



## City of Annapolis

# Refuse Rate Study

May 1, 2019





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Ms. Jodee Dickinson  
Finance Director  
City of Annapolis  
160 Duke of Gloucester St.  
Annapolis, MD 21401

Re: Refuse Rate Study -  
Report

Dear Ms. Dickinson

Stantec is pleased to present this Report of the Refuse Rate Study (Study) that we performed for the City of Annapolis ("City"). We appreciate the fine assistance provided by you and all of the members of the City staff who participated in the Study.

If you have any questions, please do not hesitate to call us at (202) 585-6391. We appreciate the opportunity to be of service to the City of Annapolis and look forward to the possibility of doing so again in the near future.

Sincerely,

A handwritten signature in black ink, appearing to read "David Hyder".

David A. Hyder  
Principal

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Enclosure

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# 1. EXECUTIVE SUMMARY

## 1.1 INTRODUCTION

This Executive Summary presents an overview of the results of the comprehensive Refuse Rate Study Update (Study) that was conducted for the refuse collection and disposal system of the City of Annapolis (hereafter referred to as the “City”) by Stantec Consulting Services.

## 1.2 STUDY OBJECTIVE

The principal objective of the Study was to perform a revenue sufficiency analysis to determine the ability of the City’s current and future revenues to meet the funding requirements of the refuse operation, and to develop a financial management plan to ensure the ongoing financial health of the City’s Refuse Fund. To facilitate the study, we populated a refuse financial forecasting model that simulated the financial operations of the City’s refuse program. The model was used to determine the level of annual revenue required to satisfy projected annual operating and maintenance expenses, debt service payments, debt service coverage and capital cost requirements, as well as maintain adequate reserves.

## 1.3 REVENUE SUFFICIENCY ANALYSIS

Our analysis evaluated the sufficiency of the City’s current refuse program revenues to meet all of its current and projected financial requirements over a ten-year projection period and determined the level of any fee revenue increases necessary in each year of the projection period to provide sufficient revenues to fund all of the City’s cost requirements.

Based on the revenue sufficiency analysis, we have determined that the City’s current refuse fees will not be sufficient to meet the funding requirements of the program over the next several years. Based on the needed revenue requirements, including additional operating expenses associated with a new collection contract, the current revenues will be insufficient, and without adjustment, the City will exhaust all resources within the Refuse Fund.

To address the needs of the refuse program, we have developed a financial management plan that will increase refuse fee revenues. The recommended financial management plan and corresponding plan of fee adjustments are based upon the revenue and expense information, beginning cash balances, and assumptions as described in Section 3 of this report. To develop our analysis and forward looking expenditures, we examined the historical trends in program expenditures and revenues.

The recommended fee adjustments for Fiscal Year 2020 and FY2021 - 2024 are presented in Table 1-1.

**Table 1-1 Recommended Plan of Refuse Fee Increases**

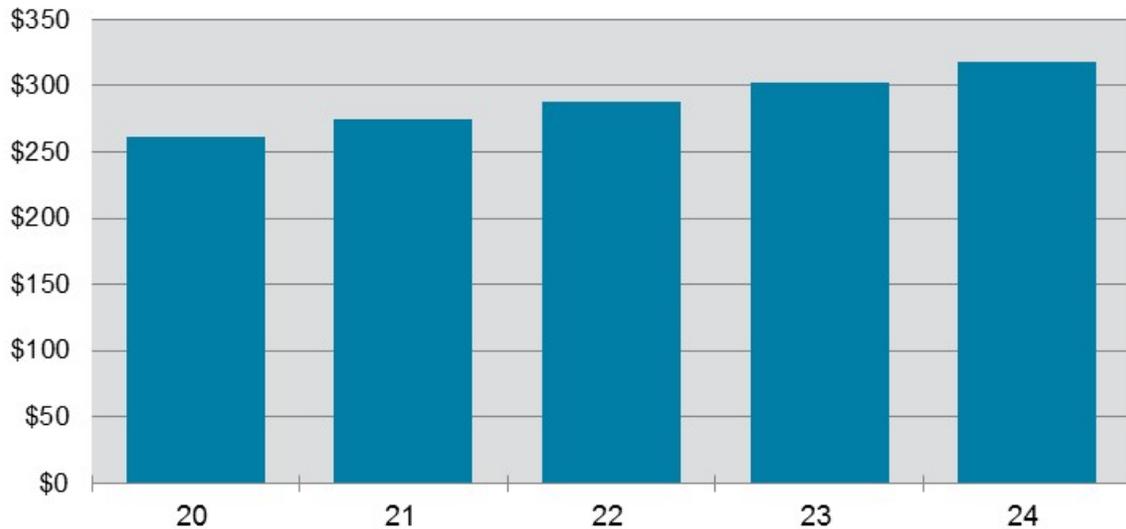
	FY 20	FY 21	FY 22	FY 23	FY 24
<i>Effective Date</i>	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023
<b>Refuse Fee Increase</b>	<b>27%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>

The fee adjustments identified in Table 1-1 for each of the Fiscal Years, 2021-2024, are estimates at this time based on projected needs of existing programs. Improvements or changes made to the effective management of solid waste and recycling could impact the estimates presented in this report. Therefore, the City should evaluate the annual revenue requirements of the refuse program on an annual basis as part of the budget process to evaluate whether the estimated fee adjustments shown in the table remain appropriate.

## 1.4 CUSTOMER IMPACTS

Customer impacts are a key factor in policy decisions and must be considered within the recommended financial plans for the City. The typical annual refuse bills for the City’s retail residential customers based on the proposed financial plan are represented in Figure 1-1.

**Figure 1-1 Proposed Annual Residential Refuse Fee**



As demonstrated in the figure above, the annual increases in the typical customers fee will be \$56 (approximately 27%), bringing the total fee from the current fee of \$205 to \$261 in FY 20. Increases for the four succeeding years would also be flat at 5%. While this increase may seem

significant, it is necessary to meet the funding requirements of the program and remains well below the level of the refuse fee had been at prior periods within the City (i.e. the refuse fee was \$380 in FY13).

## 2. INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has conducted a Refuse Rate Study (Study) for the City of Annapolis's Refuse Fund (hereafter referred to as the "City"). This report presents the results of the comprehensive Study, including background information, an explanation of the calculation methodology employed, and the results of the analysis.

### 2.1 BACKGROUND

The City of Annapolis (City) manages an extensive refuse collection and disposal program, which includes collection and disposal of refuse, residential and commercial recycling, yard trim, bulk, metal, and household hazardous waste. The City collects residential refuse (including bulk items), as well as recycling and yard trim on a weekly basis. The City manages and accounts for the refuse program as an enterprise fund and as such the program is fully funded by revenues collected from the users. The refuse fee is collected from residential customers on a quarterly basis on the utility bill along with water, sewer and stormwater charges.

Over the last several years the City has decreased the refuse fee due to the accumulation of a healthy balance within the Refuse Fund. This has occurred through various cost savings within the solid waste program. The City's annual residential fee was \$380 in FY13 and the City gradually adopted lower refuse fees starting in FY15 through FY19.

The City currently contracts out the majority of the services provided within the refuse program. The City's current collection contract is set to expire this year and therefore the City has bid out and signed a new multi-year refuse and recycling collection contract. While the cost of the new contract is consistent with contracts maintained by surrounding communities, it represents a significant cost increase over the City's historical contracted costs for refuse and recycling collection services. As a result, the overall revenue requirements of the refuse program will be significantly higher beginning in FY20.

To address the increasing costs of the refuse program, the City engaged Stantec Consulting Services to assist with the development of a long-term financial plan and refuse fee study. The remaining sections of this Report outline the study.

## 2.2 STUDY OBJECTIVES

The objectives of this Study are to:

**Perform a Revenue Sufficiency Analysis** – To evaluate the sufficiency of the City’s current refuse fee over a multi-year projection period and, to the extent necessary, develop a plan of annual fee adjustments that will provide adequate revenues during the projection period to satisfy all financial requirements, including 1) operating and maintenance costs, 2) capital improvement program costs, 3) existing and new debt service expenses and corresponding net income to debt service coverage ratios, and 4) adequate operating reserves.

**Conduct a Residential Refuse Fee Survey** – To compare the refuse fee for customer serviced by the City to that of other programs in the City’s surrounding geographic area.

## 3. REVENUE SUFFICIENCY ANALYSIS

This section presents our revenue sufficiency analysis (RSA) for the City's refuse program. The analysis examines the ability of the Refuse Enterprise Fund to support the revenue requirements of the program with the current fee, and any necessary adjustments required to ensure revenue sufficiency. The following sub-sections of the report present a description of the source data, assumptions, and results of the RSA.

In order to populate the financial model, we reviewed the City's historical and budgeted financial information regarding the operation of its refuse program. The review is based on historical spending, projected budgets established by the City, and includes capital costs related to purchases of a new truck, as well as the additional annual operating and maintenance costs associated with the new collections contract for refuse, recycling and yard trim. We also documented the City's current debt service obligations and covenants, or promises made to lenders, relative to net income coverage requirements and any necessary reserves.

We counseled with City staff regarding other assumptions and policies that would affect the financial performance of the refuse program, such as additional operating costs associated with the City's new collection contract, and other factors that might impact program expenditures and/or revenues. We examined historical spending levels (budget to actual) to determine if the City has historically executed its budget, and if any adjustments to future spending levels should be made. Finally, we completed a detailed review of the historical number of accounts billed to develop a baseline for forecasting future revenues.

All of this information was entered into our refuse financial model. The model was loaded and reviewed for accuracy. The projection period within the model was developed to provide a full ten-year projection period (Fiscal Year 2020 to 2029).

Once the financial model was reviewed and updated, we reviewed alternative multi-year financial management plans and corresponding refuse fee adjustment plans through an interactive work session with City staff. During the work session, we examined the impact of various inputs or assumptions upon key financial indicators. The work session focused on the new refuse collection contracts impact on revenue requirements. Each of the scenarios were evaluated in light of key financial metrics for the Refuse Fund including cash reserves, and customer bill impacts. After discussions and scenario analysis, we developed the recommended financial management plan and corresponding plan of annual refuse fee adjustments presented in this report. The financial plan was developed for the full 10-year projection period with recognition that the City will evaluate the plan annually and make adjustments as necessary, given changing conditions or enhancements within the program.

### 3.1 SOURCE DATA AND ASSUMPTIONS

The following presents the key source data and assumptions relied upon in conducting the RSA.

#### 3.1.1 Source Data

The FY 2018 Comprehensive Annual Financial Report (CAFR) provided by City staff was used to establish the beginning FY 2019 balances for City's Refuse Fund. As of the end of year FY 2018, the City had approximately \$4.9 million in total fund balance.

#### 3.1.2 Current Revenues

The revenues utilized in the RSA reflect an evaluation of multiple years of historical results. Revenues consist of fee revenue, other operating revenues, and interest income. FY 2019 fee revenue is based upon FY 2019 budgeted amount with interest earnings on fund balances, starting at 1.00% in FY19, increasing to 1.25% annually in FY 2023, and then to 1.50% by FY2024, and maintaining at that level through the projection period. To evaluate the sufficiency of current revenues to meet the funding requirements of the refuse program, the revenues are forecasted at current fee with no growth in customer accounts.

Projected revenues at current refuse fees are shown below in Table 3-1 over the next five years.

**Table 3-1 Refuse Projected Revenues at Current Fees (millions)**

	FY 20	FY 21	FY 22	FY 23	FY 24
Refuse Fee Revenues	\$2.10	\$2.10	\$2.10	\$2.10	\$2.10
Total Refuse Fund Revenues	\$2.17	\$2.16	\$2.15	\$2.14	\$2.14

#### 3.1.3 Operating Expenditures

The City's refuse program operating expenditures include all operating and maintenance expenses, transfers, debt service requirements, and minor capital outlay. The RSA based operating expenditure projections on the individual expense categories and expense amounts within the FY 2019 Adopted Budget and the FY 2020 Proposed Budget, adjusted annually thereafter, based upon assumed cost escalation factors that were reviewed with City staff (with the exception of annual debt service expenses which reflect the repayment schedules of each outstanding bond/loan). Based on a historical review of the City's budget to actual spending, no adjustment was made within the forecast as the City has historically not over-budgeted.

In addition to the budgeted expenses, several updates were made to the projections of revenue requirements based on data and information provided by the City:

- Separate expense line items were added to the projection to account for the change in the collection contract the City will experience. As such, an additional \$1.4 million was added starting in FY 2020 to account for the new contract price provided by MBG for trash and yard trim collections, and recycling collections. As a result of the new contract, the contract services line item was reduced by approximately \$500,000, which represented the previous contract amount.
- An additional \$18,000 a year was added to the FY 2020 budget at City staff indication to account for the landfill gas collection system expenses.

### 3.1.4 Existing Debt Service

The City currently has two outstanding debt service issuances for public improvements that include funding for the refuse program. The annual debt service amortization schedules for all existing refuse obligations were provided by City staff and included in the RSA. The annual debt payments are minimal at approximately \$33,000 per year in the first 3 years of the projection, and then are reduced to \$15,000 per year starting in FY22, when one of the bonds is retired.

### 3.1.5 Capital Improvement Program

City staff provided the multi-year Capital Improvement Program (CIP) in project level detail from FY 2019 through FY 2029. The City has two significant capital improvement projects. One is related to the landfill gas mitigation mandated by the State, anticipated to be \$200,000 in FY20, and the second is the purchase of new refuse collection trucks. The new refuse collection truck is anticipated to occur in FY19, and again in FY29, at \$180,000 each occurrence.

Once the capital plan was loaded into the model, the annual funding sources for the capital projects were discussed in detail with City staff during the work session. Both projects are cash funded, due to the size of the projects, and the City currently having sufficient cash balances to do so.

### 3.1.6 Total Refuse Fund Revenue Requirements

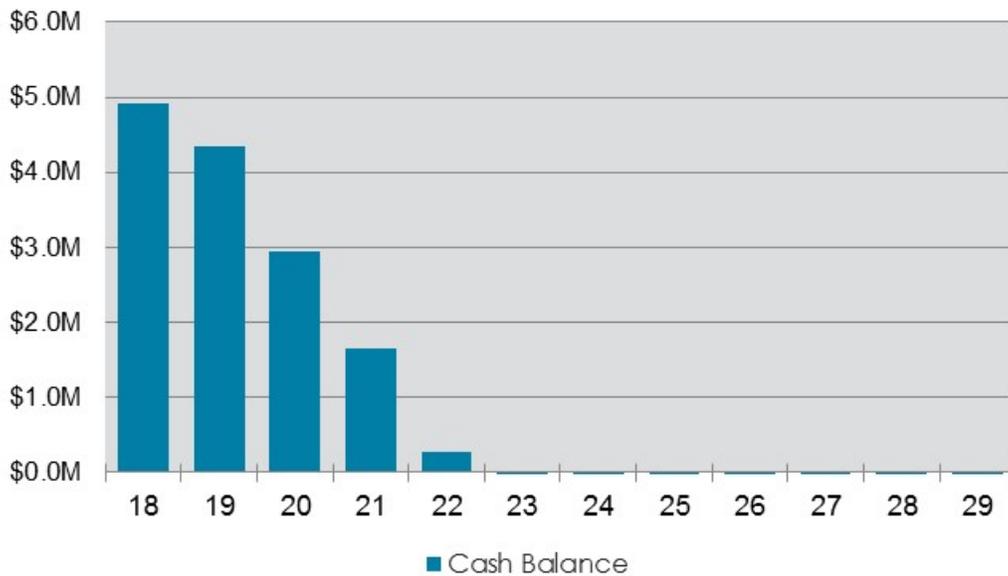
The total refuse revenue requirements include the operating expenditures, the existing debt service and the funding of capital projects. Table 3-2 presents the refuse revenue requirements assuming the City cash funds all capital projects identified in the capital improvements plan. The table compares the revenue requirements with the existing revenues.

**Table 3-2 Refuse Revenue Requirements Projection**

(\$ Million)	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Total Operating Expenses	\$3.10	\$3.20	\$3.28	\$3.36	\$3.45	\$3.54	\$3.63	\$3.72	\$3.81	\$3.91
Existing Debt Service	\$0.03	\$0.03	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02
Cash Funded Capital	\$0.20	\$0.00	\$0.00	\$0.00	\$0.18	\$0.00	\$0.00	\$0.00	\$0.00	\$0.18
<b>Total Refuse Expenses</b>	<b>\$3.34</b>	<b>\$3.23</b>	<b>\$3.30</b>	<b>\$3.38</b>	<b>\$3.65</b>	<b>\$3.55</b>	<b>\$3.64</b>	<b>\$3.73</b>	<b>\$3.83</b>	<b>\$4.11</b>
<b>Revenues from Existing Refuse Fees</b>	<b>\$2.17</b>	<b>\$2.16</b>	<b>\$2.15</b>	<b>\$2.14</b>						

As demonstrated in the Table 3-2, the current revenues from refuse fees will be insufficient to meet the forecasted annual expenditures of the program. As shown in Figure 3-1 the Refuse Fund will exhaust all resources by FY 2023 based on the current refuse fee revenues.

**Figure 3-1 Refuse Fund Balance**



### 3.1.7 Minimum Reserve Policy

To assist with development of a financial plan for the Refuse Fund, it is prudent to establish a minimum reserve balance to maintain within the Fund. Reserve balances for enterprise funds are funds set aside for a specific cash flow requirement, financial need, project, task, or legal covenant. These balances are maintained in order to meet short-term cash flow requirements, and at the same time, minimize the risk associated with meeting the financial obligations and continued operational and capital needs under adverse conditions. The level of reserves maintained by a utility is an important component and consideration in developing a multi-year financial management plan.

Many utilities, rating agencies, and the investment community, as a whole, place a significant emphasis on having sufficient reserves available for potentially adverse conditions. The City does not currently have a specifically defined reserve policy for the Refuse Fund. For purposes of the rate study, we recommend that the City maintain an operating reserve equal to 3 months of operating expenses. This equates to a total minimum reserve level in the Refuse Fund of approximately \$0.75 million in FY20. These reserves will ensure that the City maintains adequate funds for the refuse program.

## 3.2 FINANCIAL PLAN DEVELOPMENT

As demonstrated in the revenue sufficiency analysis, the City's current refuse fees are not sufficient to meet the funding requirements of the program and the Refuse Fund will exhaust its resources by FY 2023. In order to meet the additional revenue requirements resulting from the new collection contract, the City will need to increase the refuse fee to provide additional funding for the program. The results for the proposed financial planning scenario recommended are outlined below over a five-year projection period.

**Table 3-3 Recommended Refuse Fee Adjustments**

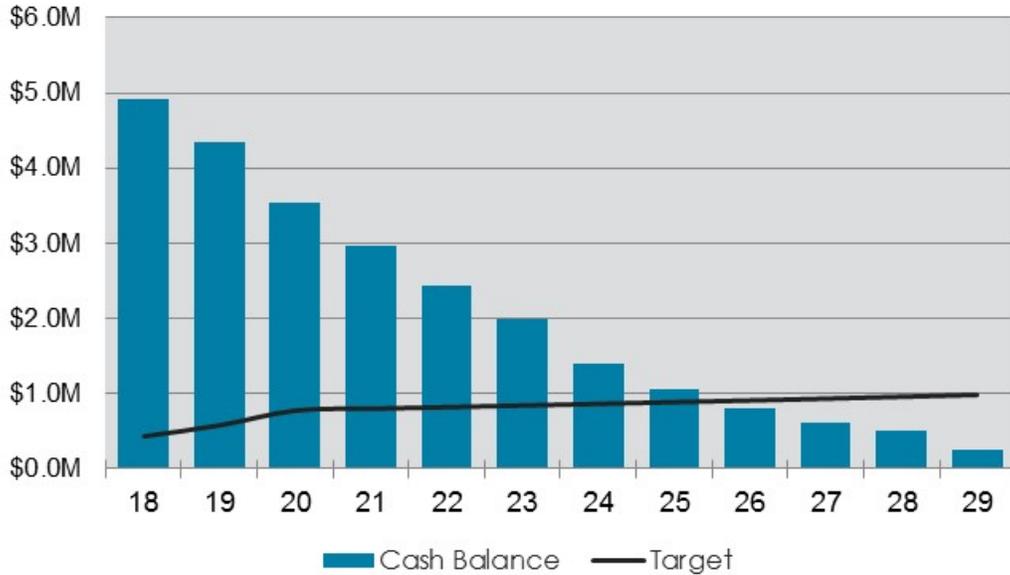
	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Effective Date</b>	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023
<b>Refuse Fee Increase <sup>(1)</sup></b>	<b>27%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>
<b>Annual Residential Refuse Bill</b>	<b>\$261</b>	<b>\$274</b>	<b>\$288</b>	<b>\$303</b>	<b>\$318</b>

<sup>(1)</sup> Plan requires additional increases in future years (following FY 24) of at least 5%

Figure 3.2 presents the estimated annual cash balance within the Refuse Fund based on the fee adjustments shown in Table 3-3. The "Minimum" line reflects the fund balance minimum to maintain operating and capital reserves recommended in Section 2.1.7 of this Report. The figure

below shows that even with the proposed rate increases, the City will fall below minimum targets recommended by FY26. However, our forecast includes assumptions regarding future costs and revenues which will need to be monitored and evaluated in the future. Should our forecast be accurate, additional refuse fee increases will likely be required in the future above the estimated 5% increases.

**Figure 3-2 Updated Refuse Fund Balance**



## 4. RESULTS AND RECOMMENDATIONS

The following conclusions and recommendations were developed during the completion of the Refuse Rate Study. Based on our review of the City's current and project refuse revenue requirements and the corresponding refuse fee revenues, we have developed several conclusions.

- The current and projected revenue requirements for the management of the City's refuse program will outpace the program revenues over the coming years. The primary driver for increases in the revenue requirements is the new collection contract the City, that brings a significant increase in the program's operating and maintenance expenses.
- To address the needs of the current refuse program, the City will need to adjust the refuse fee over the next several years.
- The City currently has adequate cash balances within the Refuse Fund to cash fund the capital spending outlined in this study.

**Table 4-1 - Refuse Financial Plan**

	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Effective Date</b>	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023
<b>Refuse Fee Increase <sup>(1)</sup></b>	<b>27%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>

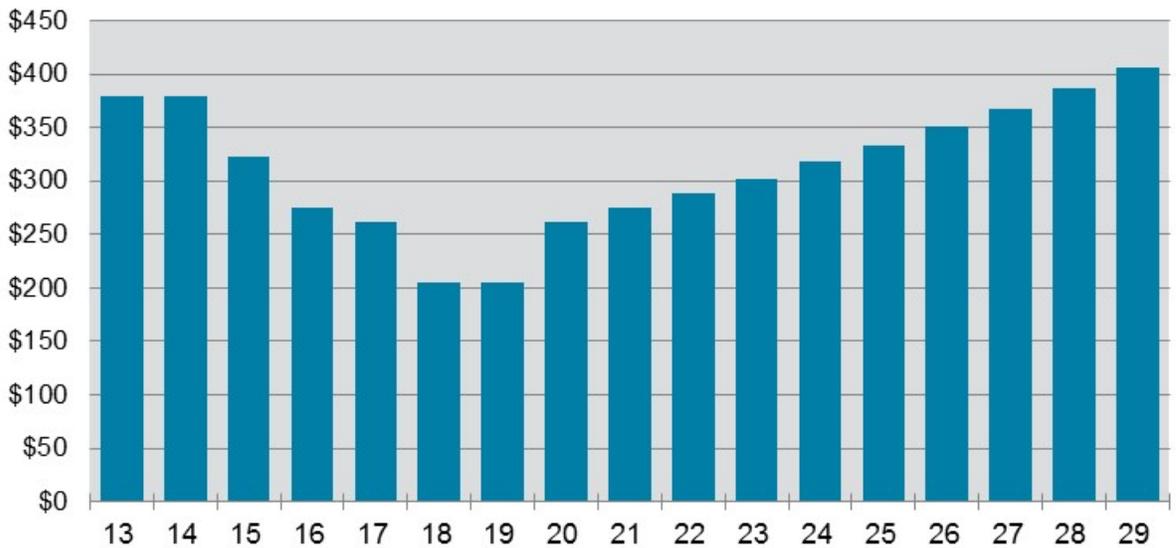
*<sup>(1)</sup> Plan requires additional increases in future years (following FY 23) of at least 2% to maintain minimum reserve balances.*

- We recommend that the City continue to evaluate and update the financial plan for the refuse program over each of the coming years.

## 5. CUSTOMER IMPACTS AND COMPARISONS

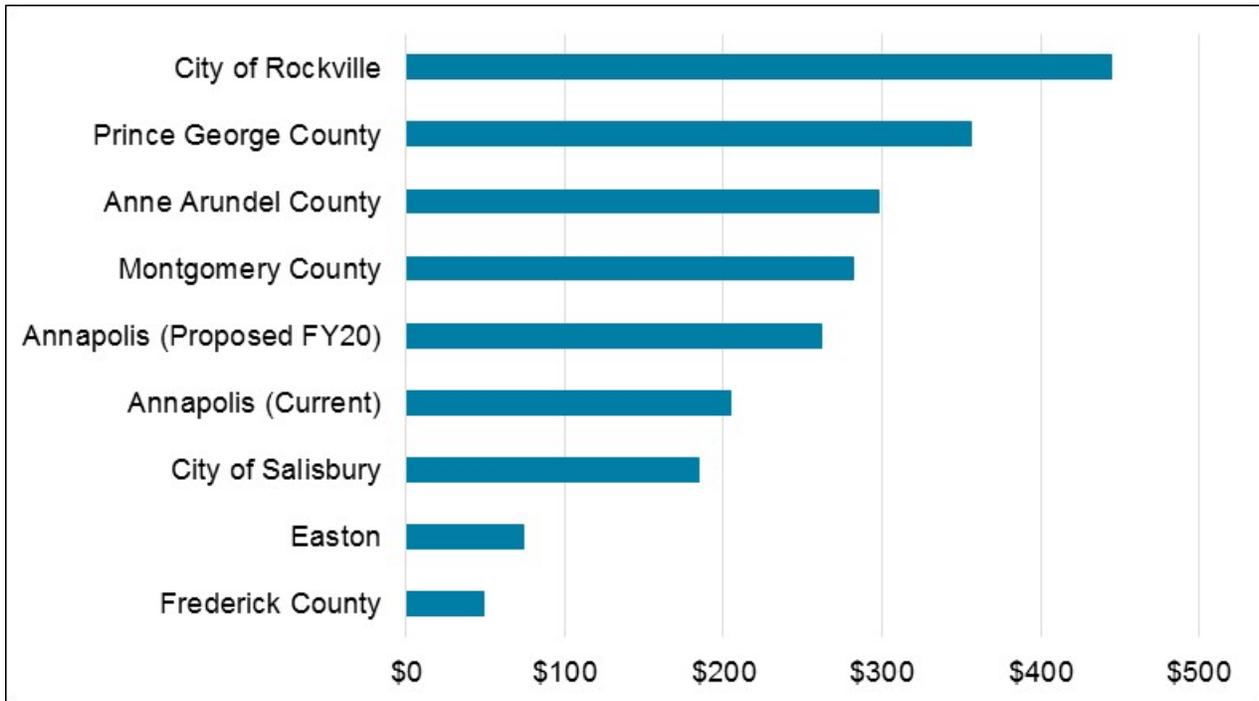
The recommendations developed in this report will have an impact on refuse fee for customers served by the City. The following figures shows the historical bill decrease, as well as the impacts to residential refuse customers within the City over the projection period.

**Figure 5-1 Annual Residential Refuse Bill**



The comparison of current and proposed fees for the City with those assessed by surrounding jurisdictions, can provide a general perspective on the level of fees paid by customers located within the City. The following figure was developed to provide a comparison of what a typical residential customer pays for refuse service in surrounding jurisdictions. It is important to note that the comparison community bills reflect current rates and do not reflect potential rate adjustments in FY 20, for which data is not yet available. It is also important to note that each jurisdiction provides different refuse services within their respective program and therefore the fee comparisons are not necessarily representative of an “apples to apples” comparison. The comparison below looks at the annual fee charged to residents and does not include a detailed analysis of the specific services provided by each community.

**Figure 5-2 Annual Refuse Fee Comparison**



As shown in the figure above, the refuse fee for a typical residential customer within the City of Annapolis will remain among the lowest in the region, even with the proposed adjustments in FY 20.

*Disclaimer*

*This document was produced by Stantec Consulting Services, Inc. (“Stantec”) for the City of Annapolis, MD and is based on a specific scope agreed upon by both parties. In preparing this report, Stantec utilized information and data obtained from the City of Annapolis or public and/or industry sources. Stantec has relied on the information and data without independent verification, except only to the extent such verification is expressly described in this document. Any projections of future conditions presented in the document are not intended as predictions, as there may be differences between forecasted and actual results, and those differences may be material.*

*Additionally, the purpose of this document is to summarize Stantec’s analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliance on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City of Annapolis should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.*