 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	300,000	-	-	-	-	-	-
2012 Series A Public Utility Revenue Bonds	163,655	168,405	172,990	177,430	177,430	-	-	-	-	-
2012 Series B-1 Public Utility Revenue Bonds	-	-	52,690	52,690	52,690	-	-	-	-	-
2012 Series B-2 Public Utility Revenue Bonds	-	47,310	47,310	47,310	47,310	-	-	-	-	-
2012 Series C Public Utility Revenue Bonds	163,215	163,215	163,215	163,215	163,215	-	-	-	-	-
2010 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	300,000	300,000	300,000	-	-	-	-
2008 Series A Public Utility Revenue Bonds	20,200	168,190	268,095	274,210	279,955	285,540	290,000	290,375	290,375	-
2007 Series A Public Utility Revenue Bonds	-	115,580	218,715	218,715	218,715	218,715	218,715	218,715	218,715	218,715
2007 Series B Public Utility Revenue Bonds	-	-	-	-	-	-	-	-	-	59,000
2004 Public Utility Revenue Bonds	-	-	-	-	-	-	-	-	-	295,000
2003 Public Utility Revenue Bonds	-	-	-	-	-	176,220	176,220	176,220	176,220	176,220
Notes Payable to the Federal										
Government for Bloomington Dam	12,841	13,217	13,580	13,932	14,273	14,603	14,922	15,232	15,532	15,823
DC General Obligation Bonds	-	-	-	-	-	245	1,490	5,180	9,905	15,060
Notes Payable to WSSC for Little Seneca	-	-	-	-	63	104	142	179	216	251
Total Subordinate Debt	2,201,131	1,753,617	1,636,595	1,547,502	1,253,651	995,427	701,489	705,901	710,963	780,069
Total Senior and Subordinate debt	2,733,191	2,446,797	2,473,790	2,048,957	1,768,671	1,522,967	1,240,759	1,254,606	968,608	1,046,189
Unamortized bond premiums	198,677	104,060	76,098	79,313	79,674	28,255	29,929	31,102	31,255	20,051
Unamortized bond discounts	(2,222)	(2,351)	(2,480)	(2,608)	(2,784)	(2,879)	(2,968)	(3,053)	(3,134)	(3,211)
Total Debt	\$ 2,929,646	\$ 2,548,506	\$ 2,547,408	\$ 2,125,662	\$ 1,845,561	\$ 1,548,343	\$ 1,267,720	\$ 1,282,655	\$ 996,729	\$ 1,063,029
Debt - per capita	N/A	\$ 3,791	\$ 3,866	\$ 3,288	\$ 2,919	\$ 2,505	\$ 2,096	\$ 2,166	\$ 1,718	\$ 1,851
Debt - as percentage of personal income	N/A	5.17%	5.54%	4.37%	3.90%	3.40%	2.94%	3.18%	2.43%	2.83%

N/A: population and personal income not available

See exhibits 13 and 14 for District of Columbia personal income and population data.

Total debt doesn't include outstanding debt associated with DC Water's short-term debt (commercial paper) program.

Source: D.C. Water Department of Finance & Budget

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 12
CALCULATION OF DEBT SERVICE COVERAGE
FY 2016 (\$000)**

Prepared in accordance with the Authority's Master Trust Indenture, which corresponds closely to the cash basis of accounting.

Calculation of Debt Service Coverage:	
Cash Receipts (Revenues)	
Retail	\$ 451,467
Wholesale	79,784
Other Non-Operating	58,078
Transfer from (Contributions to) Rate Stabilization Fund	(19,000)
Total Cash Receipts (A)	<u>570,329</u>
Cash Disbursements (Operating Expenses) (B)	<u>298,452</u>
Cash Receipts Less Cash Disbursements (C=A-B)	<u>\$ 271,877</u>
Debt Service:	
Senior Debt Service (D)	\$ 46,829
Subordinate Debt Service (E)	105,252
Total Outstanding and Projected Debt Service (F=D+E)	<u>\$ 152,081</u>
Calculation of Net Cash Receipts Available for Senior Debt Service:	
Cash Receipts Less Cash Disbursements (C)	\$ 271,877
Prior Year Federal Billing Reconciliation	(11,679)
(Refund to)/Payment from Wholesale Customers	(13,017)
Net Cash Receipts Available for Senior Debt Service (G)	<u>\$ 247,181</u>
Senior Debt Service Coverage (G/D)	<u>5.28</u>
Calculation of Subordinate Debt Service Coverage:	
Net Cash Receipts Available for Senior Debt Service (G)	\$ 247,181
Less Senior Debt Service (D)	(46,829)
Net Cash Receipts Available for Subordinate Debt Service (G-D)	<u>\$ 200,352</u>
Subordinate Debt Service Coverage ((G-D)/E)	<u>1.90</u>
Combined Debt Service Coverage (G/F)	<u>1.63</u>

Source: D.C. Water Department of Finance & Budget

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4. Demographic and Economic Information

These schedules offer demographic and economic data to help explain the environment within which the Authority's financial activities take place.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 13
POPULATION OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
District of Columbia	N/A	672,228	658,893	646,449	632,323	617,996	604,912	592,228	580,236	574,404
Montgomery County, MD	N/A	1,040,116	1,030,447	1,016,677	1,004,709	989,794	975,439	959,013	942,748	931,694
Prince George's County, MD	N/A	909,535	904,430	890,081	881,138	871,233	865,219	856,161	850,167	849,916
Fairfax County, VA	N/A	1,180,139	1,175,622	1,168,405	1,155,292	1,135,992	1,121,054	1,099,347	1,077,509	1,060,356
Loudoun County, VA	N/A	375,629	363,050	349,679	336,898	325,405	315,305	303,661	292,570	279,704

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 14
PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS
(\$000)**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
District of Columbia	N/A	\$49,275,917	\$ 46,015,860	\$48,696,519	\$ 47,280,666	\$ 45,597,835	\$ 43,082,099	\$ 40,326,374	\$ 41,014,705	\$ 37,525,123
Montgomery County, MD	N/A	79,946,266	75,720,017	73,958,785	73,551,167	69,050,166	65,904,393	62,962,957	65,845,731	62,643,745
Prince George's County, MD	N/A	40,806,805	40,215,913	38,595,921	38,481,250	35,036,640	33,888,631	33,156,357	33,026,742	31,753,583
Fairfax County, VA	N/A	88,419,380	88,180,013	83,835,355	82,727,342	78,392,046	75,161,493	71,954,372	75,302,775	73,256,103
Loudoun County, VA	N/A	26,254,562	24,463,869	20,886,046	20,107,077	18,626,729	16,971,112	15,340,608	15,147,096	13,875,373

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 15
PER CAPITA PERSONAL INCOME OF SERVICE AREA JURISDICTIONS
LAST TEN CALENDAR YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
District of Columbia	N/A	\$ 73,302	\$ 69,838	\$ 75,329	\$ 74,773	\$ 73,783	\$ 71,220	\$ 69,093	\$ 70,686	\$ 65,329
Montgomery County, MD	N/A	76,863	73,483	72,746	73,206	69,762	67,564	65,654	69,844	67,236
Prince George's County, MD	N/A	44,866	44,465	43,362	43,672	40,215	39,168	38,727	38,847	37,361
Fairfax County, VA	N/A	74,923	75,007	71,752	71,607	69,008	67,045	65,452	69,886	69,086
Loudoun County, VA	N/A	69,895	67,384	59,729	59,683	57,242	53,824	50,519	51,773	49,607

N/A: Not Available

Source: U.S. Department of Commerce, Bureau of Economic Analysis

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 16 UNEMPLOYMENT RATES LAST TEN CALENDAR YEARS

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
District of Columbia	6.5%	6.9%	7.0%	7.3%	8.2%	10.2%	10.1%	9.7%	6.6%	5.5%
Montgomery County, MD	3.2%	4.0%	4.1%	4.5%	4.7%	5.2%	5.8%	5.6%	3.2%	2.6%
Prince George's County, MD	4.1%	5.1%	5.5%	6.2%	6.5%	7.0%	7.7%	7.3%	4.4%	3.6%
Fairfax County, VA	3.3%	3.3%	3.6%	3.7%	3.6%	4.3%	4.9%	4.9%	2.9%	2.2%
Loudoun County, VA	3.3%	3.3%	3.6%	3.9%	3.7%	4.2%	4.8%	4.8%	2.8%	2.1%

Source: U.S. Department of Labor, Bureau of Labor Statistics

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 17
EMPLOYMENT BY SECTOR**

	DISTRICT OF COLUMBIA	MONTGOMERY COUNTY	PRINCE GEORGE'S COUNTY	FAIRFAX COUNTY	LOUDOUN COUNTY
Agriculture, Forestry, Mining, etc.	0.06%	0.32%	0.09%	0.22%	0.81%
Construction	2.03%	5.69%	8.76%	4.57%	8.16%
Manufacturing	0.22%	1.92%	1.84%	0.83%	3.25%
Transportation & Public Utilities	1.38%	2.06%	4.33%	2.27%	5.81%
Wholesale & Retail Trade	3.64%	9.56%	13.47%	8.19%	12.07%
Finance, Insurance & Real Estate	6.07%	11.86%	6.52%	9.49%	8.14%
Services	58.11%	54.56%	43.30%	60.72%	50.55%
Government (Federal, State & Local)	26.82%	12.87%	20.03%	12.54%	10.66%
Military	1.65%	1.14%	1.66%	1.16%	0.54%
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%

Source: U.S. Department of Commerce, Bureau of Economic Analysis
Latest available data is for 2015

5. Operating Information

These schedules contain information about the Authority's operations and resources to help the reader understand how the Authority's financial information relates to the activities it perform.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 18
WATER DELIVERED (PUMPED) AND BILLED (SOLD)
LAST TEN FISCAL YEARS**

FISCAL YEAR	TREATED WATER DELIVERED (MG)	WATER BILLED (MG)	SOLD/PUMPED RATIO
2007	41,687	31,581	75.76%
2008	40,755	30,603	75.09%
2009	39,998	29,344	73.36%
2010	38,589	29,004	75.16%
2011	37,556	29,040	77.32%
2012	36,930	27,988	75.79%
2013	34,714	26,316	75.81%
2014	34,708	25,374	73.11%
2015	38,146	26,748	70.12%
2016	36,363	26,325	72.40%

Source: DC Water Department of Customer Service

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 19
WATER DEMAND
LAST TEN FISCAL YEARS**

<u>FISCAL YEAR</u>	<u>ANNUAL DELIVERIES TO SYSTEM (MG)</u>	<u>AVERAGE DAY (MG)</u>	<u>MAXIMUM MONTH AVERAGE (MGD)</u>	<u>MAXIMUM DAY (MGD)</u>	<u>TOTAL ANNUAL WATER SOLD (MG)</u>	<u>AVERAGE DAY (MGD)</u>
2007	41,687	114.2	133.7	156.5	31,581	86.5
2008	40,755	111.7	130.1	150.5	30,603	83.8
2009	39,998	109.6	123.2	150.4	29,344	80.4
2010	38,589	105.7	130.5	146.9	29,004	79.5
2011	37,556	102.9	121.6	143.7	29,040	79.6
2012	36,930	100.9	125.3	142.9	27,988	76.5
2013	34,714	95.1	111.3	129.7	26,316	72.1
2014	34,708	95.1	106.6	123.7	25,374	69.5
2015	38,146	104.5	117.7	148.4	26,748	73.3
2016	36,363	99.4	113.8	127.7	26,325	71.9

Source: DC Water Department of Water Services and Washington Aqueduct

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
LAST TEN FISCAL YEARS**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Utilities and supplies per day at Blue Plains										
Electric power (kwh)	615,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	745,000	745,000
Natural gas (cf)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Sodium hypochlorite (gallons)	10,051	10,051	6,850	6,850	6,850	6,850	6,850	6,850	6,850	6,850
Sodium bisulfite (pounds)	7,880	7,880	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600
Water (gallons)	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000	525,000
Lime (tons, pounds)	0	39,000	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050
Sodium hydroxide (pounds)	14,766	14,766	26,100	26,100	26,100	26,100	26,100	26,100	26,100	26,100
Methanol (gallons)	19,428	19,428	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Ferric chloride (10% Iron) (gallons)	19,060	19,060	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900
Wastewater treatment capacity										
Average day (mgd)	370	370	370	370	370	370	370	370	370	370
Peak 4 hour flow, through complete process (mgd)	511	511	740	740	740	740	740	740	740	740
Excess storm flow, primary treatment only (mgd)	336	336	336	336	336	336	336	336	336	336
Peak flow (mgd)	847	847	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076
DC Water employees	1,121	1,164	1,079	1,080	1,051	1,032	1,004	1,000	961	948

Source: D.C. Water Department of Wastewater Treatment Operations

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
(CONTINUED)**

Wastewater Plant Permit Limitations
September 30, 2010 through September 30, 2015

Parameter	Monthly	Weekly
Biochemical Oxygen Demand (carbonaceous)	5.0 mg/L (15,429 lbs./day)	7.5 mg/l (23,143 lbs./day)
Total Suspended Solids (TSS)	7.0 mg/l (21,600 lbs./day)	10.5 mg/l (32,400 lbs./day)
Ammonia Nitrogen		
Summer (5/1 – 10/31)	4.2 mg/l (12,960 lbs./day)	6.1 mg/l (18,823 lbs./day)
Winter 1 (1/1 – 2/14)	11.1 mg/l (34,253 lbs./day)	14.8 mg/l (45,670 lbs./day)
Winter 2 (2/15 – 4/30)	12.8 mg/l (39,500 lbs./day)	17.0 mg/l (52,460 lbs./day)
Total Phosphorus (annual average)	0.18 mg/l (555 lbs./day)	0.35 mg/l (1080 lbs./day)
Dissolved Oxygen		
Minimum daily average	5.0 mg/l	
Not less than	4.0 mg/l	
pH		
Minimum	6.0 units	
Maximum	8.5 units	
Total Chlorine	Non detectable	
E.coli	123 cu/100ml Geometric (30 day)	
Chesapeake Bay Voluntary Agreement		
Total Nitrogen (Annual Average)	8,467,200 lbs./yr	
U.S. Environmental Protection Agency		
Total Nitrogen (Annual Average)	4,337,580 lbs./yr	

Wastewater Plant Processes

Primary Treatment

Influent Pumping Capacity	1,300 MGD
Number of bar screens	13
Number of aerated grit chambers	16
Total volume of aerated grit chambers	2.3 MG
Number of primary clarifiers	36
Average detention time (clarifiers)	2.5 hours
Average hydraulic loading (clarifiers)	1,008 gallons/square foot/day
Maximum hydraulic loading (clarifiers)	2,929 gallons/square foot/day

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 20
MISCELLANEOUS STATISTICS ABOUT AUTHORITY OPERATIONS
(CONTINUED)**

Secondary Treatment

Number of reactors	6
Total reactor volume	27.7 MG
Number of clarifiers	24
Average reactor detention time	1.6 hours
Average clarifier hydraulic loading	763 gal/sq ft./day
Number of centrifugal blowers	6
Total blower capacity	280,000 cu ft. /min
Average MLSS	2,200 mg/L
Average SRT	1.6 days
Average SVI	80-100 ml/g
Effluent dissolved oxygen	2-3 mg/L
Effluent alkalinity	140 mg/L as CaCO ₃

Nitrification / Denitrification

Number of Nitrification reactors	12
Total reactor volume	55.2 MG
Number of Denitrification reactors	8
Total reactor volume	36.7 MG
Number of clarifiers	28
Average reactor detention time	3.3 hours
Average clarifier hydraulic loading	755 gallons/square ft./day
Average MLSS	2000 mg/L
Average pH	7.0 units
Average SRT	21 days
Average SVI	80-110 ml/g
Effluent alkalinity	110 mg/L as CaCO ₃

Effluent dissolved oxygen (Post – Aeration)	3.8 – 7.2 mg/L
Dual Purpose sedimentation tanks	4 Secondary Treatments 4 Nitrification Treatments
Total Dual Purpose Surface Area	197,160 sq. ft.

Filtration & Disinfection

Number of filters	40
Total filter area	83,200 sq. ft.
Average filtration rate	3.4 gal/ minute/ sq. ft.
Average filter run time	55 hours
Depth of anthracite media	24 inches
Depth of sand media	12 inches
Depth of Gravel Support Layer	12 inches
Number of chlorine contact tanks	4
Average contact time	42 minutes

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 21
SCHEDULE OF INSURANCE
AS OF SEPTEMBER 30, 2016**

TYPE OF COVERAGE	COMPANY	POLICY PERIOD	COVERAGE LIMITS
Blanket Property and Boiler & Machinery	Alliant Public Entity Property Insurance Program (PEPIP)	July 1, 2016– July 1, 2017	<p>\$1,000,000,000 Blanket Buildings and Contents – (Specified Locations) and Mobile Equipment</p> <p>\$100,000,000 Boiler and Machinery</p> <p>\$25,000,000 Miscellaneous Locations</p> <p>\$100,000,000 Earth Movement</p> <p>\$100,000,000 Excess Flood (over NFIP), except \$25,000,000 Locations within 100 Year Flood Zone (e.g. Blue Plains)</p> <p>Terrorism: \$650,000,000 per occurrence, \$1,250,000,000 annual aggregate (\$250,000,000 of occurrence and aggregate limit dedicated solely to DC Water)</p> <p>\$25,000,000 Transit Per Shipment</p> <p>Deductibles: \$1,000,000 Any Loss, except \$10,000 Equipment</p>
Fidelity & Crime Insurance	Travelers Insurance	July 1, 2016– July 1, 2017	<p>\$10,000,000 - Employee Dishonesty, Forgery, Funds Transfer, Fraud, Money & Securities</p> <p>Deductible: \$200,000 Per Occurrence</p>
Commercial General Liability	Self-Funded		\$1,000,000 each occurrence
Commercial Automobile	Self-Funded		<p>\$1,000,000 any one accident</p> <p>100% Physical Damage - self-funded</p>
Worker's Compensation	Self-Funded		<p>\$1,000,000 each accident</p> <p>Statutory WC Benefits</p> <p>Employer's Liability - \$1,000,000 Each Accident; \$1,000,000 Disease/ Employee</p>
Excess Worker's Compensation Insurance	Safety National	July 1, 2016– July 1, 2017	<p>Unlimited - WC Benefits; \$3,000,000 - Employer's Liability (Included - Terrorism)</p> <p>Retentions: \$1,000,000/accident; \$1,000,000 Disease/ Employee.</p>
Excess General Liability, Automobile Liability, and Employers Liability Insurance	AEGIS	July 1, 2016– July 1, 2017	\$35,000,000 in excess of \$1,000,000
Excess Liability	Alliant Catastrophe Liability Insurance Program (C.L.I.P.)	July 1, 2016– July 1, 2017	\$65,000,000 in excess of \$35,000,000
Public Official Liability	RSUI Indemnity / Hiscox Insurance Company	July 1, 2016– July 1, 2017	<p>\$20,000,000 Each Loss / Aggregate</p> <p>Retentions: \$250,000 per wrongful act</p>
Fiduciary Liability	Travelers Insurance	July 1, 2016– July 1, 2017	<p>\$5,000,000 Each Loss / Aggregate</p> <p>Deductible: \$0 per claim</p>
Cyber	Beazley	July 1, 2016– July 1, 2017	<p>\$5,000,000 Each Loss/Aggregate</p> <p>Deductible: \$100,000</p>
Professional Liability	Lloyds of London	July 1, 2016– July 1, 2017	<p>\$2,000,000 Each Loss</p> <p>Deductible: \$10,000</p>
National Flood	NFIP	July 1, 2016– July 1, 2017	<p>\$500,000 building/contents</p> <p>Deductible: \$50,000 per building/contents</p>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 22
SUMMARY OF MAJOR PERMITS AND ADMINISTRATIVE ORDERS
AS OF SEPTEMBER 30, 2016**

Wastewater	Description	Expiration Date	Current Status
National Pollutant Discharge Elimination System Permit # DC0021199	Authorizes discharge of treated wastewater from Blue Plains into the Potomac River and from the combined sewer system into Rock Creek, the Anacostia River, and the Potomac River. Prescribes operating conditions for the plant and sewer system.	September 30, 2015 ⁽¹⁾	In Compliance
National Pollutant Discharge Elimination System Municipal Separate Storm Sewer (MS4) Permit # DC0000221	Permit issued to Government of District of Columbia which prescribes certain actions to DC Water including: Responding to sanitary sewer overflows (SSO) Reporting SSOs that overflow to MS4 system to public health agencies Cleaning catch basins and removing trash from waterbodies Maintaining storm sewer system infrastructure Collection of stormwater fees	October 7, 2016 ⁽¹⁾	In Compliance
1995 Consent Decree Civil Action No.: 90-1643-JGP and 84-2842-JGP	Requires certain actions including: Review procurement practices & maintenance procedures Undertake Operational Capability Review Conduct a pilot project for biological nitrogen reduction	N/A	In Compliance All items completed; awaiting action to terminate decree
1996 Stipulated Agreement & Order Civil Action No.: 96-669-TFH	Requires certain actions including: Rehabilitate and maintain certain facilities and capital equipment in good operating condition Maintain certain records and data for status reports and prepare monthly reports on status of compliance Maintain user fees in separate accounts and make timely payment of invoices	N/A	In Compliance All items completed; awaiting action to terminate agreement and order
2003 Consent Decree Civil Action No.: 1:00CV00183TFH Civil Action No.: 02-2511 (TFH)	Requires certain actions including: Replacement/repair of control structures Cleaning/inspection of catch basins Rehabilitation of pumping stations Rehabilitation of Blue Plains grit chambers and influent screens Inspection of certain sewers and siphons Public education/outreach activities Payment of civil penalty of \$250,000 Conduct/support of supplemental environmental projects	N/A	In Compliance
2005 Modified Consent Decree for CSS LTCP Consolidate Civil Action No; 1:00CV00183TFH	Requires implementing various components of the combined sewer system (CSS) long term control plan (LTCP). On January 14, 2016, the Court entered the First Amendment to the Consent Decree to incorporate DC Water's Total Nitrogen Wet Weather Plan and modify the requirement for the Potomac and Rock Creek watersheds to include Green/Gray Infrastructure in Potomac watershed, and Gray Infrastructure in the Rock Creek watershed. The Consent Decree does not have an expiration date.	N/A	In Compliance
DC Department of Energy and the Environment	Permit to construct the enhanced nitrogen removal facility	2/20/2015 ⁽²⁾	In Compliance
DC Department of Energy and The Environment	Permit to construct biosolids project – main process train/combined heat & power/final dewatering facility	3/15/2015 ⁽²⁾	In Compliance

⁽¹⁾Administratively extended in accordance with the terms of the permit.

⁽²⁾Extended monthly pending issuance of revised permit.

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**EXHIBIT 23
BUDGETARY COMPARISON SCHEDULE
FOR FISCAL YEAR 2016**

	Revised Budget	Actual Expenditures	Variance
Expenditures			
Personnel services	\$ 140,034	\$ 141,886	\$ (1,852)
Contractual services	79,244	74,086	5,158
Water purchases	30,740	26,345	4,395
Chemicals and supplies	35,951	28,966	6,985
Utilities and rent	35,018	23,934	11,084
Small equipment	1,465	672	793
Interest and fiscal charges (debt service)	174,766	149,781	24,985
Payment in lieu of tax & right of way fee	20,744	20,744	-
Cash financed capital improvements	23,644	-	23,644
Total budgetary basis expenditures	<u>\$ 541,605</u>	\$ 466,413	<u>\$ 75,193</u>

Reconciliation between total budgetary basis expenditures and total expenses reported in statements of revenues, expenses and changes in net position

Capitalized personnel expenditures	(17,648)
Depreciation expense	89,512
Long-term debt - principal payments	(28,460)
Long-term debt - capitalized interest	(62,800)
Build America Bonds subsidy	7,969
Inventory issuances	(112)
Non-budgeted expenses	<u>2,628</u>
Total expenses reported in statements of revenues, expenses and changes in net position	<u>\$ 457,502</u>

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 23 BUDGETARY COMPARISON SCHEDULE FOR FISCAL YEAR 2016 (CONTINUED)

BUDGETARY ACCOUNTING AND CONTROL

Budget Law

The Authority prepares its operating and capital budgets under the provisions of its enabling legislation. In accordance with those provisions, the following process is used to adopt the annual budget.

- Development of the 10-year financial plan
- Development of individual departmental operating budgets, based on the financial framework in the 10-year financial plan
- Review and development of the Authority wide proposed budget by the General Manager
- Presentation of proposed budget to the Board of Directors
- Review and development of proposed budget by the Board of Directors
- Adoption of proposed budget by the Board of Directors
- Submission of proposed budget to the District of Columbia for inclusion in its budget
- District of Columbia budget submission to U.S. Congress
- Approval of proposed budget by U.S. Congress and President

Budgetary Accounting

The Authority is a single enterprise fund and maintains accounting records using the accrual basis of accounting, in accordance with U.S. generally accepted accounting principles (GAAP). Under this basis of accounting, revenues are recognized when earned, and expenses are recognized when goods and services are received. The Authority's expenditure budget is prepared on a comparable basis to GAAP, with the exception of debt service, which is budgeted in full when due, including principal and interest. Depreciation is not budgeted; depreciation is recorded as an expense for financial statement purposes. Certain other items are also not budgeted such as bad debt expense or (recovery) and loss (gain) on disposals of fixed assets or inventory.

Budgetary Requirements

After the U.S. Congress approves the budget, the operating and capital budgets are loaded into the Authority's financial management system, which prevents overspending without appropriate approvals. The Department of Finance, Accounting and Budget prepares monthly management reports for each operating unit, management staff, the Board of Directors, and its various committees. The reports are consistently reviewed each month to ensure the Authority complies with its authorized budget levels.