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FINAL

Miscellaneous Fee Report

Final Report / February 6, 2019

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Charlotte, NC 28202

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July 31, 2018

Mr. Syed Khalil
Director, Rates and Revenue
DC Water
5000 Overlook Avenue, SW
Washington, DC 20032

Subject: Water and Wastewater Miscellaneous Fee Report

Dear Mr. Khalil,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Water and Wastewater Miscellaneous Fee Report (Report) for DC Water to address the comprehensive review and update of customer service fees and charges and to establish new miscellaneous fees that are fair and equitable.

The major objectives of the study include the following:

- Establish Fat, Oil, and Grease (FOG) and Backflow Preventer Inspection cost of service fees
- Update customer service fees and charges
- Review and update permitting review fees according to cost of service
- Benchmark fees and charges

The Report summarizes the key findings and recommendations related to the development of the miscellaneous fees.

It has been a pleasure working with you, and we thank you and DC Water staff for the support provided during the course of this study.

Sincerely,

Jon Davis
Vice President

227 W. Trade Street, Suite 1400
Charlotte, NC 28202

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1. Introduction

1.1. Background of the Study

In 2017, DC Water engaged Raftelis to conduct a Water and Wastewater Miscellaneous Fee Study (Study) to develop sustainable miscellaneous fees for its water and wastewater enterprises. The impetus for this update was the escalating costs of providing service for ancillary, or non-user charge related, customer activities. DC Water has not undertaken a comprehensive study of miscellaneous fees since 2011, so many fees have not been updated in several years. In general, when established, the proposed fees are based on the cost of providing the service. However, the analysis also took into account the level of fees in comparison to other regional peers. As a result, in some instances, no increase was recommended as that increase would be out of line with peer fees.

1.2. Objectives of the Study

The major areas of focus include:

- Proposed new fees for FOG (fat, oil, and grease) and cross connection/backflow preventer inspection;
- Miscellaneous retail customer fees;
- Permitting review fees; and,
- Additional fees (fees that do not fit into any of the above categories).

Raftelis performed a cost of service analysis for two newly proposed fees, inspection fees for FOG and cross connections/backflow prevention. Raftelis assisted DC Water staff in the assessment and update of current fees for permitting review, event, and groundwater sewer fees as well as other retail customer service fees. Raftelis also conducted a benchmarking study of the miscellaneous fees with national peers to determine a reasonableness of DC Waters proposed fees.

Fat, Oil, and Grease (FOG) and Backflow Preventer Fees

Both the FOG and Backflow preventer inspection fees are new fees proposed by DC Water staff to pay for expanded enforcement. Combined, these fees will generate roughly $1.7 million annually to cover program costs, including inspection services that are already provided by DC Water. FOG relates to the discharge of fat, oil, and/or grease into the sewer system. The fee represents the cost to enforce installation and maintenance of FOG abatement systems and monitor/check establishments that have registered grease traps that potentially discharge FOG effluent. These masses of fat impede sewer flow and increase maintenance costs for DC Water.

The cross connection/backflow preventer fee allows for enhanced inspection of assemblies that prevent polluted water from accidentally siphoning backward into the distribution system thus contaminating clean, or potable, water. Currently, DC Water inspects backflow preventers, but new

fees would allow them to increase frequency of those inspections. Services, like restaurants, laundromats, etc. utilize these devices. Increasing the frequency of inspections may increase the compliance rate, which is the goal of the program.

Retail Customer Fees

The retail miscellaneous fees are the fees that retail customers pay for non-user fee related activities. The utility provides many services to retail customers outside of the usual water and wastewater services appearing on the monthly bill. These fees range from late check fees to turn off fees. The fees help ensure that DC Water recovers costs associated with these activities.

Permitting Review Fee Update

Developers and planners must submit development plans to DC Water for approval. These plans require careful vetting and DC Water spends a significant amount of time and effort reviewing these plans, providing system information, determining and collecting inspection fees, creating work orders, creating commercial accounts, and managing the refund process. The permit reviews are designed to enforce safe design standards throughout the city and the peripheral services support the design, construction and inspection of the proposed work. The fees are designed to recover the full costs associated with the review process and ensure that these activities are not subsidized by other DC Water revenues.

Additional Fees

Any supplementary fees are considered in our review of additional fees. Programs range from industrial permitting to events. The updates to the industrial and groundwater sewer fees are due to the growth in costs since the last update. The creation of an event fee covers the cost that DC Water incurs when it supports a public event in the District.

1.3. Study Results

The results of this study are documented within this report. Throughout this report Raftelis identifies whether the fees are new, exiting, updated, or proposed , and the basis for the recommended change.

2. FOG Inspection Fees

2.1. Description of Fees

The fees are designed to recover and expand the costs of inspection and enforcement. DC Water requires that customers in FOG-related business, like restaurants, properly collect and dispose of FOG to prevent it from entering the sewer collection system. Proper collection of FOG usually requires a working grease trap or oil/water separator. Currently, DC Water requires participants to maintain a record of maintenance for their FOG device.

Currently, the DC Water FOG program does not have any dedicated staff. When a complaint comes in DC Water pulls a specialist from the cross-connection program. This hinders operations in the cross-connection program. The proposed fee will fund the positions of five dedicated FOG personnel. By instituting the proposed fee, the FOG program will transform into a proactive program from a reactionary program. The goal of the initial program is to inspect FOG establishments at least once every five years. As the program evolves it is expected that inspections will further increase. The current FOG inspection costs are not self-supporting and are therefore subsidized by other fees and charges within DC Water. By instituting a dedicated FOG fee DC Water will end this cross subsidization.

2.2. Existing fees

DC Water has no existing FOG inspection fees.

2.3. Revenue Requirements

Raftelis conducted a cost of service review for this fee. When implemented, this fee will fund the proposed relevant labor and materials of the FOG inspection program. Costs were identified in close collaboration with DC Water staff. Personnel time, O&M (operation and maintenance) costs, and implementation costs were determined through this process. The FOG program requires the continuing development and maintenance of a DC Water FOG database to allow DC Water to easily monitor program participants. Relevant capital costs were depreciated over a straight-line basis over five years. Shown below are the costs for the FOG inspection program

Figure 1 FOG Inspection Costs

Revenue Requirement for FOG Inspection Fee

Personnel	Annual	
4 Direct Personnel Costs	$ 441,664	
1 Indirect Personnel Costs	$ 94,765	
Total Personnel	**$ 536,429**	

Materials	Annual	Over Multi-Year
4 Vehicles		$ 200,000
4 Surface Pros		$ 8,000
4 Cellphones	$ 2,200	
4 Uniforms	$ 2,000	
FOG Specific Equipment	$ 7,500	
Office Supplies	$ 1,000	
IT-related software/hardware	$ 11,400	
Subtotals Materials	$ 24,100	$ 208,000
Annual or Amortized (# of Years)	*1*	*5*
Subtotals	$ 24,100	$ 41,600
Total Annual Materials	**$ 65,700**	

Other Costs	Annual
5 Training	**$ 10,000**

Certification Database/Tracking Certification Costs	Annual	Over Multi-Year
3PP FOG Tracking development		$ 150,000
3PP ongoing FOG tracking maintenance	$ 50,000	
	$ 50,000	$ 150,000
Annual or Multi-Year	*1*	*5*
Subtotals	$ 50,000	$ 30,000
Total Annual Certification	**$ 80,000**	

FOG - Billing System Functionality Update	Over Multi-Year
Incorporate FOG designator into Billing System	$ 50,000
Amortization	*5*
Total Annual Billing System Fee	**$ 10,000**
Bill Fee @ $1.20 per bill	**67,680**

Total Costs	**$ 769,809**

2.4. Fee Development

Once the costs were determined, the fee can be developed. The proposed fee is calculated on a monthly fee basis. A monthly fee allows participants to pay for the service each month and more easily include that cost in their business model. Figure 2 shows the calculation of the fee. It's important to note that in addition to the revenue requirement for inspections, a $1.20 fee has been added to the payment to account for billing and mailing costs. Inspections do not occur annually, but DC Water will implement an inspection program where each participant will be inspected on a more regular basis.

Figure 2 FOG Inspection Fee

Per Participant Fee		
Total Costs	**$**	**702,129**
Number of Participants	$	4,700
Annual Fee Per Participant*	$	151
↓		
Monthly Fee Per Participant	$	12.50
Bill Payment/Mailing Fee	$	1.20
Total Monthly Participation Fee	$	13.70

*Incorporates rounding.

By instituting a FOG fee DC Water is following a utility industry best practice. A strict enforcement program ensures that participants comply with the stated regulations. In the U.S many utilities still use voluntary self-reporting guidelines for FOG where businesses must annually select a contractor from an approved list. The current DC Water program allows the participants to self-regulate. DC Water is proposing to make its program stricter. By having a dedicated FOG department, the utility is better able to enforce the applicable regulations, since participants know more regular inspections will occur.

Three comparable utilities that charge directly for FOG are listed below.

Figure 3 Benchmark FOG Fees

Fee Name	WSSC	BWSC	LA Sanitation
Annual FOG discharge fee with Grease Abatement Device	$537		
Annual FOG discharge fee without Grease Abatement Device	$152		
Annual Grease Trap Permit Fee		$200	
One-time application fee			$544

Annual inspection and control fee			$373

2.5. Conclusions

The FOG inspection fee is projected to raise approximately $775,000 a year to cover the FOG inspection program and billing costs. Currently, some of these costs are not recovered and have been subsidized by other revenues. This has placed an unfair cost burden on other service fees or user charges. By charging the cost of service fees, DC Water will be able to ensure more equitable revenue recovery.

3. Backflow Prevention Inspection Fees

3.1. Description of Fees

The proposed fees are designed to recover costs of the existing inspection and enforcement program and recover costs of the proposed expansion of the program. Backflow preventer assemblies prevent untreated water from siphoning back into the potable water distribution system. If contact were to occur, then untreated water may contaminate treated water DC Water is providing to customers. DC Water completes inspections approximately once every ten years to ensure that compliance is occurring by verifying establishments that have backflow preventers in place at cross connections.

Currently, the backflow prevention program has 3 specialists and 1 analyst supporting the program. The expansion of the program will allow DC Water to fund an indirect personnel to work with the program. Currently, DC Water requires participants to annually hire a certified backflow preventer inspector. The independent inspectors are certified by DC Water. The inspectors upload the results of their inspection to a DC Water maintained database. This database requires continues maintenance by DC Water staff. Currently, the program inspects 1,000 establishments per year, but the proposed fee increase will allow the program to ramp up to 2,000 inspections per year.

3.2. Existing fees

DC Water has no existing backflow inspection fees.

3.3. Revenue Requirements

Raftelis conducted a cost of service review for this fee. If implemented, this fee would fund all relevant labor and material costs for the program. Costs were identified in close collaboration with DC Water staff. Personnel time, O&M costs, and implementation costs were determined through this process. To fully build out the program the backflow prevention inspection program requires the maintenance and expansion of the annual tracking program. Recovery of these costs will allow DC Water to more easily monitor participants in the programs. Relevant capital costs were depreciated over a straight-line basis over five years. Shown below are the costs for the cross connection/backflow prevention inspection program.

Figure 4 Backflow Prevention Inspection Costs

Revenue Requirement for Back Flow/Cross Connection Fee

Personnel	Annual	
4 Direct Personnel Costs	$ 441,664	
1 Indirect Personnel Costs	$ 94,765	
Total Personnel	**$ 536,429**	

Materials	Annual	Over Multi-Year
4 Vehicles		$ 200,000
4 Surface Pros		$ 8,000
4 Cellphones	$ 2,200	
4 Uniforms	$ 2,000	
Office Supplies	$ 1,000	
IT-related software/hardware	$ 11,400	
Subtotals Materials	$ 16,600	$ 208,000
Annual or Amortized (# of Years)	*1*	*5*
Subtotals	$ 16,600	$ 41,600
Total Annual Materials	**$ 58,200**	

Other Costs	Annual
5 Training	**$ 10,000**

Backflow/Cross Connection - Billing System Functionality Update	Annual	Over Multi-Year
Develop backflow preventer tracking portal		$ 350,000
Incorporate Backflow designator into Billing System		$ 50,000
Annual maintennce cost for tracking portal	$ 50,000	
Subtotals Billing System	$ 50,000	$ 400,000
Annual or Amortized (# of Years)	*1*	*5*
Subtotals	$ 50,000	$ 80,000
Total Annual Billing System Fee	**$ 130,000**	
Bill Fee @ $1.20 per bill	**$ 159,667**	

Total Costs	**$ 894,296**

3.4. Fee Development

Once the costs were determined, the proposed fee was developed. The program fee is being proposed on a monthly fee basis per assembly (backflow device). Some customers may have more than one assembly onsite. A "per assembly" fee basis most equitably recovers the cost of inspecting each assembly. A monthly fee allows customers to pay for the service each month and more easily include that cost in their business model. Figure 5 shows the development of the fee. It's important to note that in addition to the revenue requirement for inspections, a $1.20 fee has been added to the payment to account for billing and payment costs. Inspections do not occur annually, but DC Water will implement an inspection program where each assembly will be inspected at least once every five years. Currently, the program inspects 1,000 establishments per year. Currently, each establishment is inspected every ten years.

Figure 5 Backflow Prevention Inspection Fee

Total Costs	$	734,629
Number of Assemblies		11,088
Annual Fee Assembly*	$	66.00
↓		
Monthly Fee	$	5.50
Bill Payment/Mailing Fee	$	1.20
Total Monthly Fee	**$**	**6.70**

*Incorporates rounding.

The implementation of a backflow prevention inspection program is a best practice in the utility industry. By instituting a dedicated fee the program will ensure more regular inspection and compliance. Many utilities require self-inspection programs where businesses must complete annual inspections by approved plumbing contractors. The businesses select the contractors from a pre-approved list. This matches the current DC Water program. By instituting this proposed fee DC Water will be able to more accurately ensure compliance. The current DC Water specialists cannot fully inspect all establishments, so by increasing the number of inspections DC Water should increase compliance.

Listed below are two cross connection/backflow prevention fees.

Figure 6 Benchmark Cross Connection/Backflow preventer fees

Fee Name	Nashville	Roanoke
Cross Connection Annual Inspection fee per device	$42	$45.90

3.5. Conclusions

The backflow prevention inspection fee is projected to raise approximately $900,000 to cover the existing inspection and billing costs. Currently, these costs are not recovered and have been subsidized by other revenues. This has placed an unfair cost burden on other service fees or user charges. By charging the cost of service fees DC Water will be able to ensure more equitable revenue recovery. Also, ensuring compliance with backflow prevention requirements will protect public health by helping to ensure the highest quality water is delivered to customers.

4. Engineering and Permitting Fees

DC Water's Department of Permit Operations oversees the permitting process that all residential and commercial customers must complete when conducting any work that affects the public water or sewage systems. Proper permitting ensures the development of DC Water's systems is in accordance with legal and operational standards. For complex projects the Permit Operations department and the Department of Engineering and Technical Services will verify and confirm the capacity of the system to accommodate the project and evaluate the proposed design's impacts on existing infrastructure. Extensive reviews consume many labor hours to adequately ensure compliance. Since the initiation of these fees in 2011 redevelopment in the District has been prolific and the number of permit applications has risen significantly and the level of inter-agency coordination has expanded. Thus, the number of personnel required and the cost to accommodate the amount of work has increased.

When originally implemented, the permitting fees covered all aspects of costs related to permit compliance and approval. Currently, the engineering review fees generate $1.8 million in annual revenue. The proposed budget to adequately serve customers is estimated at $3 million in 2018. Significant adjustments in fees are needed to fully recover the revenue requirements.

4.1. Description of Fees

The Permitting Department, Department of Engineering, and Technical Services review all permits for DC Water. Any construction that will affect the water or sewer systems must go through this permitting process.

4.2. Existing Fees

DC Water's existing permitting fees are shown below. DC Water is discontinuing the fees in Figure 8. Many of the resources are now freely available online.

Figure 7 Existing Permitting Fees

Fee Name	Fee
Large Permits Fast Track (15 working days review per submission)	$10,000
Large Permit Basic	$7,500
Foundation to Grade- Large Commercial	$1,000

Approved Project Plan Revision (Project Scope/Design Change)	$1,000
Approved Plan Revision (Field Conditions)	$250
Large Project Sheeting and Shoring (Large Commercial)	$1,000
Raze Permits	$150
Abandonment Waiver Request	$500
Availability Letter (Small)	$125
Small Commercial (multi-family, apartments, store, etc.)	$2,500
Small Residential	$300
New Home from a Large Project Subdivision (10 or more units)	$150
Large Permits Submissions (Excessive Submission: 4 or more)	$1,000
Availability Letter (Large Commercial)	$500
Small Sheet and Shore	$500
Standard Letter and Legal Pages Copy	$0.25 per copy

Figure 8 Discontinued Fees

Fee Name	Fee
Design Manuals- Initial	$60
Design Manuals- Revisions/Updates	$25
Construction Standard Details-Initial	$35
Construction Standard Details- Revisions/Updates	$10
Construction General Conditions & Standard Specifications - Initial	$25
Construction General Conditions & Standard Specifications - Revisions/Updates	$5
DC Water Pipeline Design Manual – Initial	$75
DC Water Pipeline Design Manual - Revisions/Updates	$30
Preparing As-Built Drawings	$215
Electronic Version of Water/Sewer Counter and As-Built Maps - Per Project	$100
Updates of the Electronic Version - Per Project	$25
Small Commercial (multi-family, apartments, store, etc.)	$2,500
Small Residential	$300
New Home from a Large Project Subdivision (10 or more units)	$150
Xerographic Copy	$2.50 per copy
Vellum Copy	$4.00 per copy
Mylar Copy	$5.50 per copy

4.3. Evaluation Process

Revenue generated from these fees are projected at $1.8 million in FY 2018, though costs are projected at $4 million in the coming years. In the evaluation process Raftelis assisted DC Water staff in setting fees at the required level to recover costs in an equitable manner. DC Water staff provided direction on the elimination or creation of permit review fees so that the proposed set of

fees more accurately reflect the permitting review activities. All proposed fee categories represent current services offered by the department.

4.4. Revenue Requirements

DC Water staff determined that the Permit Operations Department is projected to spend $3.7 million to satisfactorily provide quality service to developers and contractors in 2020. With inflation this total comes out to $4 million in the years after. This includes costs for full time equivalent (FTEs) staffing positions working on the permit process, office costs, and office rent. Since the last fee update in 2011 the number of staff and costs have risen significantly due to an enhanced level of customer service, increased costs to collaborate with other agencies, unique customer demands, and new regulations.

4.5. Fee Development

The proposed permit review fees were developed using the top-down approach fairly allocating the $4 million revenue requirement among the various groups of fees and then to the individual fees. The first step was to break down the total revenue requirement into spending on small plan and large plan reviews. This was determined through discussions with DC Water staff about time spent on various approvals and permits. The large plan review represents 72% of the total fees collected, small plan review represents 18%, miscellaneous fees 7%, and submittal review represents 3% of fees collected. After calculating the large and small allocation, Raftelis and DC Water staff examined the individual fees to determine how to fairly spread the cost among individual fees within each group. By allocating costs amongst the divisions Raftelis can meet the overall revenue requirement for the permit department. The breakdown of fees between different divisions allows each division to have a per unit base fee. This base fee is the most accurate way to account for the cost of providing the service within the applicable division.

Through consultation with DC water staff Raftelis considered instituting an expedited fee. When applicable, the expedited permit would allow individuals to pay a higher fee to have the permit fast-tracked. The quicker processing time adds more costs to the permit but the permit will still meet the stringent guidelines of a regular permit approval. It was determined through discussion with DC Water staff that the expedited fee would be at 175% of the regular fee. This represents a way to recoup the costs that will occur due to the quicker turn around. The 175% upcharge will also discourage everyday use, since the fee is designed to be used by customers who have an abbreviated time table. Due to rounding some expediated fees are not exactly 175%. To calculate the estimated revenue from this expedited fee, DC Water staff developed estimates of annual participants.

Through discussion with staff, it was determined that many of the map and manual fees will be discontinued because DC Water is putting many of these resources online. This represents a process enhancement by DC Water as this change will make content more readily available for customers.

By putting some of these materials online, DC Water is proactively addressing the needs of the development community and eliminating services, and associated fees, that do not provide value.

"As-built" structure permits and services were designed to recover the cost of service which was estimated at $750,000. Their costs do not overlap with the engineering fees, so it was determined that it would be most accurate to evaluate them on a standalone basis. For some of the projects it was determined that a fee would be calculated on a case by case basis. For example, if a water line larger than 48 inches is involved in the review then costs must be estimated because of its potential impact within a complex, interconnected distribution system. These estimated fees will best reflect the actual cost in each unique situation.

To calculate individual fees, Raftelis collaborated closely with DC Water staff to determine reasonable estimates of demand for each fee. For each fee a weighting was then determined. For example, a two-meter permit receives a weighting of two, while a one-meter permit receives a weighting of one. The weightings along with estimated demand, or annual occurrences, determine equivalent units. Equivalent units allow for disparate fees to be equated. It should be noted that the level of many fees did not change. Instead, the weighting process more accurately aligns the cost to provide service with the fees assessed.

4.6. Proposed Plan Review Fees

Figure 9 shows the proposed plan review fees. The fees are based on the equivalent unit rate whenever applicable. Fees have been rounded to the most appropriate number of digits.

The fee structure has been updated to more accurately recover costs. Currently, the fees do not adequately cover all services offered. By making the fees more detailed, the District will be able to better delineate differences between each service fee. The fees represent services the staff believe should be broken out. The fees are based on services that developers currently demand from District staff.

Figure 9 Proposed Permitting Fees

Fee Name	Existing	Proposed Standard	Proposed Expedited	
Base Plan Submission Fee- for all review types	$0	$140	N/A	New
Rejected Plan Resubmission fee for all review types	$0	$75	N/A	New

Large Basic - Domestic Service Connection > 3" - New Construction or Complete Renovation (Level - 3 alteration)	Existing	Proposed Standard	Proposed Expedited
• 1 metered connection	$7,500	$10,000	$17,400

• 2 metered connections	$7,500	$20,000	$34,800
• 3 metered connections	$7,500	$30,000	$52,500
• 4 or more metered connections	$7,500	$40,000+	$69,600+ Determined on a per project basis

Large project Modified (No Evaluation of Meter Sizing only partial not a complete new service) per structure/connection	Existing	Proposed Standard	Proposed Expedited
Fire service only (No Modification to the Plumbing Fixtures)	$7,500	$4,500	$7,800
Sanitary or Combined Connection Only 8" or larger	$7,500	$4,500	$7,800
Sanitary or Combined Connection Only 6" or less	$2,500	$700	$1,200
Large Storm Connection Only 15" or larger	$7,500	$4,500	$7,800
Storm Connection Only less than 15"	$2,500	$700	$1,200

Miscellaneous Large	Existing	Proposed Standard	Proposed Expedited	
Large Renovation no new water/sewer work-Project Doc signoff only (inside a campus)	$0	$400	$700	New
Large Project Approved Plan Revision (Project Scope/Design Change or field change)	$1,000	$1,000	$1,750	
Approved Plan Revision (Field Conditions)	$250	$1,000	$1,750	
Large Project Sheeting and Shoring	$1,000	$6,500	$11,300	
Large water meter size reduction plan - no other work	$1,000	$3,300	$5,800	
Large Project Raze permit and utility release letter - no abandonments	$150	$300	$500	
Large Project Raze permit and utility release letter with abandonments	$150	$700	$1,200	
Temporary Water connections (previously small commercial-multi-family, apartments, store etc.)	$2,500	$3,300	$5,800	
Water and sewer availability letter (large)	$500	$500	$880	
Abandonment Waiver Request	$500	$500	$880	

Small Basic Non-Residential Project - domestic Service 2" or less in diameter - Not conforming to International Residential Code	Existing	Proposed Standard	Proposed Expedited
• 1 metered connection (Per Connection)	$2,500	$3,300	$5,800
• 2 metered connections (Per Connection)	$2,500	$6,600	$11,600

• 3 metered connections (Per Connection)	$2,500	$9,900	$17,400
• 4 or more metered connections (Per Connection)	$2,500	$13,200+	$23,200+ Determined on a per project basis

Small Hybrid Non-Residential - Domestic service 2" or less with Fire greater than 2"	Existing	Proposed Standard	Proposed Expedited
• 1 metered connection (Per Connection)	$7,500	$5,000	$8,700
• 2 metered connections (Per Connection)	$7,500	$10,000	$17,400
• 3 metered connections (Per Connection)	$7,500	$15,000	$26,100
• 4 or more metered connections (Per Connection)	$7,500	$20,000+	$34,800+ Determined on a per project basis

Small Plan Review (service tap 2 inches or less)	Existing	Proposed/Phase Out	Proposed Expediated
Availability Letter (Small)	$125	$125	$215
Small Commercial (multi-family, apartments, store, etc.)	$2,500	Phased Out	N/A
Small Residential	$300	Phase Out	N/A
New Home from a Large Project Subdivision (10 or more units)	$150	Phased Out	N/A
Small Sheet and Shore	$500	$1,000	$1,750

Small non-residential Modified (no domestic only the items below)	Existing	Proposed Standard	Proposed Expedited
Sanitary or combined Sewer connections 6" and less (per lot)	$300	$700	$1,200
Storm sewer connection less than 15" (per lot)	$300	$700	$1,200
Fire service only greater than 2" (per lot)	$7,500	$4,600	$8,100

Small Basic Residential Project - domestic Service 2" or less in diameter - Conforming to International Residential Code	Existing	Proposed Standard	Proposed Expedited
Single Family Residential per metered connection up to 50	$300/$7,500	$700 each up to $25,000	$1,200 each

Town Houses Per metered connection up to 50	$300/$7,500	$700 each up to $25,000	$1,200 each
More than 50 SFU or TH's	$7,500	$700 + each up to 50 and $350 for each above 50	$1,200 + each up to 50 and $600 for each above 50

Small Non-Residential or Residential Raze permit review and utility release letter	Existing	Proposed Standard	Proposed Expedited	
no abandonments	$0	$330	$580	New
with abandonments	$150	$700	$1,200	
as part of a project review	$0	$300	$600	New

Excessive Submission Additional Review Fee assessed for any 4th submission (basic review assumes up to 3 submission)	Existing	Proposed Standard	Proposed Expedited	
Large Plan Review (any)	$1,000	$2,400	$4,200	
Small Non-Residential Plan Review (any)	$0	$600	$1,050	New
Residential Plan Review	$0	$360	$630	New
NOTE: Any plan not receiving approval by the 4th submission will be cancelled)				

Miscellaneous Fees	Existing	Proposed Standard	Proposed Expedited	
Request for Information (RFI)	$0	$30	$60	New
Request for As-built Drawings per man hour	$0	$90	$150	New
Water Meter Sizing Computation	$0	$90	$150	New
Water and Sewer Availability Letter	$500	$500	$880	
Delayed abandonment or waiver from Standards Letter	$500	$500	$880	
One Day Plan Design and Review and approval		Min-$20,000		

Easement and Covenant Services	Existing	Proposed Standard	Proposed Expedited	
Processing of standard easement covenant document	$0	$1,000	$1,750	New
Processing of non-standard easement covenant document	$0	$5,000	$8,750	New

As Built Fees	Existing	Proposed Fee	
Small Residential	$215	$250	

Townhouses or SFU from multi unit project	$215	$250	
Small non-residential, Large service connection (per connection)	$215	$500	
Small Non-Residential Fire Service	$0	$750	New
Large non-residential water service 3" or more, sewer service 8" or more, fire service 3" or more	$215	$750	
New water or sewer main (20 to 100 feet each) (each)	$215	$2,500	
Additional 200 ft for water line more	$0	$2,000	New
Each additional 400 ft. sewer main/line	$0	$2,000	New
If installing more than 200 lf of water line or any water line larger than 24" in diameter	$215	Determined on a per project basis	
If installing more than 200 lf of sewer line or any sewer line larger than 60" in diameter	$215	Determined on a per project basis	

Printing Fee	Existing	Proposed Fee
Standard Letter and Legal Pages Copy	$0.25 per copy	$0.75 per copy

Witness Fee	Existing	Proposed
Witness Fee	Salary + Fringe	Salary + Fringe

4.7. Examples

To better compare the existing and proposed fees some examples will be shown below.

Large Basic metered connection

- Current-$7,500
- Proposed-$10,00, expedited-$17,500

Large Basic 3 metered connections

- Current- $7,500
- Proposed- $10,000 x 3 or $30,000

Small Basic Nonresidential Project 4 metered connections

- Current-$3,300
- Proposed- $3,300 x 4 or $13,200

Small Non-Residential 3 metered connections

- Current-$3,300
- Proposed- $3,300 x 3 or $6,900

Large Project Sheeting and Shoring

- Current- $1,000
- Proposed-$6,500

Availability Letter

- Current- $500
- Proposed-$500, expedited- $880

The above examples display how the proposed fees will be charged. The break out of fees by number of connections will now more accurately represent the time and cost spent on each review.

4.8. Benchmarking

Engineering and permit reviews are completed in some form by every utility. When customers are making modifications in and around water and sewer lines, the utility must be a part of that process. Many utilities design their fees in a manner similar to DC Water. By charging individual fees, utilities can accurately recover the cost of the service of each fee. Utilities throughout the U.S offer various levels of engineering fees to fund their engineering departments. Although the service operations differ, all fees that fund operations are based on level of service. This level of service principle is the sample principle that DC Water is using to cost their fees. Based on benchmarking with other utilities, DC Water has one of the more robust permitting operations which has grown to meet the needs of intense development within the District. The substantial number of fees is needed to meet DC Water's varied service demands. Many other utilities do not face nearly as many demands. Correspondingly, they will have fewer fees.

4.9. Conclusions

DC Water and Raftelis believe these proposed fee structure will better align revenue with costs incurred to provide high quality service to the development community. The fee structure uses a top-down fee development approach that provides a mechanism to recover the total cost of service from many different fees adequately and equitably across all permitting review fees. The increased number of fees are designed to address all services that the DC Water Permit Department and Engineering/Technical Service Department currently offer. By implementing these proposed fees DC Water will raise approximately $3 million in incremental revenue and cover the costs of permit operations.

5. Retail Customer Fees

5.1. Description of Fees

The retail customer fees are the miscellaneous fees that retail customers pay and range from bad check fees to water tap fees. In addition, fees for similar services should stay in line with those of regional peer utilities. These fees pay for the administration, maintenance, and operational costs of running a utility.

Many of the fees will affect low income households. Due to this, care must be taken when revising and updating the fees. Throughout the update process, Raftelis and DC Water worked to keep fees at a reasonable level.

5.2. Background for Fees

The motivation for the review of customer service fees was that costs have risen significantly since the last update in 2011. DC Water estimates that there has been an increase of approximately 30% in personnel and other costs since 2011. This is primarily due to increases in labor costs, including both increase in cost of labor and additional personnel to provide the services. This increase in costs has left many fees below the service costs for DC Water. DC Water understands that all costs are not able to be increased by 30% due to concerns about affordability and comparability.

5.3. Evaluation Process

The retail customer fees are customer facing fees. These are the fees that the public will most likely see and interact with. Many fees such as, a declined credit card fee are hard to define. Therefore, when developing retail miscellaneous fees, reasonableness must be considered. For example, it is not reasonable to charge high interest on late payments, even if those overdue payments cause cash flow problems for the utility.

5.4. Fee Update

Since the last update in 2011, DC Water has estimated costs have increased 30%, driven by general inflation and increases in labor costs. The increase will be used to increase most of the fees by 30%. DC Water will hold many fees constant. DC Water wants to ensure affordability for its customers and by holding these fees constant, DC Water shows its commitment to affordability. DC Water is adding a manual read fee. This fee is designed to recover the costs that DC Water incurs when it manually checks a water meter. The proposed increase in revenue from customer fees is negligible.

In this update, staff decided to implement new cross connection turn-off charges. It was determined by DC Water staff that these charges will be based on meter size. This allows the utility to tailor its fees according to usage patterns. This fee was a policy driven decision due to focus on ensuring compliance with the cross connection program. A cross connection occurs when the water system is connected to a potential source of containments.

Staff also informed Raftelis of an update of the fire hydrant fees. The fire hydrant meters are temporary meters used by construction and industrial customers. The customers rent meters from the District to temporarily serve construction and industrial areas. The volumetric rates are based on the volumetric rate structure. Currently, the fire hydrant rental fees are not based on meter size. Staff wants to update the rental fees to reflect the differing costs between large and small rentals. DC Water personnel calculated maintenance costs for the variously sized fire meters. These maintenance costs include repainting, refitting, and various other maintenance costs for fire hydrant meters. The annual maintenance costs were then converted into applicable rental rates. By updating the fees to reflect meter size DC Water will be matching best utility standards.

It is suggested that along with the implementation of the fire hydrant rates that DC Water implements a policy of prepayment for the fire hydrants. The prepayment will assist in ensuring that fire hydrants are returned at the proper time.

A new fire hydrant flow computer model test was added to provide a more cost-effective alternative to the current fire flow field test offerings. Fire flow tests are completed at the request of the customers, so DC Water provides multiple options/price points. DC Water is adding a private fire hydrant flush fee to charge owners of hydrants who can not flush their hydrants. The fee is based on the time and materials to flush a hydrant.

5.5. Existing and Proposed Fees

Shown below are DC Water's existing and proposed retail fees.

Figure 10 Residential Customer Fees

Fee Name	Existing	Proposed	
Customer Bad Check Fee	$25	$25	
Declined Credit Card Fee	$35	$35	
Customer Penalty Late Fee	10% + 1% per month of Balance due	10% + 1% per month of Balance due	
New Initiation Fee	$50	$50	
Customer Turn Off Charges for Non-Payment	$50	$50	
Reconnection Fee (Turn on)	$50	$50	
Broken By-Pass Seal	$700	$700	
Unauthorized Turn On	$245	$245	

Second Water Audit within 24 months	$125	$125	
Manuel Read (convenience charge for credit cards)	$0	$20/month	New

Figure 11 Fire Hydrant Fees

Fee Name	Existing	Proposed	
Fire Hydrant Flow Test (No recent record available)	$225	$300	
Fire Hydrant Flow Test (Recent Test Record Available)	$25	$125	
Fire Hydrant Flow Test (computer model)	$0	$200	New
Private Fire Hydrant Flush	$0	$81	New
Letter in Lieu of Hydrant Flow Test	$125	$125	
Fire Hydrant User per day	usage based	usage based	
Fire Hydrant Permit	$0	$75	New
3" Hydrant Meter Deposit	$700	$1,600	New
3" Hydrant Meter Rental < 15 days	$0	$75 flat rate	New
3" Hydrant Meter Rental > 15 days	$0	$5/ day	New
3" Hydrant Meter with BP Deposit	$0	$2,200	New
3" Hydrant Meter with BP < 15 days	$0	$150 flat rate	New
3" Hydrant Meter with BP > 15 days	$0	$10/ day	New
5/8" Hydrant Meter with BP Deposit	$0	$700	New
5/8" Hydrant Meter with BP < 15 days	$0	$75 flat rate	New
5/8" Hydrant Meter with BP > 15 days	$0	$5/ day	New

Figure 12 Connection and Tap Fees

Fee Name	Existing	Proposed
1 Inch Water Tap Insertion	$325	$425
1.5 Inch Water Tap Insertion	$380	$500
2 Inch Water Tap Insertion	$415	$540
Water Tap Abandonment	$310	$400
Water service Connection Abandonment	$610	$800
Inspect Pointing up Sewer Taps	$660	$860
Inspect Insertion of Y-Branch	$235	$306
Inspect Sewer Tap Removal	$235	$306
Inspect Installation of Std. Cleanout	$235	$306

Figure 13 Proposed Cross Connection Violation Charges

Fee Name	Existing	Proposed Fee	
Cross-Connection Turn-off 5/8" to 2"	$0	$200	New
Cross-Connection Turn-off 3" to 5"	$0	$400	New
Cross-Connection Turn-off 6" and larger	$0	$900	New

5.6. Benchmarking Conclusions

The benchmarking analysis in Appendix A represents ten other utilities throughout the nation. Each utility serves a large population and has comparable demographics, ensuring relevant comparison. Each utility has different miscellaneous fees and most fees have no direct comparison. The benchmarking results also show the numerous ways to charge for related items.

The results of the benchmarking analysis show that DC Water charges appropriate rates for its retail fees. DC Water's bad check fees, turn off fees, and late fees are all in line with comparable utilities.

Through the benchmarking process it was found that many utilities charge for fire hydrant service based on meter size. This corresponds with DC Water's methodology that charging based on meter size is a more accurate way to recover costs. The results show there are many ways to charge for hydrant permits. The rates range from daily to yearly with differing price points for various amounts of time.

5.7. Conclusion

Raftelis and DC Water staff believe that the proposed changes will assist DC Water in recovering revenue to meet the cost of providing service for this division. By meeting cost of service, DC Water ensures that other parts of their customer base will not be subsidizing these costs. The new cross connection turn-off charges will assist DC Water in meeting its policy goals. The charges based on violations incentivize customers to practice safe water management. The reformed fire hydrant fees will better match DC Water's cost to serve smaller and larger hydrant meters. These reforms also conform to many other utility standards throughout the country.

DC Water places a heavy emphasis on affordability. DC Water is keeping turn-on/turn-off fees and late fees constant. An increase in these fees may significantly harm low income customers, so DC Water chose to keep the fees constant.

6. Additional Fees

6.1. Description of Fees

Additional fees are miscellaneous fees that do not fall into the FOG/backflow preventer, engineering, or retail categories. Included in this category are event fees, industrial permitting fees, and groundwater sewer fees. The fees cover the costs for specific services that DC Water provides. The fees would allow DC Water to assess customers who directly use the related service. This prevents the cost from falling on rate payers.

6.2. Event Fee Development

DC Water regularly operates at events throughout the District of Columbia. The event organizers request the water utilities' presence at the events to generate discussion and interaction. When DC Water participates in an event it incurs personnel time costs and equipment costs. The costs to serve these events scale up according to the size of the event. DC Water would like to propose fees for these events.

DC Water acknowledges that the events represent a way for DC Water to conduct outreach to its customers, but they do come at a cost to the utility. Each event requires multiple personnel and equipment. As the event becomes larger the investment by DC Water becomes larger. Each event is unique, so this fee development process allows DC Water to scale the fee if necessary. The fee framework easily allows DC Water to add or subtract services/people. Described below are the fees that go into an event fee.

Through collaboration with DC Water staff costs were determined for the personnel and equipment. The costs represent the amount that must be recovered to serve the event. The two existing fees, shown below, are being replaced with this new framework of fees.

Figure 14 Existing Equipment Fees

Fee Name	Existing	Proposed
Temporary Potable Water Equipment Fee	$262	Phased out
Each additional Temporary Potable Water Equipment Fee (Quench, Buggy, Misters, Water Fountains, etc.)	$54	Phased out

Figure 15 Personnel Costs

Each Personnel= $81/hour

Size of Event (Attendees)	Number of DC Water Personnel Per Event*
100-2,000	2
2,000-5,000	4
5,000 r more	6

* This refers to the minimum number of personnel required for the event. Upon review of the event specifications, staff reserves the right to increase level of staffing based on assessed need.

Figure 16 Equipment Component

Equipment	Per Unit Per Event*
Misting Tent*	$550
Mobile Brita Hydration Station*	$600
Cooling Station	$420
Quench Buggy*	$2,500
DC Water Mascot	$50

* This refers to a per unit per event, assuming a single day event. For a multi-day event, the per unit cost would be multiplied by the number of days.

This Study did not find any comparable charges for peer utilities. It is likely that DC Water is called to support events more often than its peers, necessitating development of these fees.

The breadth of fess allows the organizers and District to work together to design a unique event. When an event organizer contacts DC Water it is suggested that the organizer be immediately informed of the update to the fee policy.

6.3. Treatment Fees

Shown below are existing treatment fees which will be kept constant.

Figure 17 Existing Pre-Treatment Fees

Pre-Treatment	Unit Cost
Waste Hauling- Annual Fee Per Vehicle	$30.00
High strength grease trap waste	$0.07 per gallon
High strength septage waste	$0.07 per gallon
Domestic strength waste	$0.003 per gallon
Low strength waste	$0.003 per gallon

Figure 18 High Strength Waste Fees

Pre-Treatment	Unit Cost
Biochemical Oxygen Demand (BOD)	$0.135 per pound
Total Suspended Solids (TSS)	$0.263 per pound

Total Kjeldahl Nitrogen (TKN) or Total Nitrogen (TN)	$1.471 per pound
Total Phosphorus (TP)	$4.524 per pound

6.4. Industrial Permitting Fee Update

The Industrial Permitting fees were originally instituted in 2012. Industrial permits are required by commercial enterprises and government agencies that can discharge process wastewater or contaminated groundwater into DC Water's system. The industrial permits are based on number of outfalls, where the physical connection to the wastewater system occurs.

The sampling and inspection of permits are conducted annually. The inspection process requires significant investment in time and lab work. Inspectors collect samples at outfalls and send the samples to labs to analyze. The costs of compliance are based on size and each permit is valid for three years.

The original study in 2011 determined industrial permitting fees by setting fees to capture estimated costs. Staff determined costs by estimating time spent on the industrial permitting projects, then costs associated with this time. This is consistent with the industry standard of estimating the labor and material costs when exact costs cannot be determined. These estimates of time and material are the most equitable way to derive these costs. DC Water staff estimates that since 2012 costs have increased by about 3% per year, in line with inflation.
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Figure 19 Proposed Industrial Permitting Fees

Industrial Permitting Fees	Current	Proposed
Industrial Permit Initial Fee	$2,000	$2,500
Industrial Permit Renew Fee	$600	$700
Significant or Non-Significant Categorical Industrial User Annual Compliance Fee- 1 Outfall	$2,500	$3,100
Significant or Non-Significant Categorical Industrial User Annual Compliance Fee- 2 or more Outfalls	$3,500	$4,300
Significant Non-Categorical Industrial User Annual Compliance Fee- 1 Outfall	$2,500	$3,100
Significant Non-Categorical Industrial User Annual Compliance Fee- 2 or more Outfalls	$3,500	$4,300
Non-Significant Non-Categorical Industrial User Annual Compliance Fee- 1 Outfall	$550	$700
Non-Significant Non-Categorical Industrial User Annual Compliance Fee- 2 Outfalls	$700	$900

6.5. Groundwater Sewer Charge Update

The groundwater sewer charge pays for the costs of moving groundwater pumped into the sewer system from construction activity. The groundwater sewer fee is calculated by dividing the groundwater revenue requirement by the total groundwater discharge (units of service). The groundwater sewer revenue requirement is calculated by totaling the relevant groundwater O&M and debt service costs. The consumption is the total demand.

The figure below shows the proposed update to the groundwater sewer fee.

Figure 20 Groundwater Sewer Charge Update

	FY 2019
Total Revenue Requirement	$ 87,480,520
Units of Service	30,897,804
Unit Cost	**$ 2.8313**

Figure 21 Existing Groundwater Sewer Charge versus Current

	Existing		Proposed	
Per Unit	CCF	KGAL	CCF	KGAL
Groundwater Sewer Charge	$2.33	$3.11	$2.83	$3.78

7. Summary

The results of this study are a set of proposed, updated miscellaneous fees and charges. We anticipate that DC Water staff will make recommendations to the Retail Rates Committee, which will then recommend them to the DC Water Board for adoption in FY 2019.

The exhibit below summarizes our findings.

Figure 22 Study Findings

Description	New/Updated	Calculated Cost of Service		Calculated Incremental Annual Revenue Potential
FOG and Backflow Preventer/Cross Connection		New	$1.7 million	$1.7 million
Retail Fees		Updated	$1.2 million	Negligible
Engineering Review Fees		Both	$4 million	$3 million
Additional Fees		Both		

The fee updates will allow DC Water to more effectively and equitably recover cost from its customer base.