

**2012 IMA
LIST OF DERIVATIVE AGREEMENTS**

OPERATING AGREEMENTS		
NO.	TITLE	EFFECTIVE DATE
1.	BLUE PLAINS FLOW CAPACITY, LOADS AND PEAK FLOWS - ALLOCATIONS AND LIMITATIONS	
2.	FINANCIAL RESPONSIBILITIES OF PARTIES	
3.	FLOW AND LOAD MEASUREMENT AND MANAGEMENT	
4.	WASTEWATER PROJECTED FLOW CAPACITY NEEDS AND FUTURE OPTIONS	
5.	PRETREATMENT AND OPERATIONAL REQUIREMENTS	
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OPERATING AGREEMENT #1

PARTIES' AGREEMENT REGARDING: BLUE PLAINS FLOW CAPACITY, LOADS, AND PEAK FLOWS - ALLOCATIONS AND LIMITATIONS

THIS OPERATING AGREEMENT ("Agreement"), made among the **DISTRICT OF COLUMBIA** (the District), the **DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY** (DC Water), **FAIRFAX COUNTY, Virginia** (Fairfax), **MONTGOMERY COUNTY, Maryland** (Montgomery), **PRINCE GEORGE'S COUNTY, Maryland** (Prince George's), and the **WASHINGTON SUBURBAN SANITARY COMMISSION** (WSSC),

Witness:

WHEREAS, the Parties have entered into the Blue Plains Intermunicipal Agreement (2012 IMA); and

WHEREAS, the Parties have agreed to comply with the Allocated Flow Capacity values for the Blue Plains Wastewater Treatment Plant (Blue Plains), which apportion capacity among the District, Fairfax, WSSC and Non-Party Users, as set forth in the 2012 IMA, **Section 4**; and

WHEREAS, the Parties agree to comply with nutrient loads for Blue Plains effluent discharged through two Blue Plains effluent points, designated Outfall #001 and Outfall #002; and

WHEREAS, the Parties agree to routinely monitor their Actual Flows, Adjusted Flows and the associated nutrient loads to Blue Plains to ensure that all allocations and/or limitations for Blue Plains are not exceeded; and

WHEREAS, the Parties have agreed to regularly monitor all wastewater process, permit, regulatory and other developments that have the potential to impact either flow capacity, nutrient loads or other parameters that may affect Blue Plains and its ability to comply with its permit or process requirements as defined in **Section 6**; and

WHEREAS, the Parties recognize that the Blue Plains NPDES permit, applicable Total Maximum Daily Load (TMDLs) for the Potomac River Watershed, and associated state Watershed Implementation Plans (WIPs) must all be complied with, and that the load limits in Blue Plains' permit are applied to Outfall #001 and #002; and

WHEREAS, the Parties have agreed to regularly monitor their peak flows at the point of connection to the collection system owned by the District and operated by DC Water, and to comply with their Peak Flow Limitations, as set forth in the 2012 IMA, **Section 6**; and

WHEREAS, the Parties acknowledge their responsibility to ensure that the Non-Party Users and Indirect Users also comply with the terms of this Agreement as applicable; and

WHEREAS, Section 2 of the 2012 IMA authorizes the Leadership Committee to create, modify or terminate an Operating Agreement to implement the terms of the IMA consistent with **Section 11**.

NOW, THEREFORE, the Parties agree as follows:

PURPOSE: The purpose of this Agreement is to address matters relating to **Section 4** of the 2012 IMA

A. BLUE PLAINS EFFLUENT LOADS AND ALLOCATIONS

1. The Blue Plains Effluent Loads and Blue Plains Effluent Load Allocations (for Outfalls #001 and #002) are defined in **Table OA 1-A** below.
2. The Parties acknowledge that these Effluent Load Allocations are based on various state and District flow and concentration assumptions.

Table OA 1-A

BLUE PLAINS EFFLUENT LOADS^{1, 2}		
ENTITIES WITH ALLOCATIONS	LOAD ALLOCATIONS (LBS/YR)	
	Total Nitrogen	Total Phosphorus
District of Columbia’s Blue Plains Load Allocation³ - Total	2,114,542.00	87,993.54
<i>WSSC</i>	<i>Not specified</i>	<i>Not specified</i>
<i>Naval Ship Research & Development Center</i>	<i>Not specified</i>	<i>Not specified</i>
<i>National Park Service</i>	<i>Not specified</i>	<i>Not specified</i>
Maryland’s Blue Plains Load Allocation-Total⁴	1,993,000.00	89,694.91
<i>Fairfax County</i>	<i>Not specified</i>	<i>Not specified</i>
<i>Loudoun County Sanitation Authority</i>	<i>Not specified</i>	<i>Not specified</i>
<i>Dulles Airport</i>	<i>Not specified</i>	<i>Not specified</i>
<i>Town of Vienna</i>	<i>Not specified</i>	<i>Not specified</i>
Virginia’s Blue Plains Load Allocation-Total	581,458.00	26,166.00
Blue Plains Effluent Loads (Grand Total)¹	4,689,000.00	203,854.45

¹ Loads for Blue Plains and sub-allocations are as documented in EPA’s Final TMDL (December 29, 2010), Section Q.

² Use of Allocated Flow Capacity is contingent on providing an allocation equivalent to at least 4.0 mg/L for TN and 0.18 mg/L for TP for Allocated Flow Capacity plus Captured Stormwater Flow, i.e. all flow out of Outfall 002. The District must also provide an allocation for flow discharged to Outfall 001.

³ The load allocations shown for the District only address that portion associated with District flows to Blue Plains. Allocations for other Non-Party Users are reflected in the respective state allocations.

⁴ WSSC use of allocated flow capacity is limited to 163.6 mgd due to diversion of nitrogen and phosphorus load allocations to the Seneca WWTP (i.e., loads associated with 6 mgd).

B. BLUE PLAINS INFLUENT DESIGN LOAD CAPACITY

1. Influent loads to Blue Plains must be limited so that the Blue Plains effluent loads meet permit requirements. The Parties agree that the Design Load Capacities are set forth in **Table OA 1-B**. If there are potential problems with meeting plant permits then the load capacities set forth in **Table OA 1-B** will apply.
2. The Design Load Capacity reflects Complete Treatment requirements for those flows that are discharged through Outfall #002, under Maximum Design Flow Capacity flows.

Table OA 1-B

BLUE PLAINS DESIGN LOAD CAPACITY FOR INFLUENT FLOWS¹		
Parameters	Loads (lb/day)	
	Annual Average	Maximum 30-Day Rolling Average
BOD	525,977	694,290
TSS	562,282	747,836
TKN	104,940	137,471
NH₃	55,390	64,252
TP	14,108	18,340
Associated Maximum Design Flow Capacity – Basis (mgd)		
Flow, Average Year	384	485
Flow, Maximum Year	431	485

GLOSSARY TERMS FOR OPERATING AGREEMENT #1

This Glossary identifies terms that have a specific and defined meaning for purposes of interpreting this Operating Agreement. Additional terms that are also used in the 2012 IMA Core Agreement are defined in the Glossary included in the IMA.

Complete Treatment – Flow that is discharged out of Outfall #002 and receives the following treatment: screening, grit removal, primary treatment, secondary treatment, nutrient reduction, disinfection, and de-chlorination.

Maximum Design Flow Capacity – Design flow capacity figures, used to develop design loads for complete treatment out of Outfall #002, that reflects flow assumptions during specific wet weather conditions (i.e., 60 inch Rain Year and after full implementation of the CSO LTCP and the Total Nitrogen and Wet Weather Plan).

¹ *Source: “Design - Level Plant Influent Flows and Loads Technical Memorandum”, AECOM May 2009 and “Projected Flows and Sources – NT/Wet Weather Plan”, Greeley and Hansen, July 2010.

EXECUTION

This Agreement is executed on behalf of the Parties by the Members of the IMA Leadership Committee who, by affixing their signatures, confirm the authorization of their respective Party to be bound thereby. It shall be effective on the date indicated by the Chair below.

DISTRICT OF COLUMBIA

City Administrator Date

DC WATER

General Manager Date

FAIRFAX COUNTY, VIRGINIA

County Executive Date

MONTGOMERY COUNTY, MARYLAND

Chief Administrative Officer Date

PRINCE GEORGE’S COUNTY, MARYLAND

Chief Administrative Officer Date

WASHINGTON SUBURBAN SANITARY COMMISSION, MARYLAND

General Manager Date

Approved by Leadership Committee: _____
Chair Date

All Parties have been notified, 60 days have passed from notification, no objection has been made by any Party, this Agreement is, therefore,

EFFECTIVE: _____
Chair Date

OPERATING AGREEMENT #3

PARTIES' AGREEMENT REGARDING: FLOW AND LOAD MEASUREMENT AND MANAGEMENT

THIS OPERATING AGREEMENT (Agreement), among the **DISTRICT OF COLUMBIA** (the District), the **DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY** (DC Water), **FAIRFAX COUNTY, Virginia** (Fairfax), **MONTGOMERY COUNTY, Maryland** (Montgomery), **PRINCE GEORGE'S COUNTY, Maryland** (Prince George's), and the **WASHINGTON SUBURBAN SANITARY COMMISSION** (WSSC),

Witness:

WHEREAS, the Parties have entered into the Blue Plains Intermunicipal Agreement (2012 IMA); and

WHEREAS, the Parties agree to routinely monitor and assess their Actual Flows, Adjusted Flows, and the associated Pollutant/Nutrient Loads to Blue Plains to ensure that all allocations and/or limitations for Blue Plains are not exceeded, as set forth in **Section 4** of the 2012 IMA; and

WHEREAS, the Parties agree to regularly monitor and assess their Peak Flows at the point of connection to the BPSA's collection system; and comply with Peak Flow Limitations, as set forth in **Section 4** of the 2012 IMA and **Operating Agreement #1**; and

WHEREAS, the Parties acknowledge their responsibility to ensure that the Non-Party Users and Indirect Users also comply with the terms of this Operating Agreement; and

WHEREAS, **Section 2** of the 2012 IMA authorizes the Leadership Committee to create, modify or terminate an Operating Agreement to implement the terms of the 2012 IMA consistent with **Section 11**.

NOW THEREFORE, the Parties agree as follows:

PURPOSE: The purpose of this Agreement is to address matters related to **Section 6** of the 2012 IMA, including:

- A. Flow Measurement, Reporting and Assessment;
- B. Load Measurement, Reporting and Assessment; and
- C. Load Management.

A. FLOW MEASUREMENT, REPORTING AND ASSESSMENT**1. Flow Measurement**

- a. For each sewer of a Party that has, or is expected to have, a discharge of 60,000 GPD or greater which discharges from a sewer of the District, Fairfax or WSSC into a sewer owned or operated by the District, DC Water, Fairfax or WSSC; the owner/manager of such discharging sewer(s) shall provide and install wastewater flow meters of the maximum practicable accuracy, at its own expense. The receiving Party directly involved shall mutually approve all such meter installations, shall designate who shall read, test, operate and maintain all such meters, and shall determine the methods and procedures to be followed. DC Water, Fairfax and WSSC may jointly read, test and inspect such meters at reasonable times at the request of any Party.
- b. DC Water shall provide, operate and maintain metering of the total Blue Plains wastewater Flow, as well as Intra-plant Flows¹, in order to implement this agreement. DC Water, Fairfax and WSSC may jointly read, test and inspect such meters at reasonable times at the request of any Party.
- c. In case a wastewater flow meter fails to function for any reason, the meter shall be repaired as expeditiously as possible. Wastewater flow for the period of such failure shall be deemed to be equal to the flow during the most recent equivalent period that the meter was in satisfactory operation. If there is no such corresponding period, the flow shall be determined or estimated in such a manner as shall be agreed upon by the Parties involved.
- d. **Wastewater Units** - For each sewer that has, or is expected to have, a discharge of less than 60,000 GPD which discharges from a sewer of the District, Fairfax or WSSC into a sewer of another entity, the total annual estimated wastewater flow shall be calculated based upon the number of wastewater units connected to or discharging into such sewer. A wastewater unit shall equate to an annual discharge of 125,000 gallons. Each service connection shall be counted as one or more wastewater units depending upon the use of the premises served through such connections as follows:
 - 1) Each single family dwelling unit, whether detached or attached, shall constitute one (1) wastewater unit;
 - 2) Each apartment unit shall constitute one-half (0.5) of a wastewater unit;
 - 3) Wastewater units for premises used for other than residential purposes shall be determined by multiplying the annual water consumption by one and one-half (1.5)² and dividing by 125,000 gallons³.
- e. The monthly computation of the District, Fairfax, WSSC, and Non-Party User's Actual Flow shall include both its metered and unmetered flow entering the District's sewer system.

¹ Wastewater flow meters that are located within the Blue Plains WWTP that are used to help calculate District Flows.

² Ratio of 1.5 accounts for contributions from I/I sources to the estimated flows.

³ 125,000 gallon figure reflects conversion of flows (water consumption and I/I) to estimated wastewater units.

- f. The District's Actual Flow shall be calculated by subtracting the sum of Fairfax, WSSC and Non-Party Users' Actual Flows from the total plant Actual Flow.
- g. Additional long-term flow meters to monitor flows to the Potomac Interceptor are critical to ensuring that there is adequate and detailed flow data to evaluate how well the PI system is functioning under various flow conditions; and to ensure that individually and collectively that the flows into and through the PI are consistent with those values set forth in **Section 4** of the IMA.
- h. In order to address flow limitations necessary to ensure the proper performance of the Potomac Interceptor, the Regional Committee shall evaluate the need for developing a long-term rain gauge network, adding meters near Manholes #7 or #18 (i.e., section of PI where surcharging occurs), and addressing any other technical issues that would aid in this effort. The Regional Committee shall develop a plan to identify, fund, and implement this evaluation; which shall include defining specific tasks, roles and responsibilities, and a schedule for accomplishing this work.

2. **Flow Reporting**

- a. No later than 15 days after the end of each month, Fairfax, WSSC and each Non-Party User shall prepare and send to DC Water a report on the status of its Actual Wastewater Flows and commitments. DC Water shall compile these reports into a single report and distribute this report to the Parties no later than 30 days after the end of the month. DC Water shall also prepare an annual summary report for each calendar year and distribute this report to the Parties no later than February 15th of the following year.
- b. Fairfax, WSSC and Non-Party Users' report shall include at least the following information:
 - 1) The measured average flow and Peak Flow rate and duration during the month of the report for each metered point of connection between two (2) entities in the wastewater collection systems;
 - 2) The measured Actual Flow and the Peak Flow rate and duration for each metered point of connection between two (2) entities' wastewater collection systems for the 12 month period ending with the month for which the report is prepared;
 - 3) The estimated Actual Flow for the unmetered points of connection between the two (2) entities' wastewater collection systems, and the method used to estimate the annual average;
 - 4) The User's total daily average of all Actual Flows (i.e. the sum of all metered and unmetered flows) during the month for which the report is prepared;
 - 5) The total rainfall, as measured at Washington National Airport, during the 12 months ending with the month for which the report is prepared;
 - 6) The Highest Rolling Annual Average for its Actual Flow during the 12 months ending with the month for which the report is prepared;
 - 7) Such other related information/data as may be deemed necessary to implement the 2012 IMA.
- c. DC Water shall be responsible for ensuring that the Non-Party Users comply with these reporting requirements.

- d. DC Water's monthly and annual summary reports shall include Actual Flow data at Blue Plains, including total flow through the plant, and the distribution of the flow to Outfall #001 and Outfall #002; and such other related information/data as may be deemed necessary to implement the 2012 IMA.
- e. The District's Actual Flow for the purposes of flow management within the context of this Agreement shall be the total flow to Blue Plains less flows reported by Fairfax and WSSC and the Non-Party Users. The Parties recognize that a portion of the District's Actual Flow to Blue Plains is stormwater flow from its Combined Sewer area.

3. **Flow Assessment**

- a. DC Water shall monitor reported flows and calculate Adjusted Flows from Actual Flows provided by Fairfax, WSSC and Non-Party Users (i.e., to present normalized flows that reflect average hydrologic conditions). **Table OA 3-A** shows Adjusted Flow –Calculation Example.
- b. DC Water shall monitor the flow trends and any potential allocation or limit exceedances and alert the Parties each month if any reported flows or peak flow values indicate problems.
- c. DC Water shall prepare an annual BPSA flow report for the Regional Committee that assesses flow trends, as well as noting any instances where Adjusted Flows and/or Peak Flow values indicate that flows are or have the potential to exceed Allocated Flow Capacity and/or Peak Flow Limitations, as defined in **Section 4** of the 2012 IMA.
- d. DC Water shall also be responsible for assessing all flows, analyzing data and modeling flows as needed to make recommendations what and where peak flow reductions are required in the system and for potential modifications to the Peak Flows in the Potomac Interceptor defined in the **Section 4** of the 2012 IMA.
- e. The Regional Committee is responsible for reviewing the BPSA flow report and assessing what actions, if any, are required. These actions may include, but are not limited to, determining if additional flow management or documentation of flow management efforts are required from the District, Fairfax, WSSC and/or the Non-Party Users; and determining whether a comprehensive BPSA Long-term Planning Study and updated BPSA Flow Projections are needed in advance of their regularly scheduled 5-year update. These efforts will be used to formally assess Adjusted Flow and Peak Flow trends against Allocated Flow Capacity and Peak Flow Limitations, as well as flow management actions. The procedures for conducting this BPSA work are outlined in **Operating Agreement #4**.
- f. The Regional Committee shall report to and make recommendations to the Leadership Committee based on the results of the BPSA Long-term Planning Study.

4. **Flow Management**

- a. The District's, Fairfax's, WSSC's and Non-Party Users' Adjusted Flow shall at no time exceed its Allocated Flow Capacity as defined in **Section 4** of the 2012 IMA.
- b. If the Adjusted Flow of the District, Fairfax or WSSC exceeds the Allocated Flow Capacity for any reason, the District, Fairfax or WSSC shall immediately stop making any further commitments for hookups, connections and extensions to its

sewage system tributary to Blue Plains until three (3) consecutive months have passed during which the sum of the entity's Adjusted Flow shall not have exceeded its Allocated Flow Capacity. The sole exceptions to this prohibition shall be:

- 1) To eliminate an alternative method of wastewater disposal that has been certified by a duly constituted health officer in the District, Fairfax or WSSC's BPSA, or his designated local representative, to constitute a public health hazard. This certification shall be on a parcel by parcel basis;
- 2) For public service buildings, which include schools, hospitals, nursing homes, medical and dental clinics, and other structures used by public agencies in providing essential services for public health and welfare;
- 3) If the User has a plan approved by the Regional Committee to bring its Adjusted Flow within its Allocated Flow Capacity.

B. LOAD MEASUREMENT, REPORTING AND ASSESSMENT

1. DC Water shall be responsible for sampling, monitoring and assessing the influent flows to Blue Plains. If there are exceedances that create problems with the Blue Plains permit or other issues, then the Load Capacities set forth in **Table OA 1-B of Operating Agreement #1** will apply.
2. DC Water shall be responsible for providing annual reports to the Regional Committee regarding the results of these assessments and recommending any potential actions, including conducting detailed strength of influent wastewater studies.
3. The Regional Committee shall participate in DC Water-required Jointly Managed Studies to assess the strength of influent wastewater and to determine what changes, if any are required to Allocated Flow Capacity, Peak Flow Limitations or any Load Limitations in order to ensure that Blue Plains continues to have the ability to comply with all of its process and permit requirements.
4. Based on the results of such studies, the Regional Committee shall make recommendations to the Leadership Committee regarding changes that may be required to the flow, load and/or financial obligations of the Parties.

C. LOAD MANAGEMENT

1. The Regional Committee shall review options for managing loads in influent wastewater flows, including but not limited to, assessing the increase in loadings that result from extensive Inflow/Infiltration reductions in sewer collection system, use of garbage disposals, and potential Pretreatment requirements for commercial, household or other activities.
2. Based on the results of such studies, the Regional Committee may make recommendations to the Leadership Committee regarding any potential changes to the Flow Management responsibilities, Pretreatment obligations, and any other obligations of the Parties.

APPENDIX

Table OA 3-A

Adjusted Flow - Calculation Example (for comparing to Allocated Flow Capacity)

1) Actual Flows, Rainfall and Well Depths

- a) Assume it was a wet year and annual averages of Actual Flows were measured as follows:

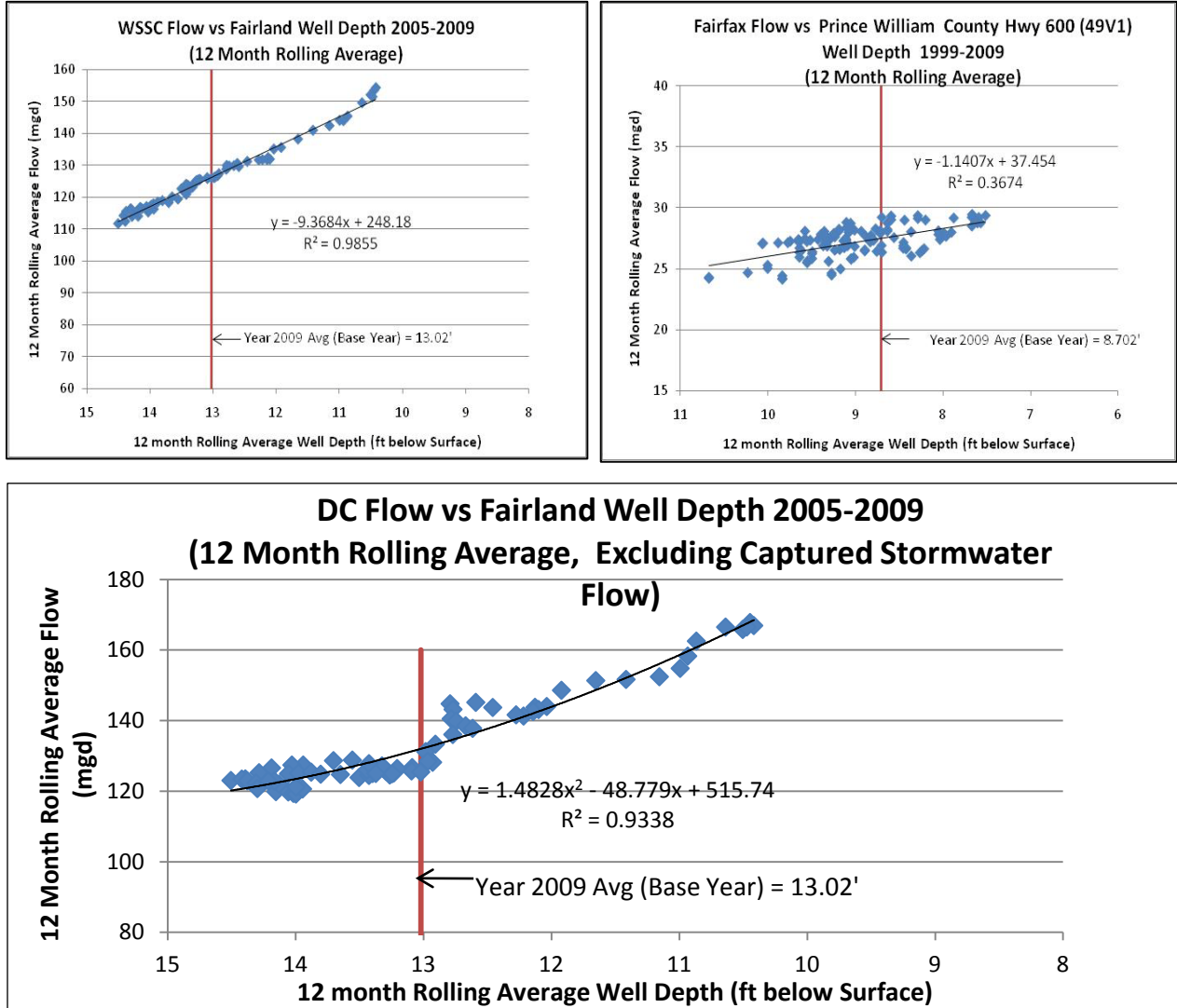
Line	Item	Value (MGD)	Calculation
1	Blue Plains Outfall #002	400.00	
2	Blue Plains Outfall # 001	8.00	
3	Total Blue Plains	408.00	Lines 1 + Line 2
4			
5	Maryland		
6	WSSC	175.00	
7	Navy	0.07	
8	NPS	0.03	
9	Sub-Total Maryland	175.10	Sum of Lines 6,7,9
10			
11	Virginia		
12	Fairfax	30.00	
13	Loudoun	13.80	
14	Dulles	1.50	
15	Vienna	1.50	
16	Sub-Total Virginia	46.80	Sum of Lines 12 to 15
17			
18	Total Suburban Flow	221.9	Line 9 + Line 16
19			
20	Total District Flow	186.10	Line 3 minus Line 18

b) Rainfall and Well Depths

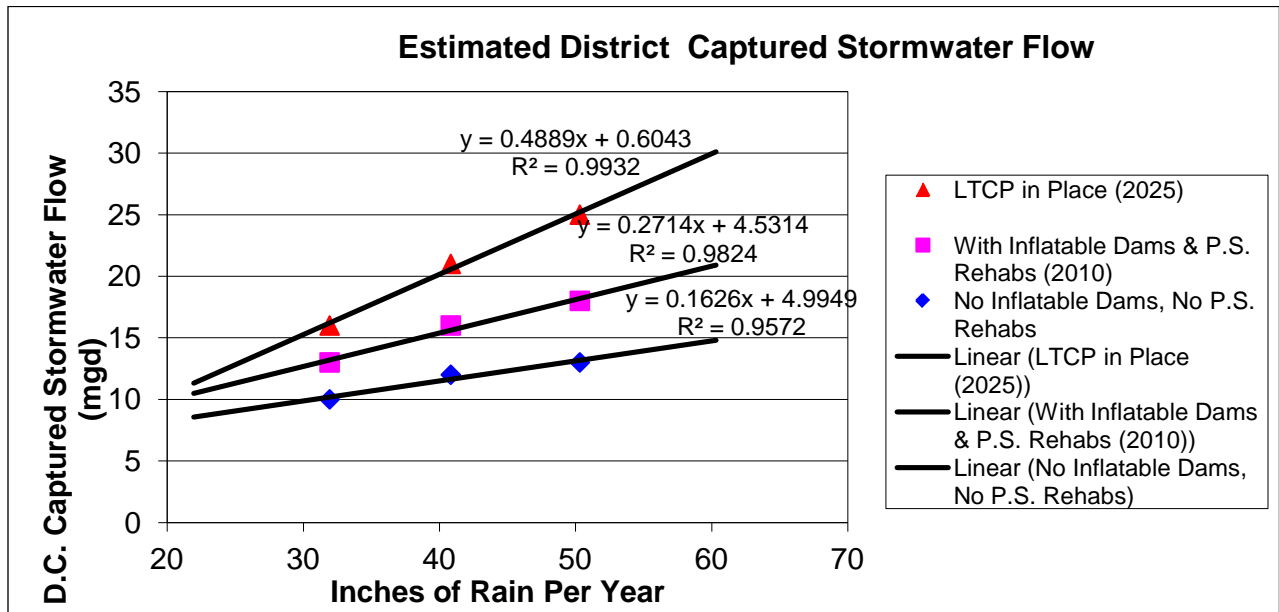
Assume 12 month rolling average rainfall and well depths were as follows:

Item	Value	Notes
Rainfall at National Airport	48 in.	12 month rolling average
Fairland Well Depth	11.5 ft	12 month rolling average
Prince William County Highway 600 Well Depth	7.50 ft	12 month rolling average

Nomographs Used to Calculate Flow Adjustments¹



¹ These nomographs shall be reviewed periodically by the Regional Committee for accuracy and adjusted accordingly.



SAMPLE CALCULATIONS**2) WSSC Flow Calculation**

- a) Assume Actual Flow = 175.00 MGD (metered)
- b) Make adjustment to average hydrologic conditions using Fairland Well depth
 - i) Assume actual 12 month rolling average Fairland well depth = 11.50 ft
 - ii) Nomograph flow: $y = -9.3684 * (11.50) + 248.18 = 140.4$ MGD
 - iii) Base year (2009) 12 month rolling average Fairland well depth = 13.02 ft
 - iv) Nomograph flow: $y = -9.3684 * (13.02) + 248.18 = 126.2$ MGD
 - v) Adjustment = $126.2 - 140.4 = -14.2$ MGD
- c) WSSC Adjusted Flow = $175.00 - 14.2 = 160.8$ MGD

3) Fairfax Flow Calculation

- a) Assume Actual Flow = 30 MGD (metered)
- b) Make adjustment to average hydrologic conditions using Prince William County Highway 600 Well depth
 - i) Assume actual 12 month rolling average Prince William County well depth = 7.50 ft
 - ii) Nomograph flow: $y = -1.1407 * (7.5) + 37.454 = 28.9$ MGD
 - iii) Base year (2009) 12 month rolling average Prince William County well depth = 8.702 ft
 - iv) Nomograph flow: $y = -1.1407 * (8.702) + 37.454 = 27.5$ MGD
 - v) Adjustment = $27.5 - 28.9 = -1.4$ MGD
- c) Fairfax Adjusted Flow = $30 - 1.4 = 28.6$ MGD

4) District Flow Calculation

- a) Assume Actual Flow = 186.1 MGD
- b) Make adjustment to average hydrologic conditions using Fairland Well depth
 - i) Assume actual 12 month rolling average Fairland well depth = 11.50 ft
 - ii) Nomograph flow: $y = 1.4828 * (11.50^2) - 48.779 * (11.50) + 515.74 = 150.9$ MGD
 - iii) Base year (2009) 12 month rolling average Fairland well depth = 13.02 ft
 - iv) Nomograph flow: $y = 1.4828 * (13.02^2) - 48.779 * (13.02) + 515.74 = 132.0$ MGD
 - v) Adjustment = $132.0 - 150.9 = -18.9$ MGD
- c) Make adjustment for Captured Stormwater Flow (CSF)
 - i) Assume LTCP is in place and 48" rainfall
 - ii) $CSF = 0.4889 * (48) + 0.6043 = 24.1$
- d) District Adjusted Flow = $186.1 - 18.9 - 24.1 = 143.1$

5) Comparison of Actual Flow and Adjusted Flow

Line	Item	Actual Flow (MGD)	Adjusted Flow (MGD)
1	Blue Plains Outfall #002	400.00	
2	Blue Plains Outfall #001	8.00	
3	Total Blue Plains	408.00	349.40
4			
5	Maryland		
6	WSSC	175.00	160.80
7	Navy	0.07	0.07
8	NPS	0.03	0.03
9	Sub-Total Maryland	175.10	160.90
10			
11	Virginia		
12	Fairfax	30.00	28.60
13	Loudoun	13.80	13.80
14	Dulles	1.50	1.50
15	Vienna	1.50	1.50
16	Sub-Total Virginia	46.80	45.40
17			
18	Total Suburban Flow	221.9	206.30
19			
20	Total District Flow	186.10	143.10

-END OF PAGE-

EXECUTION

This Agreement is executed on behalf of the Parties by the Members of the IMA Leadership Committee who, by affixing their signatures, confirm the authorization of their respective Party to be bound thereby. It shall be effective on the date indicated by the Chair below.

DISTRICT OF COLUMBIA

City Administrator Date

DC WATER

General Manager Date

FAIRFAX COUNTY, VIRGINIA

County Executive Date

MONTGOMERY COUNTY, MARYLAND

Chief Administrative Officer Date

PRINCE GEORGE’S COUNTY, MARYLAND

Chief Administrative Officer Date

WASHINGTON SUBURBAN SANITARY COMMISSION, MARYLAND

General Manager Date

Approved by Leadership Committee: _____
Chair Date

All Parties have been notified, 60 days have passed from notification, no objection has been made by any Party, this Agreement is, therefore,

EFFECTIVE: _____
Chair Date

OPERATING AGREEMENT #4

PARTIES' AGREEMENT REGARDING: WASTEWATER PROJECTED FLOW CAPACITY NEEDS AND FUTURE OPTIONS

THIS OPERATING AGREEMENT (Agreement), among the **DISTRICT OF COLUMBIA** (the District), the **DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY** (DC Water), **FAIRFAX COUNTY, Virginia** (Fairfax), **MONTGOMERY COUNTY, Maryland** (Montgomery County), **PRINCE GEORGE'S COUNTY, Maryland** (Prince George's), and the **WASHINGTON SUBURBAN SANITARY COMMISSION** (WSSC),

Witness:

WHEREAS, the Parties have entered into the Blue Plains Intermunicipal Agreement (2012 IMA); and

WHEREAS, the Parties recognize their collective and mutual interests under the 2012 IMA, which includes the management of Wastewater flows generated in the Blue Plains Service Area (BPSA) and sent to the Blue Plains Wastewater Treatment Plant (Blue Plains); and

WHEREAS, the Parties recognize that the District has limited options available to it to address its own Projected Flow Capacity Needs; and

WHEREAS, the Parties agree to work together to address their individual and collective Projected Flow Capacity Needs for flows generated within the BPSA, including development of Jointly Managed Studies to determine these Projected Flow Capacity Needs and to develop alternatives for addressing these Projected Flow Capacity Needs as defined in **Section 7**; and

WHEREAS, **Section 2** of the 2012 IMA authorizes the Leadership Committee to create, modify or terminate an Operating Agreement to implement the terms of the IMA consistent with **Section 11**.

NOW, THEREFORE, the Parties agree as follows:

PURPOSE: The purpose of this Agreement is to address matters relating to **Section 7** of the 2012 IMA, including:

- A. Long-term Planning for BPSA;
- B. Development of Options and Proposed Actions; and
- C. Assessment and Notification Requirements.

A. LONG-TERM PLANNING FOR BPSA

1. **Jointly Managed Study** - The Regional Committee shall be responsible for conducting a Jointly Managed Study to produce a BPSA Long-term Planning Study at least every five (5) years, unless flow or load or other issues require this assessment to be done sooner. It is anticipated that 5-year updates for an

approximately 30-year planning horizon are adequate to assess and take necessary actions to protect the Parties' rights under this Agreement. As flows to the Blue Plains approach its Design Flow Capacity, the frequency of conducting such assessments may be increased.

2. **Flow Projection Methodology**

- a. The BPSA Long-term Planning Study shall address at a minimum:
 - 1) Updated flow projections for the District, Fairfax and WSSC, as well as for Non-Party Users and Indirect Users as well as for the overall BPSA, including:
 - a) Incorporation of MWCOG's most recently adopted Cooperative Forecast, which includes regionally developed demographic data, or other mutually agreed forecast;
 - b) Updates to all Parties' wastewater flow management actions and plans;
 - c) Confirmed or updated wastewater flow factors;
 - d) Confirmed or updated Inflow and Infiltration assumptions; and
 - e) Updated base year flow figures (i.e. flow defined or calculated that best reflects annual average flows under average hydrologic conditions), that are used to develop Projected Flow Capacity Needs of the BPSA for each jurisdiction/entity that contributes flow to Blue Plains;
 - 2) Updated information regarding water quality issues, loading limits, state or federal regulations, and any other activities or initiatives that will or have the potential to impact the Blue Plains' permit and/or treatment process requirements;
 - 3) Updated information and assessments about peak flows generated in the BPSA; and
 - 4) Trend data and analysis as needed to assess the potential impacts all of these factors will or could have on the Allocated Flow Capacity, Peak Flow Limitations and/or load assumptions for the BPSA.
- b. As a result of this periodic assessment, the Parties agree to reconcile any differences between the total and individual projected Annual Average Design Capacity requirements and with each of the Parties' and Non-Party User's Allocated Flow Capacity. This reconciliation may include, but is not limited to, the application of the following:
 - 1) Flow management projects/programs that reduce and/or increase flows;
 - 2) Load management programs that reduce or increase loads; and
 - 3) Reallocation (via sale or rental) of Allocated Flow Capacity.
- c. Evaluation of projected Annual Average Design Flow Capacity requirements will address the associated flow allocations, limitations, definitions, and assumptions set forth in the Derivative Agreement(s), to determine if any flow parameters, allocations, and/or limitations require modification to reflect the new projections.

B. DEVELOPMENT OF OPTIONS AND PROPOSED ACTION

1. Based on the results of any Jointly Managed Study, as defined in **Section 7** of the 2012 IMA, the Regional Committee shall develop options (for the Parties and Non-Party Users, as appropriate) that address at a minimum the following elements and criteria:
 - a. Provide wastewater capacity at Blue Plains to meet the District's Projected Flow Capacity Needs unless other options better meet the District's Projected Flow Capacity Needs;
 - b. Give priority to the reallocation of annual average wastewater flow capacity that is not expected to be needed for more than 15 to 20 years;
 - c. Use the following hierarchy for considering the location of any proposed new or expanded treatment options: at Blue Plains, at WSSC's facilities, or at Fairfax's facilities, all of which shall be deemed to be Multi-Jurisdiction Use Facilities (MJUF) as defined in **Section 5** of the 2012 IMA, unless the Regional Committee agrees to alternative site considerations;
 - d. Evaluate storage options to identify any potential impacts on the peak flows and Allocated Flow Capacity defined in **Section 4** of the 2012 IMA;
 - e. Evaluate the rental or sale of capacity to ensure it would be consistent with the terms and assumptions in **Sections 4** and **6** of the 2012 IMA, and the associated Derivative Agreement(s), considering that the rental or sale of capacity shall be at the discretion of the Party allocated the capacity.
 - f. Consider that rental of capacity shall be viewed as a short-term solution and must be reassessed at least every five (5) years;
 - g. Consider that the Non-Party Users' Projected Flow Capacity Needs may have unique contractual agreements and there may be limited options available for them to address their capacity requirements outside of Blue Plains;
2. The options developed during a Jointly Managed Study shall address the following elements for each Party and Non-Party User, as appropriate:
 - a. The resulting Allocated Flow Capacities;
 - b. The resulting Peak Flow Limitations; and
 - c. The impact on Design Flow Capacities and Design Load Capacities.
3. The Regional Committee shall recommend to the Leadership Committee technical and/or programmatic options that address the individual and collective Projected Flow Capacity Needs of the Parties under **Section 7** of the 2012 IMA. These recommendations shall include, but not be limited to, addressing:
 - a. The proposed time frame for taking specific actions (whether operational or construction);
 - b. The estimated cost of these actions; and
 - c. The proposed flow, load, and cost allocations and implications for each Party (and Non-Party User) associated with any options.

4. If suburban flows are diverted, nutrient loads associated with the diverted flows go with those flows and the District is responsible for finding nutrient offsets.
5. Any jurisdiction that requires additional flow capacity shall be responsible for finding nutrient offsets for that flow.

C. ASSESSMENT AND NOTIFICATION REQUIREMENTS

1. The Regional Committee shall periodically assess the Adjusted Flows set forth in **Section 6** and the flow projections set forth in **Section 7** of the 2012 IMA, and as set forth in this Agreement, to determine if the timing or the scope of the agreed upon actions are being implemented in a manner that protects the interests of all the Parties.
2. The Regional Committee shall develop an implementation plan that outlines the proposed actions to be taken and associated schedule and defines the Parties' responsibilities. For those options which require that additional flow or load capacity be provided at Blue Plains or at other sites, this implementation plan shall include, but not be limited to:
 - a. A timeline with periodic milestones (generally every 5 to 10 years) that ensures that the necessary flow and/or load capacity is available when the Projected Flow Capacity Need is required;
 - b. A reassessment of Projected Flow Capacity Needs versus agreed upon actions, whether addressed via flow management, rental/sale of capacity, or construction projects;
 - c. A minimum 15-year advance notification period for any proposed action that requires capital funding.
3. Any Party that requires additional capacity in the BPSA in order to meet its Projected Flow Capacity Needs, which it cannot meet through its own flow management actions or are not being addressed through a Jointly Managed Study, shall provide 15-year advance notification to the Regional Committee that it requires such capacity, define those actions it must undertake to manage its future flows, and outline a schedule for those actions.
4. Unless otherwise agreed to by the Regional Committee, any diversions or reallocation of flow capacity by Fairfax or WSSC greater than five (5) MGD to meet District Projected Flow Capacity Needs shall occur at least one (1) year before the projected requirement for those flows.

EXECUTION

This Agreement is executed on behalf of the Parties by the Members of the IMA Leadership Committee who, by affixing their signatures, confirm their authorization of their respective Party to be bound thereby. It shall be effective on the date indicated by the Chair below.

DISTRICT OF COLUMBIA

City Administrator Date

DC WATER

General Manager Date

FAIRFAX COUNTY, VIRGINIA

County Executive Date

MONTGOMERY COUNTY, MARYLAND

Chief Administrative Officer Date

PRINCE GEORGE’S COUNTY, MARYLAND

Chief Administrative Officer Date

WASHINGTON SUBURBAN SANITARY COMMISSION, MARYLAND

General Manager Date

Approved by Leadership Committee: _____
Chair Date

All Parties have been notified, 60 days have passed from notification, no objection has been made by any Party, this Agreement is, therefore,

EFFECTIVE: _____
Chair Date