



**Statistical  
Section  
(Unaudited)**

## **Statistical Section (Unaudited)**

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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:

- Financial Trends
  - Revenue Capacity
  - Debt Capacity
  - Demographic and Economic Information
  - Operating Information
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## **1. Financial Trends**

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

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# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Operating revenues										
Residential, commercial and multi-family customers	\$ 335,711	\$ 295,209	\$ 275,337	\$ 256,846	\$ 241,475	\$ 209,796	\$ 191,543	\$ 183,553	\$182,327	\$174,159
Federal government	54,274	39,001	45,187	48,381	43,033	37,845	35,195	35,888	30,751	31,100
District government and DC Housing Authority	32,948	28,852	21,677	24,713	25,123	21,947	16,804	16,193	17,266	16,463
Charges for wholesale wastewater treatment	112,522	96,845	87,178	94,549	90,414	87,505	85,519	82,854	73,378	67,966
Other	14,460	13,917	9,700	16,077	8,210	6,655	3,337	3,846	2,735	3,845
Total Operating Revenues	549,915	473,824	439,079	440,566	408,255	363,748	332,398	322,334	306,457	293,533
Operating expenses										
Personnel services	115,233	108,467	103,908	97,784	93,240	88,210	82,248	75,838	70,956	66,942
Contractual services	66,241	68,172	68,417	64,939	71,055	69,497	64,513	58,730	56,568	54,188
Chemicals, supplies and small equipment	32,935	31,748	28,987	28,815	28,188	29,003	29,074	28,816	24,510	23,482
Utilities and rent	30,848	29,939	26,098	26,786	29,429	29,929	32,813	37,843	32,238	31,151
Depreciation and amortization	83,857	77,833	77,330	74,342	70,209	64,425	59,291	54,418	49,355	44,149
Water purchases	29,109	28,407	27,223	28,389	27,170	27,587	25,371	25,746	24,042	22,745
Payment in lieu of taxes and right of way fee	20,437	11,458	21,982	21,982	21,982	20,474	19,183	17,525	17,514	16,923
Total operating expenses	378,660	356,024	353,945	343,037	341,273	329,125	312,493	298,916	275,183	259,580
Operating income	171,255	117,800	85,134	97,529	66,982	34,623	19,905	23,418	31,274	33,953
Non-operating revenue (expenses)										
Interest income	1,316	977	1,144	749	2,036	1,343	1,704	11,444	16,224	13,080
Interest expense and fiscal charges	(61,409)	(69,288)	(63,905)	(74,001)	(73,335)	(57,479)	(53,197)	(44,338)	(33,667)	(20,654)
Total non-operating revenue (expenses)	(60,093)	(68,311)	(62,761)	(73,252)	(71,299)	(56,136)	(51,493)	(32,894)	(17,443)	(7,574)
Change in net position before capital contributions	111,162	49,489	22,373	24,277	(4,317)	(21,513)	(31,588)	(9,476)	13,831	26,379
Capital contributions	67,965	94,690	58,310	58,957	47,374	30,403	27,752	42,208	25,083	24,927
Change in net position	179,127	144,179	80,683	83,234	43,057	8,890	(3,836)	32,732	38,914	51,306
Net position, beginning of year	1,350,815	1,206,636	1,125,953	1,042,719	999,662	990,772	994,608	961,876	922,962	871,656
Net position, end 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

Source: FY 2006 - 2015 Statements of Revenues, Expenses and Changes in Net Position.

# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

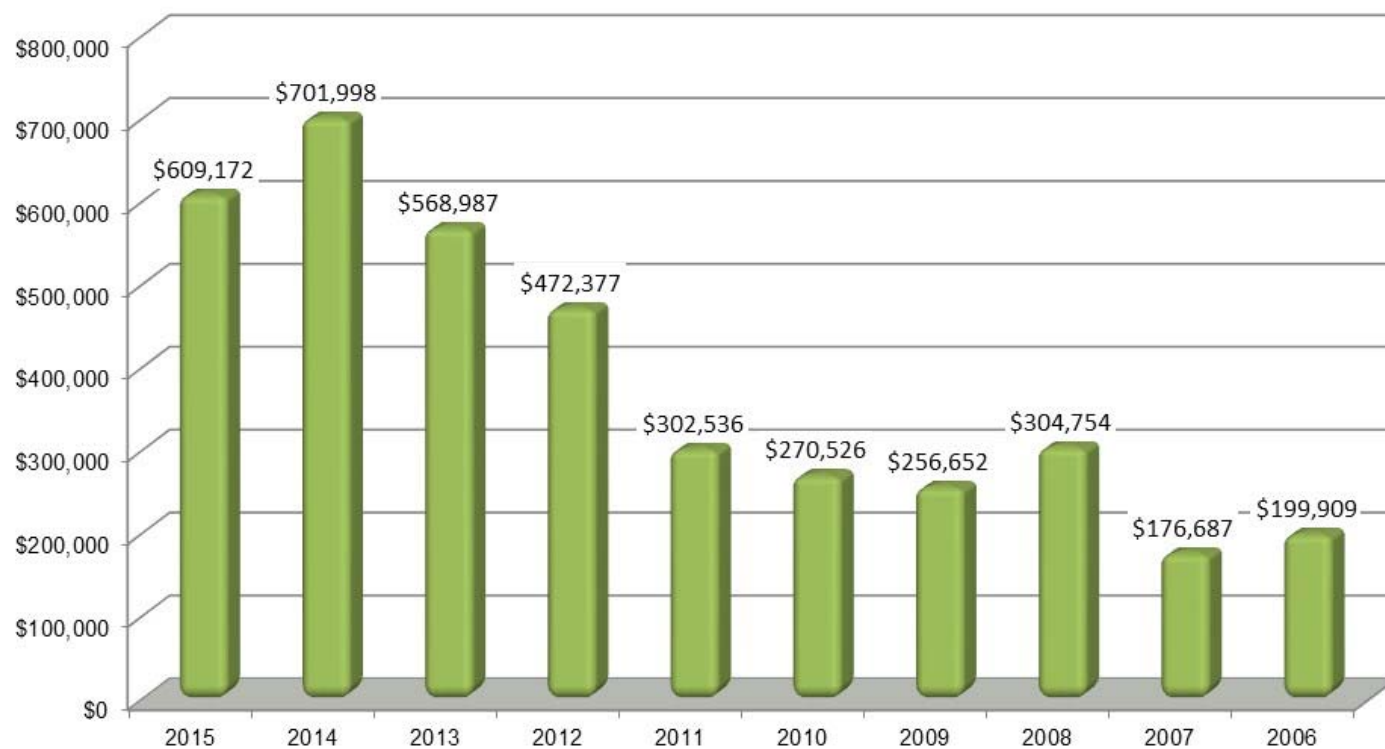
## EXHIBIT 2 SUMMARY OF NET POSITION LAST TEN FISCAL YEARS (\$000)

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Net investments in capital assets	\$1,348,056	\$1,130,952	\$1,042,620	\$ 956,397	\$ 874,356	\$ 818,001	\$ 765,709	\$ 726,747	\$766,119	\$741,479
Restricted	27,054	28,863	29,010	27,297	26,825	17,257	10,244	8,297	6,267	1,323
Unrestricted	154,832	191,000	135,006	142,259	141,538	164,404	214,819	259,564	189,490	180,160
Total net position	<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>	<u>\$922,962</u>

Source: FY 2006 - 2015 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 2006 – 2015 Statements of Cash Flows.

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## **2. Revenue Capacity**

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

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# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Operating Revenues										
Retail Customers										
Residential, Commercial and Multifamily	\$335,711	\$295,209	\$275,337	\$256,846	\$241,475	\$209,796	\$191,543	\$183,553	\$182,327	\$174,159
Federal Government	54,274	39,001	45,187	48,381	43,033	37,845	35,195	35,888	30,751	31,100
DC Government	24,453	21,205	14,714	18,213	17,827	15,628	10,116	9,391	10,580	9,617
DC Housing Authority	8,495	7,647	6,963	6,500	7,296	6,319	6,688	6,802	6,686	6,846
Other Revenues	14,460	13,917	9,700	16,077	8,210	6,655	3,337	3,846	2,735	3,845
Total Retail Customers	437,393	376,979	351,901	346,017	317,841	276,243	246,879	239,480	233,079	225,567
Wholesale Customers	112,522	96,845	87,178	94,549	90,414	87,505	85,519	82,854	73,378	67,966
Total Operating Revenues	\$549,915	\$473,824	\$439,079	\$440,566	\$408,255	\$363,748	\$332,398	\$322,334	\$306,457	\$293,533
Retail Rate Increases	7.50%	5.50%	5.50%	4.50%	12.50%	9.00%	7.50%	5.50%	5.00%	5.50%

Source: FY 2006 - 2015 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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Retail Accounts										
Residential	105,735	104,965	104,477	103,887	103,857	103,315	103,665	103,674	103,263	102,655
Commercial <sup>(A)</sup>	18,947	19,433	19,343	19,242	19,165	19,049	19,060	18,528	18,513	18,489
Governmental										
Federal	550	542	542	538	549	546	540	533	531	526
District of Columbia	638	641	630	605	607	603	606	590	589	582
DC Housing Authority	1,446	1,452	1,460	1,435	1,431	1,431	1,220	1,218	1,175	1,173
Total Retail Accounts	127,316	127,033	126,452	125,707	125,609	124,944	125,091	124,543	124,071	123,425
DC Water	39	37	36	36	35	35	30	30	30	29
Washington Aqueduct	2	2	2	2	2	1	2	2	1	1
Wholesale	7	7	7	7	7	7	7	7	7	7
Total Number of Accounts	127,364	127,079	126,497	125,752	125,653	124,987	125,130	124,582	124,109	123,462

<sup>(A)</sup> 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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Howard University	\$ 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	\$ 1,584,501
George Washington University	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	1,519,286
William C Smith & Co	2,076,534	2,277,833	1,782,719	1,787,150	1,709,334	1,505,145	-	-	-	-
Washington Hospital Center	1,830,586	1,671,855	1,693,655	933,027	1,270,788	1,113,672	823,743	514,275	606,120	782,404
Georgetown University	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	618,575
American University	1,078,412	1,125,050	1,253,038	869,211	-	694,565	1,524,262	773,109	689,676	678,900
Shoreham Hotel	1,035,982	-	-	-	-	-	656,182	458,828	-	430,412
Amtrak	1,028,989	984,336	1,004,177	937,430	903,475	761,235	963,925	795,825	-	-
Metropolitan Wash Airport	923,394	807,803	716,929	661,509	-	-	-	-	-	-
Georgetown University Hospital	720,247	955,353	1,053,659	1,643,380	1,371,035	-	-	-	1,070,099	723,604
The Barac Company	-	-	-	-	927,022	776,134	-	-	-	-
Horning Brothers	-	1,347,287	1,258,995	1,163,586	1,122,879	993,115	-	-	-	-
Soldiers Home	-	-	-	-	897,121	804,533	818,641	948,708	-	-
Marriott Wardman Park Hotel	-	-	-	-	-	-	1,037,663	681,480	592,663	555,216
JW Marriott Hotel	-	-	-	-	-	-	556,985	-	-	-
Children's Hospital	-	-	-	-	-	-	-	841,774	676,570	-
Washington Hilton Hotel	-	-	-	-	-	-	-	792,227	756,085	716,612
L'Enfant Plaza Properties	-	-	-	-	-	-	-	-	533,726	611,283
Total	\$ 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	\$ 8,220,793
% of Total Operating Revenues	2.93%	3.60%	3.53%	3.40%	3.53%	3.33%	3.59%	3.60%	2.98%	2.80%

Source: DC Water Department of Customer Service

# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
D.C. Housing Authority	\$ 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	\$ 6,514,112
U.S. Congress	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	3,320,538
U.S. General Services Administration	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	7,916,072
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	1,737,849
Smithsonian Institution	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	3,443,695
Bolling Air Force Base	2,509,536	1,928,617	2,265,348	2,925,847	-	-	2,279,861	-	-	-
National Park Service	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	1,877,269
D.C. Board of Education	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	2,934,220
Federal Naval Research Lab	1,802,150	1,542,370	1,833,491	1,788,497	-	-	-	-	-	-
DC Recreation and Parks	1,702,488	1,216,398	-	-	-	-	-	-	-	-
Department of the Navy	-	-	1,521,264	1,886,750	3,832,568	2,851,611	3,504,547	3,011,883	2,835,280	2,699,653
D.C. Department of Human Services	-	-	-	-	3,272,747	2,047,213	-	1,914,251	1,741,170	1,636,053
Department of Defense DC	-	-	-	-	2,151,529	1,608,642	2,248,076	3,292,402	3,907,312	1,521,220
Total	\$ 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	\$ 33,600,681
% of Total Operating Revenues	6.82%	6.85%	7.88%	8.14%	9.27%	8.97%	10.82%	12.08%	11.45%	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

FISCAL YEAR	(a) METERING FEE	(b) DISTRICT PUBLIC SPACE OCCUPANCY FEE AND PILOT	(c) WATER CONSUMPTION RATE	(d) SEWER CONSUMPTION RATE	(e) COMBINED CONSUMPTION RATE	(f) IMPERVIOUS SURFACE AREA CHARGE <sup>2</sup>	AVERAGE MONTHLY BILL <sup>1</sup>
2006	2.010	0.420	1.930	2.910	4.840	-	37.199
2007	2.010	0.440	2.030	3.060	5.090	-	39.006
2008	2.010	0.470	2.140	3.230	5.370	-	41.080
2009	2.010	0.520	2.300	3.310	5.610	1.240	44.260
2010	2.010	0.570	2.510	3.610	6.120	2.200	48.966
2011	3.860	0.630	3.100	3.790	6.890	3.450	57.619
2012	3.860	0.640	3.240	3.960	7.200	6.640	62.950
2013	3.860	0.660	3.420	4.180	7.600	9.570	68.689
2014	3.860	0.700	3.610	4.410	8.020	11.850	74.047
2015	3.860	0.630	3.880	4.740	8.620	16.750	82.493

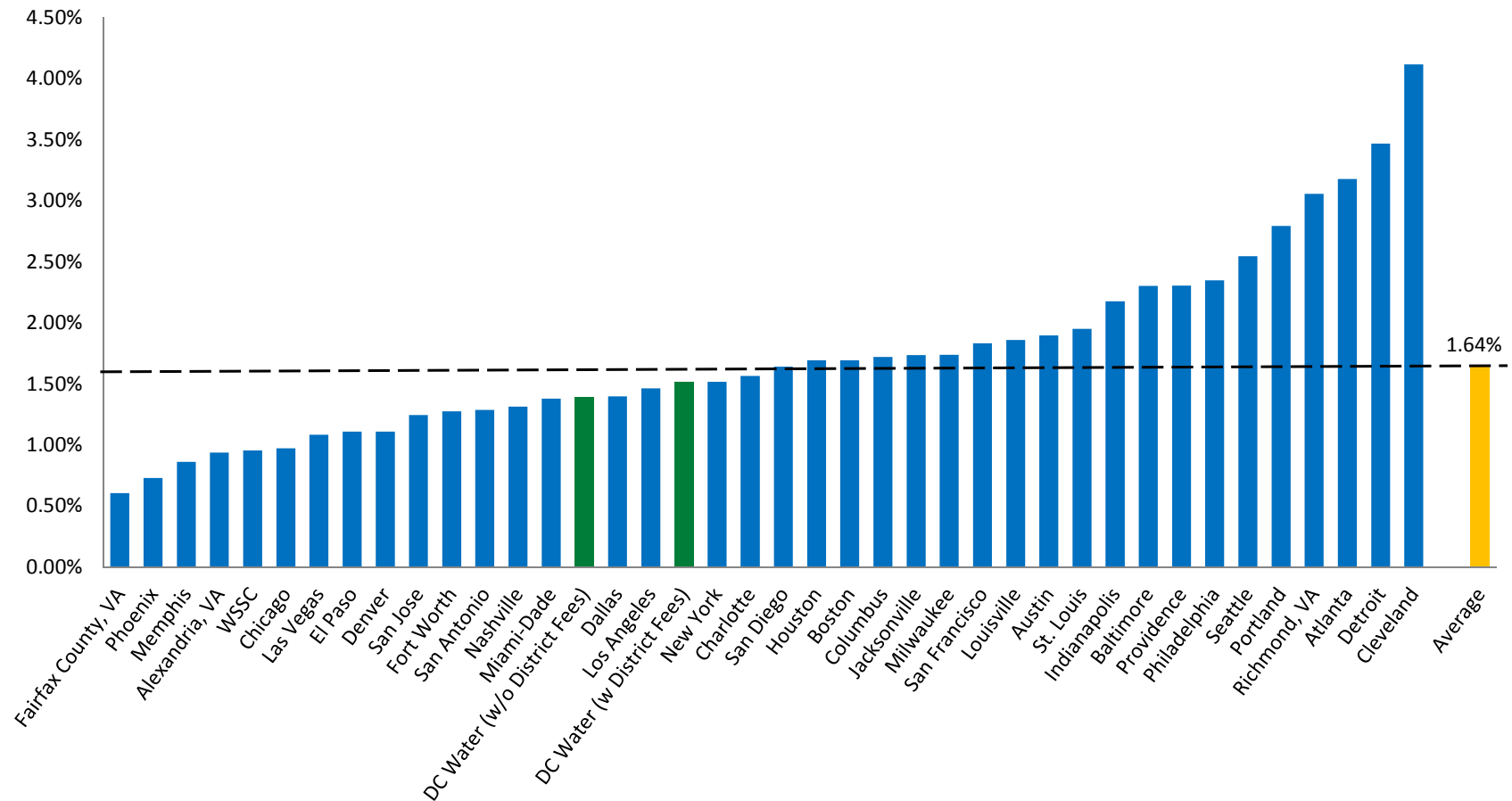
<sup>1</sup> Average residential customer consumption is 6.69 Ccf per month. The average monthly bill is calculated as follows (a)+(f)+(((b)+(e)) x 6.69 Ccf)

<sup>2</sup> Per Equivalent Residential Unit (ERU).

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)

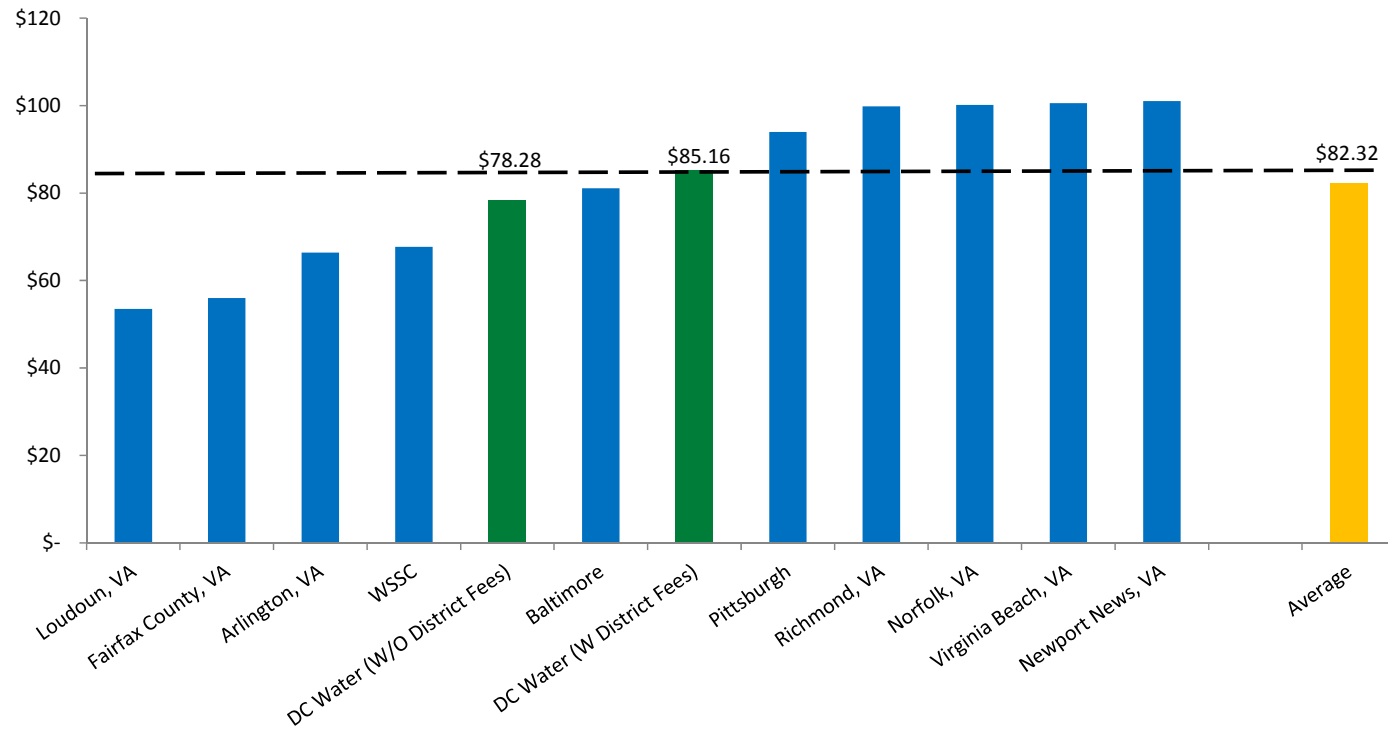


(1) This analysis is based on a single family residential monthly bill as a percentage of median household income for large national utilities based on rates in effect fall 2015.

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 2015.

Source: DC Water Department of Finance & Budget

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### **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.

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# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>Senior Debt:</b>										
2014 Public Utility Revenue Bonds	\$ 350,000	\$ 350,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2009 Series A Public Utility Revenue Bonds	159,520	291,145	293,720	296,205	298,225	300,000	300,000	-	-	-
1998 Public Utility Revenue Bonds	183,660	196,050	207,735	218,815	229,315	239,270	248,705	257,645	266,120	266,120
<b>Total Senior Debt</b>	<b>693,180</b>	<b>837,195</b>	<b>501,455</b>	<b>515,020</b>	<b>527,540</b>	<b>539,270</b>	<b>548,705</b>	<b>257,645</b>	<b>266,120</b>	<b>266,120</b>
<b>Subordinate Debt:</b>										
2014 Series B-1 Public Utility Revenue Bonds	50,000	50,000	-	-	-	-	-	-	-	-
2014 Series B-2 Public Utility Revenue Bonds	50,000	50,000	-	-	-	-	-	-	-	-
2014 Series C Public Utility Revenue Bonds	377,700	-	-	-	-	-	-	-	-	-
2013 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	-	-	-	-	-	-	-
2012 Series A Public Utility Revenue Bonds	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	-	-	-	-	-	-
2010 Series A Public Utility Revenue Bonds	300,000	300,000	300,000	300,000	300,000	-	-	-	-	-
2008 Series A Public Utility Revenue Bonds	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	295,000
2003 Public Utility Revenue Bonds	-	-	-	-	176,220	176,220	176,220	176,220	176,220	176,220
<b>Notes Payable to the Federal</b>										
Government for Bloomington Dam	13,217	13,580	13,932	14,273	14,603	14,922	15,232	15,532	15,823	16,104
DC General Obligation Bonds	-	-	-	-	245	1,490	5,180	9,905	15,060	22,299
Notes Payable to WSSC for Little Seneca	-	-	-	63	104	142	179	216	251	285
<b>Total Subordinate Debt</b>	<b>1,753,617</b>	<b>1,636,595</b>	<b>1,547,502</b>	<b>1,253,651</b>	<b>995,427</b>	<b>701,489</b>	<b>705,901</b>	<b>710,963</b>	<b>780,069</b>	<b>509,908</b>
<b>Total Senior and Subordinate debt</b>	<b>2,446,797</b>	<b>2,473,790</b>	<b>2,048,957</b>	<b>1,768,671</b>	<b>1,522,967</b>	<b>1,240,759</b>	<b>1,254,606</b>	<b>968,608</b>	<b>1,046,189</b>	<b>776,028</b>
Unamortized bond premiums	104,060	76,098	79,313	79,674	28,255	29,929	31,102	31,255	20,051	4,746
Unamortized bond discounts	(2,351)	(2,480)	(2,608)	(2,784)	(2,879)	(2,968)	(3,053)	(3,134)	(3,211)	(3,283)
<b>Total Debt</b>	<b>\$ 2,548,506</b>	<b>\$ 2,547,408</b>	<b>\$ 2,125,662</b>	<b>\$ 1,845,561</b>	<b>\$ 1,548,343</b>	<b>\$ 1,267,720</b>	<b>\$ 1,282,655</b>	<b>\$ 996,729</b>	<b>\$ 1,063,029</b>	<b>\$ 777,491</b>
<b>Debt - per capita</b>										
Debt - per capita	N/A	\$ 3,866	\$ 3,288	\$ 2,919	\$ 2,505	\$ 2,096	\$ 2,166	\$ 1,718	\$ 1,851	\$ 1,362
<b>Debt - as percentage of personal income</b>										
Debt - as percentage of personal income	N/A	5.54%	4.37%	3.90%	3.40%	2.94%	3.18%	2.43%	2.83%	2.24%

N/A: population and personal income not available

See exhibits 13 and 14 for per capita 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 2015 (\$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	\$ 382,012
Wholesale	81,230
Other Non-Operating	75,354
Transfer from (Contributions to) Rate Stabilization Fund	(10,000)

Total Cash Receipts (A)	528,596
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Cash Disbursements (Operating Expenses) (B)	273,486
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Cash Receipts Less Cash Disbursements (C=A-B)	\$ 255,110
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#### Debt Service:

Senior Debt Service (D)	\$ 55,746
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Subordinate Debt Service (E)	84,925
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Total Outstanding and Projected Debt Service (F=D+E)	\$ 140,671
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#### Calculation of Net Cash Receipts Available for Senior Debt Service:

Cash Receipts Less Cash Disbursements (C)	\$ 255,110
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Prior Year Federal Billing Reconciliation	(5,053)
---	---------

(Refund to)/Payment from Wholesale Customers	(2,483)
--	---------

Net Cash Receipts Available for Senior Debt Service (G)	\$ 247,574
---	------------

#### Senior Debt Service Coverage (G/D)

**4.44**

#### Calculation of Subordinate Debt Service Coverage:

Net Cash Receipts Available for Senior Debt Service	\$ 247,574
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Less Senior Debt Service (D)	(55,746)
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Net Cash Receipts Available for Subordinate Debt Service (G-D)	\$ 191,828
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#### Subordinate Debt Service Coverage ((G-D)/E)

**2.26**

#### Combined Debt Service Coverage (G/F)

**1.76**

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.

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## DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
District of Columbia	N/A	658,893	646,449	632,323	617,996	604,912	592,228	580,236	574,404	570,681
Montgomery County	N/A	1,030,447	1,016,677	1,004,709	989,794	975,439	959,013	942,748	931,694	926,492
Prince George's County	N/A	904,430	890,081	881,138	871,233	865,219	856,161	850,167	849,916	852,097
Fairfax County	N/A	1,175,622	1,168,405	1,155,292	1,135,992	1,121,054	1,099,347	1,077,509	1,060,356	1,051,240
Loudoun County	N/A	363,050	349,679	336,898	325,405	315,305	303,661	292,570	279,704	267,194

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)

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
District of Columbia	N/A	\$ 46,015,860	\$ 48,696,519	\$ 47,280,666	\$ 45,597,835	\$ 43,082,099	\$ 40,326,374	\$ 41,014,705	\$ 37,525,123	\$ 34,786,968
Montgomery County	N/A	75,720,017	73,958,785	73,551,167	69,050,166	65,904,393	62,962,957	65,845,731	62,643,745	60,372,289
Prince George's Count	N/A	40,215,913	38,595,921	38,481,250	35,036,640	33,888,631	33,156,357	33,026,742	31,753,583	30,306,871
Fairfax County	N/A	88,180,013	83,835,355	82,727,342	78,392,046	75,161,493	71,954,372	75,302,775	73,256,103	69,554,932
Loudoun County	N/A	24,463,869	20,886,046	20,107,077	18,626,729	16,971,112	15,340,608	15,147,096	13,875,373	12,394,528

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
District of Columbia	N/A	\$ 69,838	\$ 75,329	\$ 74,773	\$ 73,783	\$ 71,220	\$ 69,093	\$ 70,686	\$ 65,329	\$ 60,957
Montgomery County	N/A	73,483	72,746	73,206	69,762	67,564	65,654	69,844	67,236	65,162
Prince George's County	N/A	44,465	43,362	43,672	40,215	39,168	38,727	38,847	37,361	35,567
Fairfax County	N/A	75,007	71,752	71,607	69,008	67,045	65,452	69,886	69,086	66,165
Loudoun County	N/A	67,384	59,729	59,683	57,242	53,824	50,519	51,773	49,607	46,388

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
District of Columbia	6.9%	7.0%	7.3%	8.2%	10.2%	10.1%	9.7%	6.6%	5.5%	5.7%
Montgomery County	4.0%	4.1%	4.5%	4.7%	5.2%	5.8%	5.6%	3.2%	2.6%	2.8%
Prince George's County	5.1%	5.5%	6.2%	6.5%	7.0%	7.7%	7.3%	4.4%	3.6%	4.1%
Fairfax County	3.3%	3.6%	3.7%	3.6%	4.3%	4.9%	4.9%	2.9%	2.2%	2.2%
Loudoun County	3.3%	3.6%	3.9%	3.7%	4.2%	4.8%	4.8%	2.8%	2.1%	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.	0.07%	0.34%	0.09%	0.25%	0.98%
Construction	2.03%	5.87%	8.53%	4.71%	8.27%
Manufacturing	0.21%	1.91%	1.81%	0.85%	3.28%
Transportation & Public Utilities	1.11%	1.69%	4.06%	2.07%	5.78%
Wholesale & Retail Trade	3.53%	9.60%	13.39%	8.08%	12.01%
Finance, Insurance & Real Estate	6.00%	11.46%	7.13%	10.11%	8.61%
Services	57.71%	54.68%	42.91%	60.34%	48.83%
Government (Federal, State & Local)	27.57%	13.27%	20.33%	12.43%	11.68%
Military	1.73%	1.18%	1.74%	1.15%	0.57%
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 2014



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## **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.

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**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

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

FISCAL YEAR	TREATED		SOLD/PUMPED RATIO
	WATER DELIVERED (MG)	WATER BILLED (MG)	
2006	41,541	31,717	76.35%
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%

Source: DC Water Department of Customer Service

# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

## EXHIBIT 19 WATER DEMAND LAST TEN FISCAL YEARS

FISCAL YEAR	ANNUAL DELIVERIES TO SYSTEM (MG)	AVERAGE DAY (MG)	MAXIMUM MONTH AVERAGE (MGD)	MAXIMUM DAY (MGD)	TOTAL ANNUAL WATER SOLD (MG)	AVERAGE DAY (MGD)
2006	41,541	113.8	137.8	161.6	31,717	86.9
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	76.7
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

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

	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
<b>Utilities and supplies per day at Blue Plains</b>										
Electric power (kwh)	700,000	700,000	700,000	700,000	700,000	700,000	700,000	745,000	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	6,850	6,850	6,850	6,850	6,850	6,850	6,850	6,850	6,850
Sodium bisulfite (pounds)	7,880	5,600	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)	39,000	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050	72,050
Sodium hydroxide (pounds)	14,766	26,100	26,100	26,100	26,100	26,100	26,100	26,100	26,100	26,100
Methanol (gallons)	19,428	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Ferric chloride (10% Iron) (gallons)	19,060	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900	12,900
<b>Wastewater treatment capacity</b>										
Average day (mgd)	370	370	370	370	370	370	370	370	370	370
Peak 4 hour flow, through complete process (mgd)	511	740	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	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076	1,076
<b>DC Water employees</b>	1,164	1,079	1,080	1,051	1,032	1,004	1,000	961	948	920

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**

<b>Parameter</b>	<b>Monthly</b>	<b>Weekly</b>
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	126 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 <sub>3</sub>

### **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 <sub>3</sub>

Effluent dissolved oxygen	3.8 – 7.2 mg/L
(Post – Aeration)	
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, 2015

TYPE OF COVERAGE	COMPANY	POLICY PERIOD	COVERAGE LIMITS
Blanket Property and Boiler & Machinery	Alliant Public Entity Property Insurance Program (PEPIP)	July 1, 2015– July 1, 2016	<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, 2015– July 1, 2016	<p>\$10,000,000 - Employee Dishonesty, Forgery, Funds Transfer Fraud, Money &amp; 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, 2015– July 1, 2016	<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	Alliant National Municipal Liability (A.N.M.L.) Program	July 1, 2015– July 1, 2016	\$25,000,000 in excess of \$1,000,000
Excess Liability	Alliant Catastrophe Liability Insurance Program (C.L.I.P.)	July 1, 2015– July 1, 2016	\$75,000,000 in excess of \$25,000,000
Public Official Liability	RSUI Indemnity / Hiscox Insurance Company	July 1, 2015– July 1, 2016	<p>\$20,000,000 Each Loss / Aggregate</p> <p>Retentions: \$250,000 per wrongful act</p>

# DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

## EXHIBIT 22 SUMMARY OF MAJOR PERMITS AND ADMINISTRATIVE ORDERS AS OF SEPTEMBER 30, 2015

Wastewater	Description	Expiration Date	Current Status
<b>National Pollutant Discharge Elimination System</b>  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 <sup>(1)</sup>	In Compliance
<b>National Pollutant Discharge Elimination System</b>  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	In Compliance
<b>1995 Consent Decree</b>  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
<b>1996 Stipulated Agreement &amp; Order</b>  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
<b>2003 Consent Decree</b>  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
<b>2005 Consent Decree for CSS LTCP</b>  Consolidate Civil Action No;  1:00CV00183TFH	Requires implementing various components of the combined sewer system (CSS) long term control plan (LTCP)	March 18, 2025	In Compliance
<b>DC Department of Environment</b>	Permit to construct the enhanced nitrogen removal facility	2/20/2015 <sup>(2)</sup>	In Compliance
<b>DC Department of Environment</b>	Permit to construct biosolids project – main process train/combined heat & power/final dewatering facility	3/15/2015 <sup>(2)</sup>	In Compliance

<sup>(1)</sup>Administratively extended in accordance with the terms of the permit.

<sup>(2)</sup>Extended monthly pending issuance of revised permit.



**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

**EXHIBIT 23  
BUDGETARY COMPARISON SCHEDULE  
FOR FISCAL YEAR 2015**

	Revised Budget	Actual Expenditures	Variance
Expenditures			
Personnel services	\$ 135,544	\$ 133,935	\$ 1,609
Contractual services	76,944	66,241	10,703
Water purchases	28,831	29,109	(278)
Chemicals and supplies	36,187	30,306	5,881
Utilities and rent	30,416	30,848	(432)
Small equipment	1,029	531	498
Interest and fiscal charges (debt service)	160,264	134,845	25,419
Payment in lieu of tax & right of way fee	26,687	20,437	6,250
Cash financed capital improvements	20,058	-	20,058
Total budgetary basis expenditures	<u>\$ 515,959</u>	\$ 446,252	<u>\$ 69,708</u>

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

Capitalized personnel expenditures	(18,702)
Depreciation expense	83,857
Long-term debt - principal payments	(26,473)
Long-term debt - capitalized interest	(52,028)
Build America Bonds subsidy	2,647
Inventory issuances	2,099
Non-budgeted expenses	<u>2,418</u>
Total expenses reported in statements of revenues, expenses and changes in net position	<u>\$ 440,069</u>

## **DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY**

### **EXHIBIT 23 BUDGETARY COMPARISON SCHEDULE FOR FISCAL YEAR 2015 (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.